

The asbestos lie

The past and present of

an industrial catastrophe

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Maria Roselli

etui.

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Introduction

An industrial catastrophe unparalleled in scope

Every five minutes someone dies of a disease related to asbestos. The statistics in an experts' report for the European Union (EU) reflect the frightening extent of the asbestos problem: 500,000 people will die of asbestos-related cancer in Europe alone by the year 2030.¹ These are the statistics despite the fact that processing and importing of the material has been banned in the EU for a number of years. Because asbestos-related cancers have a long latency period, the number of victims will even continue to increase until 2025; only then will the numbers in Europe go down.

For decades asbestos was considered an ideal substance – it is, for example, practically fireproof – on account of its properties and therefore was designated 'the mineral of the twentieth century'. A real boom began in the 1950s; the 1970s were the high water mark when millions of tonnes were mined and some three thousand asbestos products were on the market.

The wonder fibre, however, had already proven much earlier to be a killer fibre. In 1918 the first American life insurance companies refused to insure asbestos workers on the basis of the asbestos cases that had already come to light. It was known in the 1940s that asbestos could cause lung cancer, and starting in the 1960s scientists proved that people exposed to asbestos contracted malignant mesothelioma (cancer of the pleura and abdominal membrane). In other words, scientists had already established that there was a direct cause between asbestos fibre and this disease. But the asbestos lobby ignored, trivialised, and suppressed the scientific

1. GUE, NGL, Vereinte Europäische Linke, Nordische Grüne, and Parlamentsfraktion – Europäisches Parlament (2005) Asbest: wie die Profitgier der Konzerne Menschenleben fordert, and BAFU (2005) Heimtückische Asbest, <http://www.bafu.admin.ch/dokumentation/fokus/00140/01273/index.html?lang=de>.

findings so that it took decades before the fibre was actually banned. The first country to do so was Sweden, which introduced a partial ban for construction materials containing asbestos as early as the mid-1970s. It took another fifteen to twenty years before Switzerland and many other European countries followed suit.

Even today asbestos is still the principal toxic danger to workers, causing the majority of occupational cancer worldwide. For over thirty years different organisations have fought for a ban on the carcinogenic fibre but the results are sobering: To date a mere quarter of the member states of the World Health Organisation (WHO) have issued a ban on asbestos.

Today mainly Asian countries and Russia in addition to Brazil and the asbestos stronghold of Canada mine the 'wonder fibre'. Almost three-quarters of annual asbestos production come from Russia, China, and Kazakhstan. In 2003 Asian countries consumed almost half of the asbestos produced worldwide. This development began as early as the 1970s and 1980s when the multinational corporations using asbestos relocated their production mostly to Asia following the vigorous debate in Europe on health risks.

A combination of three factors contributed to the fact that asbestos was phased out at least in Europe: The debate about a ban in Sweden during the mid-1970s; the wave of litigation in the United States; and increasing pressure from unions. These three factors led to an asbestos ban in all the countries of the European Union, which finally went into effect on January 1, 2005. The struggle has taken a full quarter of a century to get this far! Today in Europe asbestos is the synonym for probably the greatest industrial catastrophe ever, whose effects have not entirely abated and are still in full bloom elsewhere in the world. According to the International Labour Organisation (ILO), between one hundred thousand and 140,000 people worldwide die every year of diseases caused by asbestos. The countries of the former Soviet Union are increasingly affected as well as China and the developing country of India.

How is it possible, a full century after the alarming medical discoveries were first made, that this cancer-causing substance can still legally be used and sold in most countries of the world? To understand the present it is helpful to look at the past. For what is happening today in Asia, Latin America, and Africa happened in the same way in Europe, the cradle of the asbestos industry, fifty years ago.

From the start Swiss industry played an important role. The town of Niederurnen located in the Canton of Glarus was not only the headquarters of the Eternit Group of the Rhine Valley Schmidheiny family, but over the years it was also one of the centres of international power for the asbestos cement industry. During this period of asbestos euphoria, Schmidheiny Amiantus AG, a holding company of the Schmidheiny family, controlled from its Glarus headquarters the asbestos cement works in sixteen countries with approximately twenty-three thousand employees.

And there's more: The cartel of asbestos cement producers, listed in the Commercial Register under the name of International Asbestos Cement AG (SAIAC), has been headquartered in the offices of Eternit AG in Niederurnen since 1929. The first president of SAIAC was also Swiss; it was the Rhine Valley Eternit owner Ernst Schmidheiny. The asbestos cement producers comprising SAIAC are part of a particularly dark chapter of corporate history of Nazi Germany: They sniffed out good business opportunities in Berlin. And they did not pass up exploiting slave labourers during the Second World War. A particularly sad chapter of history, for which no one today will claim responsibility.

Sad too is the history of shutting down the Swiss asbestos industry. No wonder. Switzerland has suppressed the topic of asbestos for years, for it was as early as 1978 that the asbestos producers' lobby here formed the 'Asbestos Working Group' to influence public opinion to keep asbestos off Toxic Substances Schedule I. That the ban went into effect

only when the timing suited the industry is due to the success of this ‘working group’ – but also the result of the delays on the part of Swiss authorities and agencies, namely, the Swiss Accident Insurance Fund (*Schweizerische Unfallversicherung*, SUVA); the Federal Office for Health (*Bundesamt für Gesundheit*, BAG); and the Federal Office for the Environment, Forests, and Landscape (*Bundesamt für Umwelt, Wald und Landschaft*, BUWAL).

But even today, a full seventeen years after the official asbestos ban in Switzerland, the carcinogenic material remains a serious hazard. For construction workers as well as roofers, employees of hazardous material abatement companies, and even for home hobby enthusiasts. There is scarcely a house in Switzerland built before the beginning of the 1990s that is free of asbestos. Again and again unsuspecting workers stumble across the lethal material and work in contaminated space before the construction manager brings in SUVA to implement the required measures to abate asbestos.

According to SUVA, there are presently five thousand people in Switzerland under medical supervision who have been exposed to asbestos, and the Swiss Accident Insurance Fund registers eighty new cases annually.

After years of silence Swiss asbestos victims are now prepared to publicly step forward with their stories to demand justice. There are two asbestos victims organisations in Switzerland going back to 2002. Criminal complaints have been filed against four companies (Eternit, ABB, PSI, and BLS), and there are a number of investigations underway. The Swiss system of justice, however, protects the companies: Although asbestos-related cancer appears only ten to forty years after one is exposed, the rule in general is a statute of limitations period of ten years. This makes a mockery of the victims.²

The chapter ‘Targeted by the Italian Courts’ traces the efforts of the Turin state prosecutor to obtain documents from SUVA and SUVA’s resistance to producing the records. In 2007, the legal, administrative, and political drama culminated in a decision by the Swiss Office of Justice and Police (EJPD) ordering SUVA to hand over the requested files to the Italian investigative authorities for the 196 Italian workers who were exposed to asbestos in the Swiss Eternit plants. Then, on December 10, 2009, began the trial charging Stephan Schmidheiny of Switzerland and Jean Louis de Cartier of Belgium, primary shareholders of Eternit, with intentionally causing an environmental disaster and omitting safety measures in the workplace. On February 13, 2012, the Turin Tribunal handed down its verdict, with over two thousand asbestos victims, representatives of more than sixty asbestos victims associations, and journalists squeezed into four court rooms of the Palace of Justice. The two defendants were held responsible for the death of approximately 1,800 people and the illness of approximately eight hundred people in Italy (employees, family members, and people who lived near the four Italian locations of Eternit). The sentence is sixteen years in jail for each defendant and damages in the millions of euros to the local municipalities. The defendants announced they would appeal and observers see this trial as a precedent for seeking further criminal trials and damages to pay for remediation.

2. Since the publication in 2007 of *The Asbestos Lie* in German, the Swiss Parliament considered an extended statute of limitations period for asbestos victims: In the future the claims of asbestos victims to compensation for damages and legal redress would be barred only after five years after diagnosis – at the latest fifty years after the victim had been exposed to asbestos. To date, a parliamentary commission is still considering the motion.

Chapter 1

Asbestos – properties, history, and uses

The offending stone

What is asbestos?

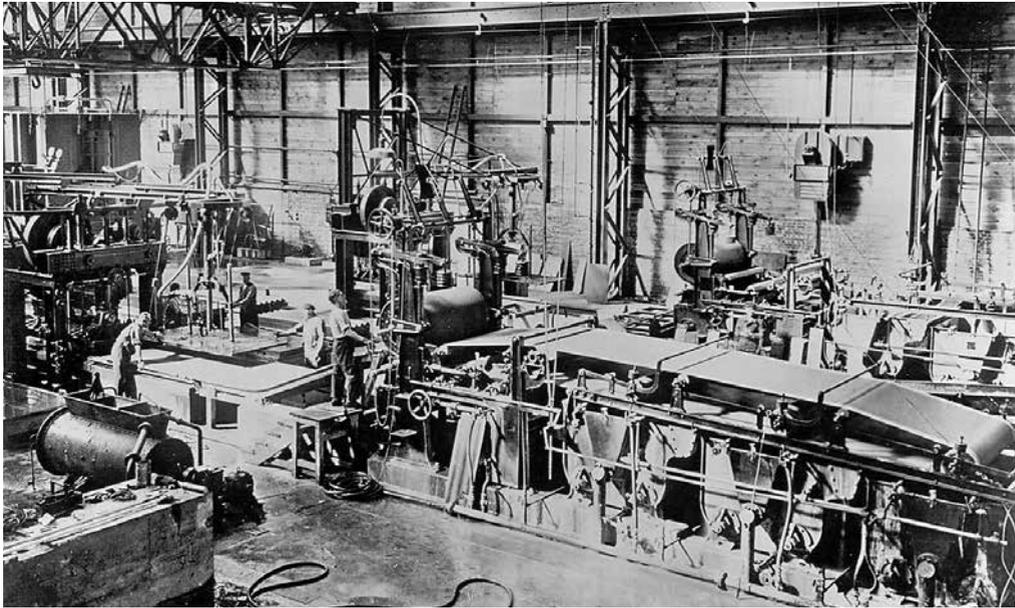
Totalp is at first glance an unsuitable name for an alpine mountain in the middle of the gorgeous Parsenn ski region. But the name, literally ‘dead Alp’, is significant: Totalp is one of the approximately fifty locations in Switzerland where the mineral asbestos occurs naturally.

During the First World War when the major powers prosecuting the war blockaded asbestos, the local asbestos cement industry sought out new places to mine. They finally found accessible reserves in the towns of Zeneggen in Wallis and Sils Maria in Engadin. It turned out that the reserves contained too many impurities and thus was unsuitable for the manufacture of asbestos cement.

Shortages during the war did not last very long. The industry was soon importing asbestos again from Canada and Russia and importing with a vengeance: At the height of asbestos production, in the 1960s and 1970s, twenty-five thousand tonnes of the lethal fibre were used annually in Switzerland, ninety percent of which was used to manufacture asbestos cement.

And what is asbestos? The Greek word *asbestos* (‘indestructible’, ‘eternal’) indicates the most important properties of this naturally occurring mineral. It covers not one mineral but rather the specific fibrous structure of various naturally occurring minerals that fall in part into the category of sheet silicates (chrysotile asbestos) and in part into the category of inosilicates (amphibole asbestos). Chrysotile asbestos, also called white asbestos, constituted about ninety-four

percent of global production during the heyday of asbestos mining. Even today mining and processing is almost exclusively limited to white asbestos.



Eternit in Berlin Rudow. The Production Floor in the 1960s (Museum Neukölln)

Table 1 Types of asbestos and their share of world production (1976)

Asbestos Type (Synonym)	Mineralogical Category	Share of World Production
Chrysotile asbestos (white asbestos)	Abestiform chrysotile	94%
Crocidolite (blue asbestos)	Abestiform riebeckite	< 4%
Amosite (brown asbestos)	Abestiform grunerite	< 2%
Tremolite asbestos	Abestiform tremolite	Insignificant
Amianth (actinolite asbestos)	Abestiform actinolite	Insignificant
Anthophyllite asbestos	Abestiform anthophyllite	Insignificant

Source: IWL Forum, 1992

Characteristic of all asbestos minerals is that the fibres are not only incombustible (the melting point is 1,500°Celsius), heat resistant, heat insulating, and highly acid resistant, but they are also stronger than steel wires of equal diameter and relatively elastic. This unique combination of properties makes the substance an ideal material for many industrial applications.

The two most common amphibole forms of blue and brown asbestos occur in accessible deposits primarily in South Africa and were used earlier mostly for the manufacture of asbestos cement; meanwhile, however, the use of this type of asbestos has been banned in most of the countries of the world. Chrysotile, rich in magnesium, has always been economically more important.

Table 2 Asbestos use in Europe 1920-2000 (in tonnes)

	1920	1950	1975	1990	2000
Europe	40,905	506,396	2,697,000	2,582,294	537,302
USSR / former USSR	1,629	136,458	1,286,697	2,151,800	507,125
Great Britain	21,199	107,606	137,487	15,731	244
Germany	6,828	93,842	378,143	15,048	189
France	445	38,921	136,587	63,571	--
Europe (excl. the USSR)	39,267	369,738	1,410,394	430,494	30,277

Source: HESA Newsletter, 2005

Today 2.2 to 2.4 million tonnes of asbestos are mined annually worldwide. In the eleven years from 1994 to 2005 there has been no reduction in the totals, but only a displacement of production to other countries.

Table 3 Worldwide asbestos mining (in tonnes)

Country	1994	1995	2004	2005
USA	10,000	9,000	--	--
Brazil	175,000	170,000	195,000	195,000
Canada	518,000	510,000	200,000	240,000
China	240,000	240,000	355,000	360,000
Kazakhstan	300,000	300,000	347,000	350,000
Russia	800,000	800,000	875,000	875,000
South Africa	95,000	95,000	?	?
Zimbabwe	150,000	145,000	150,000	100,000
Other	122,000	120,000	110,000	80,000
Total	2,410,000	2,390,000	2,230,000*	2,200,000*

*exclusive South Africa

Source: U.S. Geological Survey, 2006

From 1973, with its record production worldwide of 5.3 million tonnes, until 2005 the global production of asbestos decreased by a total of fifty percent. The decrease is a direct result of the widespread discussions about the dangerous substance that took place in many European and other industrial countries. As a consequence this led to intensified efforts to find substitutes. As early as 1988, Canada, the United States, and Japan had reduced the amounts produced by about thirty-five percent, fourteen percent, and sixteen percent respectively from the amounts produced in 1973.

In contrast to this development, there was a dramatic increase in asbestos production in the developing and newly developing countries in the 1980s and 1990s. Brazil and India recorded seven- and eightfold increases during these years. Today it is primarily the states of the former Soviet Union and China that are increasingly investing in the very profitable but lethal mineral. China increased its production just in the last ten years by fifty percent, from 240,000 to 360,000 tonnes. Smaller production sites in 2005 are in Argentina, Bulgaria, Columbia, India, Iran, Serbia, and Montenegro. South Africa and Brazil are currently making efforts to cut production.

Russia produces by far the most asbestos today. One of the largest mines, named Uralasbest, is located in the Russian city of Asbest. The open pit mine is said to be 11.5 kilometres long, 1.8 kilometres wide, and three hundred metres deep. The entire surface of the mine measures approximately ninety square kilometres. The state company ‘Uralasbest’ produces almost 450,000 tonnes of white asbestos annually. The plant is largely automated and can process twenty million tonnes of ore a year.

Mining used to be entirely underground; nowadays most asbestos mines are open pit.

While the United States has stopped mining asbestos altogether – but not, it should be noted, importing or marketing asbestos – due to public pressure, a general asbestos ban only went into effect in the countries of the European Union as of January 1, 2005.

Table 4 Limitations and general ban: Comparison by country

Date	Country
1975 (Construction material); 1986 (General)	Sweden
1980 and 1986 (Asbestos cement)	Denmark
1984	Norway
1990	Austria
1991	The Netherlands
1992	Finland and Italy
1990 (Building construction); 1993 (General)	Germany
1989 (Building construction); 1994 (General)	Switzerland
1996	France
1998	Belgium

Sources include: Asbestos European Conference 2003 (Data for Sweden) and EUROGIP, 2006

Continued asbestos threat despite the ban

Most European countries issued their own bans in the late 1980s and 1990s. In Switzerland a general asbestos ban went into effect March 1, 1989 – but with a transition period, especially for underground construction products such as pipes, until March 1, 1994.

The bans, however, are a long way from eliminating the threat – on an almost daily basis construction workers, roofers, dumpsite workers, carpenters, electricians, and workers for hazardous material removal and demolition companies come into contact with the hazardous fibres, without any protection, because they do not work with asbestos cement construction components correctly or they unexpectedly stumble across sprayed-on insulation at a construction site.

Moreover, there’s the problem of construction debris removal. And not only that: Today several tonnes of asbestos are still imported annually into Switzerland. According to the Office for the Environment, Forests, and Landscape, the responsible agency is still issuing waivers – seventeen years after the effective date of the ban. Eduard Back in the Section for Materials, Land, and Biotechnology in the federal environmental office (BAFU) responded to an inquiry by confirming that at present there are nine companies with waivers to use asbestos. Eight of the waivers are for companies that manufacture sealants containing asbestos, and the ninth waiver is for the manufacturer of diaphragms for high pressure

electrolysis systems. The exact amounts of imported asbestos – in triple-digit kilograms for manufacturers of the sealant and in double-digit tonnes for the manufacturer of the diaphragms – are just as confidential as the names of the manufacturers themselves and BAFU does not release the information to the press.

Why is asbestos dangerous?

It isn't the chemical properties that make the asbestos dangerous, but the structure and size of the particles that are inhaled (diameter smaller than 0.1 to two micrometres,³ five to one hundred micrometres in length). These threads have the lethal characteristic of splitting into microscopically small filaments, becoming airborne as suspended solids that are inhaled. The most dangerous type of asbestos by far is blue asbestos because the fibres of the amphibole mineral are much more buoyant and stiffer than the fibres of chrysotile. These pass through the filtering system of the airways, depending on the size or rather the infinitesimal size of each asbestos fibre, and they pass into the pulmonary tissue. As the years go by, they cause small lesions, which turn into scars in the connective tissue between the pulmonary alveoli. Thus the lungs are prevented from inhaling oxygen and exhaling carbon dioxide. The result is that the pulmonary tissue is irritated and inflamed, causing laboured breathing, a dry cough, sputum, and possibly cancer. The harm to health becomes evident only years later.

What diseases are caused by asbestos?

There are basically four clinically proven forms of asbestos-related lung diseases although scientists assume considerably more organs are also affected, resulting in cancer of the stomach, bowels, bladder, ovaries, and larynx:

Pleural plaques are caused when inhaled asbestos fibres pass through the lungs and protrude slightly from the pleura (the tissue covering and protecting the lungs). Each breath rubs the asbestos fibres against the pleura, causing inflammation. In response, the connective tissue thickens and may even calcify. At this stage of the disease the patient notices no symptoms.

Asbestosis is caused by the inhalation of asbestos dust. The illness is manifest, like all asbestos-related illnesses, only years after exposure. The latency period of asbestosis is generally between ten and fifteen years. Asbestosis is also called 'dust lung disease'. The lung tissue consists of approximately three hundred million pulmonary alveoli that absorb oxygen from the inhaled air and transfers the oxygen to the red blood cells. Between the pulmonary alveoli there is connective tissue that scars over in asbestosis. This interrupts the function of the pulmonary alveoli, making the oxygen take a longer diffusion path so that the oxygen transfer is delayed or isn't transferred into the blood at all. The lungs' immune cells try to expel the needles of asbestos that have been inhaled and in doing so they are destroyed. The result is that the pulmonary tissue is scarred (fibrosis). Since the body cannot remove the asbestos fibres, they remain in the lungs for life and cause significant scarring (pulmonary fibrosis). This can cause serious destruction of the lungs ('honeycomb' lung). The symptoms are a dry cough, laboured breathing, shortness of breath, and sputum.

3. A micrometre (μm) is one millionth of a metre.

It is an incurable disease. Lung cancer or malignant pleural mesothelioma occurs in ten to twenty percent of asbestosis cases. The descriptions in the medical literature of the first deaths due to pulmonary asbestosis first appear at the beginning of the twentieth century. It wasn't until the end of the 1920s, however, when the increasing number of cases of these types of diseases in industrialised countries led to a general awareness of the harmful effect of asbestos fibres on health.

Lung cancer related to asbestos, known clinically as lung carcinoma or bronchial carcinoma, comes from the cells that line the breathing passages. The latency period is on the average twenty-five years with a range of twelve to thirty-seven years.⁴ The most significant cause of lung cancer in general is smoking. The next most common cause is inhalation of asbestos dust. According to experts about ten percent of all lung cancer cases are due to exposure to asbestos. Lung cancer related to asbestos is as common as mesothelioma although it's not generally recognised as triggered by asbestos.⁵ In Switzerland lung cancer is the most common cancer among males. Among females, it's the fourth most common. In 2001 approximately 2,400 men and eight hundred women were diagnosed with lung cancer. Above the age of forty the risk of cancer increases with age; the risk, moreover, correlates directly with tobacco consumption. A significant advance in our knowledge about what causes asbestos lung cancer is our understanding of what is called a 'co-carcinogenic combination effect' – meaning two or more factors are in effect at the same time to cause the cancer. These combinations intensify the carcinogenic effects. It was clinically established decades ago that smoking increases the probability of an asbestos worker falling ill with cancer by fifty percent. It is terribly important therefore in preventing asbestos-related cancer to warn people exposed to asbestos of this finding. Asbestos-related lung cancer occurs in non-smokers too. Symptoms are coughing, coughing up blood, sputum, fever, shortness of breath, pain, loss of energy, weight loss, and night sweats.

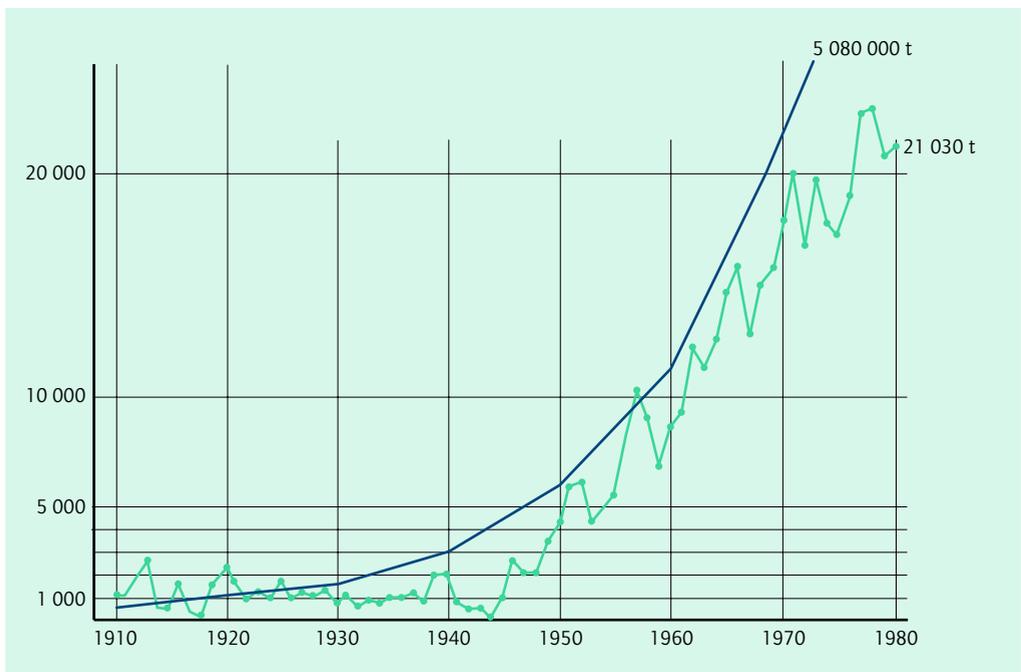
Malignant **pleural mesothelioma** occurs in the lungs and the pleura or in the lining of the abdomen (peritoneum) and is one of the most aggressive solid tumours there is. Approximately eighty to ninety percent of all pleural mesotheliomas are caused today by workplace exposure to asbestos. In a few cases – particularly in the case of blue asbestos – even a brief exposure of a few weeks suffices. In principle, even single strands of asbestos can cause a malignant tumour. The risk increases with the extent of exposure and the amount of fibre contamination, but it also depends on an individual's genetic makeup. Mesothelioma has on average a latency period of thirty years.⁶ The most frequent symptom is pleural effusion. Generally there are symptoms such as shortness of breath, pain (mostly in the chest), a stubborn cough, or weight loss, even fever on occasion, all of which points to an advanced stage of the disease. Most malignant pleural mesotheliomas are discovered only in the advanced stages. Because of the laminary growth, they often do not show clearly on chest X-rays or even to some extent on computer tomograms. Only a biopsy of the chest cavity to get a sample of the tissue leads to a diagnosis. The patient survives on average eight to twelve months after receiving a diagnosis. A new type of treatment, in which the diseased lobe of the lung is removed, gives the patient hope that the cancer can be treated. In the last few decades, pleural mesothelioma has been diagnosed more and more often. Currently about seventy patients are recorded as having died of mesothelioma in Switzerland, which is about half of all recorded occupational deaths. It

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4. Kraus T. and Raithel H.J. (1998) Frühdiagnostik asbeststaubverursachter Erkrankungen, Sankt Augustin, HVBG.
 5. EUROGIP (2006) Les maladies professionnelles liées à l'amiante en Europe, <http://www.eurogip.fr/images/publications/EUROGIP-24F-MPamiante.pdf>.
 6. Kraus T. and Raithel H.J. (1998) *op. cit.*

should be assumed, however, that not all deaths are noted for a variety of reasons. The Swiss Association for Asbestos Victims and Family Members as well as the West Swiss Asbestos Victims Association (CAOVA) assume a high number of unreported cases, especially since SUVA does not report non-occupational asbestos cases. Because the ban on asbestos became effective in the mid-1990s, the expectations are that there will be an increase in the number of deaths until at least 2020 due to the fact that the average latency period is about thirty years. The responsible authorities estimate that in this period the number of reported deaths will double.

The causal link between asbestos and mesothelioma was clinically established at the beginning of the 1960s. It is estimated that there will be six to eleven cases for every one hundred worker exposed to asbestos, while in the remaining population there will be one to eight cases per million of population per year.⁷ High risk groups in Switzerland include former asbestos sprayed-on insulation applicators, workers in the asbestos cement industry, construction worker, carpenter, electricians, auto mechanics, employees in the workyards of the Swiss Railroad, and workers involved in debris removal.

Graph 1 Worldwide production and Swiss imports of asbestos between 1910 and 1980



Asbestos production in tonnes :
 — worldwide $\times 2 \times 10^5$ tonnes
 — Swiss asbestos imports $\times 1 \times 10^3$ tonnes

Source: Lochhead R. (ed.), 1983

7. Association for Asbestos Victims and Family Members Switzerland.

Portrait

Hans von Ah

'I don't have the strength to fight anymore'

'When I became sick, people were becoming increasingly aware of the asbestos problem and I often looked back on the past. Back to the years when I came into contact with this lethal material after my apprenticeship. I'd heard somewhere that even brief contact with asbestos could cause cancer years later, and I hoped I'd be ok. I knew I had worked with this material without any thought about protection whatsoever.'

Hans von Ah is sitting on his sofa in a small, single-family terraced house on the outskirts of Olten and speaks about his illness. The man who is now seventy years old had worked his whole life and now this: First he lost six years of his pension and now he's been hit with a devastating diagnosis, asbestos cancer.

Together with his wife, Erika, he now leads a life at the edge of existence. A few years before he fell ill he took his pension money and invested it in the purchase of this little house, and when work and his health were gone at one blow, the former mechanic was then left with nothing more in reserve. He and his wife now live on the government's old age pension and draw a supplement for health costs. 'We pay 1,000 francs per month for health insurance. We pay another 1,000 for our mortgage and additional costs as well as 300 for taxes. That leaves us 700 francs a month to live on,' the former mechanic says, tallying everything up. 'We aren't going to do much on that.'

Even though it's quite certain that the pensioner's illness is an occupational one, caused by asbestos, Hans von Ah has not filed a claim with SUVA. His primary care physician as well as the regional Cancer League indicated it was practically hopeless to get SUVA to accept a claim of mesothelioma, especially as no asbestos fibres were found in his tissue biopsy. 'I was told that as a single individual I had practically zero chance. What was I supposed to do? I don't have the strength to fight anymore.'

His past finally caught up with him a good forty-five years after his first contact with asbestos. When he went to his doctor with a slight irritation in his chest in the fall of 2002, he wasn't prepared for the diagnosis. But when he heard the word 'mesothelioma' Hans von Ah understood at once: 'Ahh, it's got me now!' Up until then he hadn't felt any pain. Only after the doctor gave him the diagnosis, the pensioner realised that he had been experiencing a loss of physical and mental energy for some time. 'I was doing some strange things at the time. For example I drove into the garage with my back door open. I was always tired and couldn't focus. In retrospect I attribute these things, which were probably symptoms of my illness, to the cancer.'

An illness that most likely began on his first jobs after his apprenticeship, as a mechanic in the auto engine factory, Berna, or a year later in the workyards of the Swiss Railroad in Zurich. In both places he came into contact with asbestos. Von Ah worked just three months at Berna, in the spring of 1956 between the time of his apprenticeship and

his military boot camp training. The twenty-year-old repaired lorries, his responsibility being to repair clutches, which were made with asbestos at that time. ‘The clutch disks were damaged from stress. They had grooves that had to be ground down on the lathe – that made dust fly like crazy,’ von Ah remembers.

After boot camp he worked in the Swiss Railroad yards in Zurich for three years until 1960. Von Ah is certain that he breathed in the deadly dust there too. The young mechanic had to wrap the copper circuits in the control console of the locomotives with asbestos strips to insulate them. ‘I knew that the strips were made of asbestos but the material was highly praised at the time as excellent insulation that lasted a long time. Nobody warned us. Only now, after I got sick, I keep asking myself if the older fellows at work knew something because no one wanted to do this job.’ In the 1960s Hans von Ah went to what is called a Higher Technical College for on-the-job training to become a mechanical engineer.

He has lived for four years now without the left lobe of his lung – and his life has been radically altered: Breathing difficulties are a daily struggle; the slightest incline is too much when he walks. The scars are painful and constantly disrupt his sleep. He can seldom sleep straight through the night. He speaks of his illness with a certain disengagement. He tries not to let it get too close to him, to show no emotion. This is his strategy to keep the illness, he says, from getting to him.

A team of doctors from the Bern University Hospital removed Hans von Ah’s cancerous left lung in an operation lasting several hours in April 2003. The doctors capped the stumps of the bronchial tubes with a piece of muscle. The operation was preceded by chemotherapy for several months to prevent the cancer from metastasizing. After the operation he almost died of an infection. For months he had to gulp down antibiotics. Taking all this medicine ruined his gastrointestinal tract, which is now hypersensitive. He developed an intolerance to food over time. He can’t really digest anything that’s sour. ‘A sip of wine to clink glasses is all I can manage, but I have to pass after that.’ The psychological stress and pain were too much for the sick man. The back pains after the operation were almost impossible to bear. The only thing that helped the pain a little was classic massage.

After the operation Hans von Ah fell into a deep depression. The engineer who used to be so open to the world and interested in everything could no longer listen to the radio, didn’t want to watch television, or read a newspaper. Even his cat was no longer allowed to come near. Von Ah would become aggressive at the slightest thing. This was especially hard on his wife, Erika. After months of struggle he found a sort of balance. Once a week he tutors two Turkish children and is happy for each school success they proudly announce.

Best of all Hans von Ah is the father of two grown sons, Urs and Peter, and he loves being together with them, engaged in discussions for hours and reminiscing about his youth before he knew what the future would bring.

The myth of the wonder fibre

From Charlemagne to Marco Polo

The ancient Greeks and Romans were amazed by the properties of this fibrous mineral as recorded in their observations. Again and again the miraculous fibre appears in the writings of the ancient philosophers and later in travel accounts. Knowledge of the fabled fibre

gradually took its place in folklore passed down by word of mouth. Such folklore spoke of all sorts of magical properties.

The Greek geographer Strabo travelled the Mediterranean around the time of Jesus; he was the first to tell of cloths made of a strange material that, when dirty, were tossed in the fire to clean them. About fifty years later, Pliny the Elder, the Roman philosopher from Como, wrote about this material in his thirty-seven-volume work *Historia naturalis*. He had seen tablecloths made of asbestos, which he called 'living linen' (*linum vivum*), and described royal shrouds that prevented the bodily remains from mixing with wood. In the year 90 A.D. Plutarch, the widely travelled biographer and philosopher, mentioned nets and headscarves of asbestos.

The fibre was mostly called *asbestos* in Greek texts and Latin authors used the term *amiantus*.

Even Charlemagne (742-814) is said to have possessed a fireproof tablecloth. What has come down to us is that he once invited the envoys of a neighbouring bellicose state to a banquet and after the feast he tossed the tablecloth into the fire. When the tablecloth was removed clean and unscathed from the fire, his guests were convinced that he had supernatural powers, and they counselled their lord against war.⁸

The Venetian trader and scholar Marco Polo (1254-1324) on his trip eastwards into northern China observed fireproof wool, which he called salamander. In his work *Il milione or The Wonders of the World* he depicted among other things how the material was extracted from an asbestos mine in China: 'After one has extracted these fibres, of which you have heard, from the mountain, one beats them. They cling together and one can spin them like wool. The fibres, after having been extracted, are exposed to the sun to dry. Then they are pounded in a large brass mortar; then they are washed, and the fibres remain behind as I have described to you. The earth that had clung to them cannot be used, and one weaves cloth from them. And when this cloth is finished, I truly report to you, they are not very white. They lay them then in the fire and leave them there a while. In this manner the cloth turns white as snow. And each time, when this salamander cloth is filthy and stained, they put it for a while in the fire, and it turns white as snow.'⁹

In the seventeenth and eighteenth centuries asbestos reserves were found in Central Europe, in Italy, and in the Pyrenees. The raw material was used in antiquity primarily for making fireproof cloth. The Royal Society, founded in 1660, published in its journal, *Philosophical Transactions*, the first scientific articles about asbestos. Italy, which tried as early as 1808, to use asbestos for machine-made asbestos thread, cloth, and paper, is considered to be the true cradle of the asbestos industry.

Moving into the factories

With the discovery in 1877 of what is known as white asbestos or chrysotile reserves, the asbestos mining industry in the Canadian province of Quebec began and thus the history of the industrial exploitation of asbestos was set in motion. The development of the method of spinning, twisting, and weaving asbestos fibres in Italy in the years between 1866 and 1876 preceded the Quebec discovery. In 1871 various asbestos factories using

8. Vogel S. (1990) Geschichte des Asbests, in Bönisch M., Gößwald U. and Jacob B. (eds.) z.B. Asbest. Ein Stein des Anstoßes. Kulturelle und soziale Dimensionen des Umweltproblems. Begleitband zur Ausstellung im Heimatmuseum Neukölln, 20. Okt. 1990 - 1. April 1991, Berlin, Heimatmuseum Berlin-Neukölln.

9. *Ibid.*

this textile technology were started in England, the United States, in Canada, and South Africa.

The real industrial breakthrough, however, came in 1899 with the manufacture of asbestos cement produced by using the wet machine process. The inventor of this production method of asbestos cement panels was the Austrian industrialist Ludwig Hatschek (1856-1914).

The Austrian, who wanted to establish his own business, purchased the machines from an asbestos spinning mill and moved them from Linz to Vöcklabruck, where he had acquired an old paper mill. There he experimented with asbestos and cement mixtures, producing panels on carton presses. He made numerous attempts to mix asbestos with various binding agents, for example asphalt and finally with a fluid binding agent and Portland cement. He finally found the right mixture, but at first didn't know what to do with it. Only after a while did the idea occur to him to concentrate on the production of roof tiles.

He called his product Eternit, based on the Latin word *aeternus* (eternal). A brilliant name that assuredly led to the resounding success of the construction material.

The working conditions of the day in the asbestos factories were catastrophic as measured by today's standards. The asbestos workers almost literally sank in asbestos. Visibility on the production floor was only a few metres through the swirling dust. Remember that a concentration of asbestos dust of less than one million F/m³ (fibres per cubic metre of air) is not visible to the human eye. Those who worked in the asbestos factories usually died after a few years – of consumption as the diagnosis was called then.¹⁰

Ludwig Hatschek patented his invention in 1900. In 1903 a French company bought his patent. A year later vested interests in Switzerland also locked in the manufacturing rights for this construction material. In the very same year the Eternit Company in Niederurnen opened its doors. In 1920 the industrial family of Schmidheiny, which had become successful in the tile and cement business, acquired Eternit from its owners in the Canton of Glarus.

In the following decades almost ninety percent of the asbestos imported into Switzerland was processed by Eternit into asbestos cement products. In 1957 the manufacturer of construction materials opened a branch in Payerne in the Canton of Vaud. Asbestos thereby became inseparably entwined in Switzerland with the names of Eternit and Schmidheiny.

The industrial use of the fibre for making asbestos cement triggered the exponential growth of mining worldwide: Whereas in 1910 128,000 tonnes of asbestos were mined, in 1940 more than four times that amount was mined, namely 600,000 tonnes, and a mere ten years later, in 1950, 1.2 million tonnes. Nor did asbestos euphoria abate in the second half of the twentieth century: In 1967 three million tonnes were mined and at the peak, in 1976, five million tonnes were mined worldwide. Thereafter the first bans went into effect – Sweden was the first country to discuss a ban as early as the mid-1970s – leading to a decrease in tonnage mined. Beginning in the new century the global production of asbestos even increased again slightly from 2.06 million tonnes in 2001 to 2.4 million tonnes in 2005.¹¹

10. Albracht G. and Schwerdtfeger O. A. (eds.) (1991) Herausforderung Asbest, Wiesbaden, Universum Verlag.

11. U.S. Department of the Interior (2006) U.S. Geological Survey, May 2006.

At the height of its popularity

At the beginning of the twentieth century there was no or very little processing in the countries where asbestos was traditionally mined. Finishing the refined raw material was mostly done in countries with little or no reserves, such as the United States or Germany. When the First World War broke out in August 1914, mining decreased a bit at first only to rapidly increase again. Asbestos was a strategic war material and there were shortages in countries that lacked their own reserves.

After the war the asbestos euphoria continued in the civilian economy and the asbestos industry did not pass up any chance of patting itself on the back. The world's largest company, the American company of Johns-Mansville, boasted proudly at the World's Fair in 1939 of the 'service of this mineral to mankind'. Among other exhibits, a life-sized speaking 'Asbestos Man' showed the visitor the way to the exhibit hall of the company, and the entire fair grounds were constructed with asbestos, from the tiles to the conduit pipes.

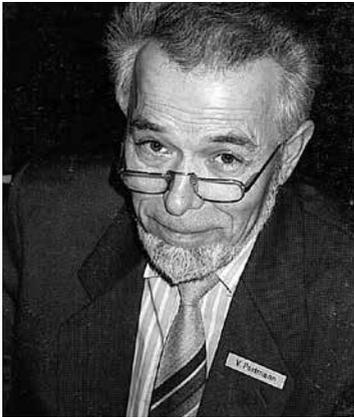
The asbestos euphoria in the 1930s even went so far that demand threatened to outstrip the global mining capacity. The Second World War was similar to the First World War: Asbestos was essential to war industries. Since the military superpowers did not control sufficient reserves in their own countries they sought to cover their needs with enormous quantities shortly before the outbreak of the war.¹² National Socialist Germany secured entire boatloads from South African and Yugoslavian mines (see the section 'Eternit offensive in Nazi Germany', p. 53). The Americans did the same. There was even an agreement between the United States and the Soviet Union to supply each other with asbestos if necessary, which the American businessman Armand Hammer had already negotiated with the revolutionary leader Vladimir Ilyich Lenin in 1918. But the American government distrusted this agreement. Even though Canadian companies tried to furnish what the United States needed, the material was rationed in America for civilian use after the war broke out. Day after day the military used asbestos by the ton for a variety of purposes: From ship engines to components for Jeeps, from the flares that floated down on parachutes to bazookas and torpedoes. Even the doctors in military hospitals wore easily sterilised operating scrubs made from asbestos.

After the end of the war the next wave of demand triggered a global boom and again thousands of tonnes of this material were mined without scruple. The engineers prized the stability and resistance to fire in asbestos cement and were correspondingly generous in using it. Skyscrapers could reach for the sky because a new type of sprayable asbestos coating insured that the steel beams would not bend in case of fire. A belief that was to prove erroneous on September 11, 2001, when the Twin Towers were completely destroyed; their steel beams had been coated with asbestos insulation.

12. Alleman J.E. and Mossman B.T. (1997) Asbest: Aufstieg und Fall eines Wunderwerkstoffes, *Spektrum der Wissenschaft*, 19 (11), 86-92.

Portrait

Viktor Portmann

An agonising death

Phil Portmann is an occupational safety expert. His father, Viktor Portmann, died of asbestos-related cancer: ‘No one can say with absolute certainty anymore which company my father worked for was the one where my father came into contact with asbestos. We do know he worked with the lethal stuff during his apprenticeship. The apprentices joked around by throwing asbestos towels at each other, like snowballs. A snowball battle in a body shop! What kids don’t think of. That was in the late 1950s in Hess’s body shop in Bel-lach near Solothurn.

My father was a passionate hunter; he didn’t like speaking about his illness. But once he told me in his apprenticeship training there were these asbestos towels that they used during welding as fire protection by covering the welding joints. The towels had to first be put into water and then they could form them into any shape. The apprentices didn’t know they were dangerous.

Later my father worked in a number of body shops – the brake linings of automobiles were made from asbestos until the 1970s. That’s why we can’t really say where he picked up his cancer.

His story of suffering began in December 2001. He was one year shy of getting his pension. He was out with his hunting buddies when suddenly he couldn’t breathe. You have to imagine him trying again and again to take a normal breath, but he just couldn’t get enough air. He went into hospital a few days later. They kept him there for three weeks. They pumped three liters of water from his lungs and took a tissue biopsy. They also sealed the pleura to his lung so that no more water would build up. On Christmas Eve he was allowed to come home. He had asked the doctor not to tell him the diagnosis before Christmas. He wanted to celebrate the holiday quietly with us.

The word asbestos was uttered right at the beginning of the consultation. My mother, brother, and I went with our father when he went into hospital in January 2002. The doctor suspected mesothelioma. In the biopsy itself they hadn’t found any asbestos, so we thought maybe it wasn’t so bad after all. But the doctor advised us to have the diseased lobe surgically removed. We resisted such an extreme suggestion. What would happen if the cancer then attacked the other lung? You can’t surgically remove the second lung!

And that’s exactly what happened: Precisely one year after the first stay in hospital we had the first setback. Again shortness of breath, again taken into hospital, and again pumping the water from the lung. In January 2003 came the definitive news: Pleural mesothelioma. We even consulted a cancer specialist in Solothurn. He advised us not to have chemotherapy right away. My father was told he had an atypical course of the disease and as long as his health was stable, chemo didn’t make sense. So we decided to wait. This worked because my father did fairly well during the first two years after the

diagnosis of cancer. We actually hoped that it wasn't so bad. In retrospect I have to say: We just didn't want to believe it and managed to suppress thinking about my father's illness as much as possible.

I researched on the Internet the course of the disease and contacted people in various forums who were also ill. Most of these people died a short time after their diagnosis. This gave me hope and I told myself that Father just couldn't have mesothelioma otherwise he would have long since died. Father, meanwhile, still worked in his garden and went hunting. So he just couldn't be dying.

In March 2004 his health took a considerable turn for the worse. He felt a terrible pressure on his chest and had shooting pains. The doctor told us he should now begin chemotherapy. But by June we got the damning news: Father wasn't responding to the treatment, the cancer had spread. It had already metastasized. Father had a huge tumour on his neck. We asked the doctor about it. But he just said: You probably already know. Father's tumour must have been huge, pressing on his trachea. To make breathing easier they put a little tube in his neck, but it just got worse and worse.

I think it's important to speak about the physical suffering, about the pain of the asbestos victims. Today you always read articles on asbestos in the newspapers but mostly they report about some trial, about legal things, about the role of SUVA, and about money. The newspapers only write about finances and legal things. But there's never an article on the immense pain that causes so much agony for these people. That this tumour is particularly brutal is simply ignored. No one mentions that the victims are screaming with pain. You get a diagnosis and it's a one-hundred-percent death sentence. What these people and their families go through is indescribable. Fortunately for my father the last phase of the illness didn't last too long ... He was always afraid of suffocating. Once we were in the car and suddenly he began to scream as if someone had turned off his air supply. He panicked and didn't know what to do. When you have these attacks you only know one thing: The next one will surely come and one day you won't survive it. The doctor explained to us that asbestos builds sort of a wall around the lung, which is ultimately squeezed tighter and tighter.

Father went through the agonies of hell, and I want people to know this. At the end, the doctor prescribed morphine for him. That lessened the pain but the hallucinations began. He lost control of his body. Once my mother called me to come over right away. Father came reeling towards me in the hallway; he was mentally confused and was releasing water uncontrollably. His muscles became weaker and weaker from lying down so much and he could barely walk. He died ten days after we took him to hospital again. That was in June 2004.

In the months when he was still doing well he had tried to arrange everything so Mother wouldn't have too many problems. He even had the attic insulated. That was my father, he wanted to do everything just so. He never spoke with my mother about what would happen after his death. My mother refused to acknowledge that her husband was ill. When he coughed she sometimes said to him: Stop coughing. You don't have anything.

For months now I've been dealing with SUVA. When my father became sick, SUVA took over all the costs and awarded him and then my mother a pension. Father's employer had given SUVA notice. Everything went smoothly. But when my father made an application for an 'integrity payment'* SUVA blocked it. We were told in a letter that my father wasn't eligible for an integrity payment because he didn't survive long enough. The key to getting an integrity payment is not the length of time one survives after the diagnosis but the length of time one survives after treatment begins. Since my father had started chemotherapy only months before his death, he wasn't eligible for an integrity payment.

That's a totally absurd interpretation of the law! If I have to I'll take my father's case to the federal insurance court. SUVA can't just interpret the law to its own advantage. Sure, it's a lot of money for SUVA but if they have to award my father the payment, it sets a precedent. From now on other asbestos victims with the same course of treatment would have to be awarded the payment. The pensions they can pay. They know people won't live long. That won't cause a financial disaster but the integrity payment, that hurts! A full payout after all comes to about 80,000 francs. We want justice. No one can say that my father wasn't impeded in his physical integrity while he was ill!

The danger that comes from asbestos is underestimated even today! I'm a professional manager for worker safety and I know from experience how careless people are in many companies with dangerous materials even today. The reason is pure greed for profits in many companies. They simply make handling this material too easy. A worker makes forty to forty-five years of his life available to his employer. So there should be some obligation on the part of the employer that people are at least healthy when they leave and get their pension! I'm hopping mad at SUVA. They really ought to know how dangerous asbestos is. They've surely learned a lot from the past, but the company's profits are partly, I think, more important to them. We desperately need in our otherwise so progressive Switzerland stronger laws that put the protection of workers who are in contact with hazardous materials above the companies' desire for profits. In the factories, wherever there's hazardous material lurking, whether it's asbestos cement particles or, for example, sprayed-on asbestos insulation, they should have to post a notice that says: Attention! Asbestos. That's the only way the workers would take the necessary safety precautions. And that's the only way cases such as the Globus store in Zurich could be prevented. During remodelling workers stumbled across asbestos and the whole store had to be temporarily shut down. We also desperately need an asbestos register that tells everyone in towns and in the cantons which buildings are contaminated with asbestos.

Father died three years ago but maybe the pain of others can be prevented.'

* An 'integrity payment' can be claimed by asbestos victims if, as a result of an occupational illness, they are seriously and continuously limited in their physical or mental integrity.

The 'mineral of a thousand possibilities'

During the heyday of asbestos production in the mid-twentieth century over three thousand products worldwide were made from asbestos. The fibre was called the 'mineral of a thousand possibilities' because of its properties and its possible industrial applications. It crept into the everyday life of most families: Toasters, irons, ironing boards, and hair dryers were all insulated with asbestos. Heart surgeons used asbestos thread; asbestos was used as polishing agent in toothpaste; and cigarettes were made with an asbestos filter; the U.S. Post Office used mail sacks made from asbestos cloth. Asbestos was used for buttons, telephones, and electrical switch boxes. And many of these products are still very much in use decades after the first bans in the 1970s, 1980s, and 1990s. The bans, after all, when there was one, affected only imports, production, and sales. Thus we should assume that everyday products containing asbestos, such as toasters and hair dryers, weren't simply thrown away after the bans went into effect for the reason that most consumers didn't even know about the components of these products. It is a fact, for example, that even today every second Swiss

household has an electrical switchbox containing asbestos. Just in Zurich alone the number of electrical metres containing asbestos is estimated to be about fifty thousand.¹³

The paragraphs below describe some of the trailblazing industrial applications of asbestos used during the last century's technological progress.

Shipping

When asbestos was employed in steamships, it was a decisive moment in the advance of steam navigation. When the first steamships crossed the oceans at the beginning of the nineteenth century marine engineers began looking for a material that could insulate and resist heat as well as protect the sides of the ship against the salt air of the sea. Asbestos soon came to be seen as the ideal material. The long asbestos fibres were woven into mats up to fifty centimetres thick that could easily resist temperatures up to six hundred degrees. The mats insulated the steam heating pipes. This not only meant protection against fire and the possibility of injury but also meant that less energy was lost, and therefore less coal was needed.

The First World War led to a boom in shipbuilding, especially warships. The munitions magazines presented an enormous hazard since even a minor fire could mean an explosion. Asbestos was therefore used by the ton as insulating material, first in the form of asbestos mats, then later in the form of sprayed-on asbestos.¹⁴ By the end of the 1960s asbestos insulation could usually be found in passenger ships as well. Within a few decades the material had become the unrivalled insulating material everywhere. There were consequences: No other branch of industry could count as many asbestos victims as the shipbuilding industry. A study by the American scientist W. J. Nicholson estimated that in 1981 the number of deaths annually in the shipbuilding industry and repair facilities due to tumours was over 2,700 cases in the United States, and Italian naval personnel complained of a new 'battle front': More than five hundred sailors have died due to exposure to asbestos on war ships in the Italian fleet.¹⁵

Insulation in steam engines

Since the middle of the nineteenth century people have tried to increase the performance of steam engines by superheating the steam. And they succeeded in building a suitable superheater in 1856 but its insulation couldn't withstand temperatures above 260° Celsius. The Englishman Richard Lloyd succeeded in constructing a soft asbestos packing. Soft packing is used to insulate the moving rods in the engine.

But this most promising invention of Lloyd's was shelved because the substance used for lubricating steam cylinders decomposed at high temperatures. After steam engines were technologically more advanced, engineers tried again in 1890 to increase the performance by superheating the steam. This time they succeeded: The organic lubricating oils were replaced by mineral oils, which could withstand temperatures of over 350° Celsius.

13. Estimate as of 2006, 'Kassensturz' in television broadcast *Schweizer Fernsehen DRS*, November 28, 2006.

14. Lange V. (1990) Asbest in der Schifffahrt, in Bönisch M., Gößwald U. and Jacob B. (eds.) z.B. Asbest. Ein Stein des Anstoßes. Kulturelle und soziale Dimensionen des Umweltproblems. Begleitband zur Ausstellung im Heimatmuseum Berlin-Neukölln, 20. Okt. 1990 - 1. April 1991, Berlin, Heimatmuseum Berlin-Neukölln.

15. Focellini P. (2006) Veleno Eternità per l'eternità, *L'Espresso*, 18 December 2006.

In 1866 moulded asbestos was tested for insulation. The insulation of boilers and conduit pipes was important in further developing steam engines in order to minimise the loss of heating energy and to achieve higher efficiency.

Steam technology was most widely used in locomotive construction. The steam locomotive came into use and with its introduction railroads were at last able to support an industrialised society.¹⁶ The subsequent successful development of steam engines further earned asbestos the reputation of being a super material.

Yarns, paper board, and asbestos rubber sheeting

The first German asbestos factory, named Asbestwerke Louis Wertheim, was built in Frankfurt am Main in 1871. A second factory soon followed in 1878, the G. and A. Thoenes asbestos factory near Dresden in Radebeul in Saxony. Both factories produced yarn and soft asbestos packing. To manufacture asbestos fabric, the method developed in Italy towards the end of the seventeenth century was used. It is well established that fireproof materials were used to make garments for blast furnace workers and firemen. In the rubber works of Metzeler & Co. in Munich asbestos fabric was mixed with natural rubber for the first time in 1883 and this was made into aprons and garments that could protect workers against splattering molten metal and extreme heat. The paper board, also fireproof, had wide application: From inserts for shoes of foundry workers to coatings for doors to insulation for boilers.

Filters for the chemical and beverage industries

Asbestos filters were introduced in the chemical and beverage industries at the end of the nineteenth century. White asbestos was able to filter the smallest particles and microorganisms from liquids thanks to its absorption capacity. Asbestos filter cloths were widely used in the beverage industry because wine, fruit juice, and beer become clear more quickly than with the traditional filters made of cellulose. In Switzerland using asbestos filters was banned only at the beginning of the 1980s. Up until that time asbestos was considered a practical material in Switzerland for food processing and was explicitly mentioned in food processing regulations.

An example of an especially grotesque application of asbestos filters occurred during the Second World War: Millions of gas masks were manufactured with filters that used the particularly hazardous blue asbestos.¹⁷

Linings for brakes and couplings

Asbestos also became indispensable in the manufacturing industry where materials were subject to friction because it was stable and heat-resistant. The process for manufacturing woven brake bands was invented in England in 1896. The Germans imitated the English in 1920 and introduced moulded brake and coupling linings at Coswig near Dresden. Brake

16. Vogel S. (1990) *op. cit.*

17. Lochhead R. (ed.) (1983) *Eternit: Asbest und Profit. Ein Konzern verseucht die Umwelt*, Zurich, SAP/Veritas-Verlag.

linings containing asbestos were adapted everywhere for vehicles that moved on tracks, on streets, and in the air. The fact that these special applications of asbestos were so widespread is reflected in mortality statistics: Surprisingly large numbers of repairmen and mechanics are among the victims of asbestos.

Sprayed-on asbestos insulation

Sprayed-on asbestos consists of a loose bond of asbestos fibres and/or artificial mineral fibres mixed with water and/or an adhesive, which is sprayed on under pressure. After it dries, a layer forms soft enough to be loosened merely by scratching. This layer, only a few centimetres thick, can be destroyed by pressure or mere touch, losing its cohesion, and very quickly releases fibres. For this reason, sprayed-on asbestos is considered a particularly dangerous health hazard.

As early as 1900, an application was invented to use the tiniest fibres that processing did not separate from the rock. The slag was ground, and lime, gypsum or cement, and water were added, making a mixture of asbestos mortar ready to apply; mostly this was used for wall plaster. The English company of J. W. Robert Ltd. and the American company of Smith & Kanzler Corp. developed a process around 1920 that made it possible to spray asbestos cement mixture directly onto the surfaces to be insulated. This new method meant a smooth covering if the surface was uneven. Sprayed-on asbestos was swiftly adopted for insulating public buildings in the United States; by the 1950s, there was even a sprayed-on asbestos boom. In Germany sprayed-on asbestos became popular in the 1970s.

This technology was used in Switzerland for about forty years until the mid-1970s. Swiss authorities have never banned sprayed-on asbestos. It's therefore impossible to say exactly when this technology was no longer being used. What is known, however, is that some Swiss companies offering sprayed-on asbestos transformed themselves into hazardous waste removal companies after abandoning sprayed-on asbestos applications. Thus they could continue to make money from sprayed-on asbestos by safely removing the life-threatening layers of asbestos that they had been applying for years.

No one knows how many buildings in Switzerland have been insulated with sprayed-on asbestos. BUWAL (*Bundesamt für Umwelt, Wald und Landschaft*, Office for the Environment, Forests, and Landscape) put together a list for the cantons based on the estimates of three large sprayed-on asbestos companies. There was a total of about 4,000 buildings with sprayed-on asbestos. These were mostly public buildings such as schools, sports centres, hospitals, and even warehouses, cafes, and banks.¹⁸ It was up to the cantons themselves to decide how they wanted to eventually remove the hazardous material.

Depending on the condition of the surfaces with sprayed-on asbestos the health hazard to those who use the buildings can be considerable. But that's not all: During remodelling or demolition a vast number of fibres are released that are a hazard not only to workers on the jobsite but to neighbours adjacent to the construction site.

Four large firms for sprayed-on asbestos and a few smaller ones controlled the Swiss market. Only the names of the leading firms back then are known today. Bernhard Hitz & Söhne (products used: Limpet and Pirok; an affiliate of Turner & Newall, Great Britain), Schneider & Co. AG (products used: Cafco and silbestos), CTW-Spray AG (product used:

18. For a partial list of the buildings in Zurich and nearby, see Roselli M. (2007) *Die Asbestflüge. Geschichte und Gegenwart einer Industriekatastrophe*, Zurich, Rotpunktverlag, p. 40.

sprayed-on asbestos; an affiliate of Asbestos Corporation, USA), Siegfried Keller (product used: Afrajete amiante).¹⁹

Asbestos board

Asbestos board is different from sprayed-on asbestos in that it is thicker and contains more adhesive. For this reason it is certainly more stable than sprayed-on asbestos but can be scratched open merely with a fingernail and therefore is very dangerous. Asbestos board is primarily used in construction to protect against fire, for example, in boiler rooms, factories, and in switch panels in electric installations. Asbestos board is mostly installed under window sills in residential construction to insulate against heat from radiators. Pical (asbestos) panels made from asbestos board were three times lighter than asbestos cement and thus much easier to work with. Working on site (cutting and drilling) and demolition are however considerably more hazardous.

Asbestos cement

As already mentioned, Ludwig Hatschek patented his first asbestos cement panels in 1900 under the clever name of Eternit. Originally the idea was to replace traditional roof tiles with the asbestos cement panels since an Eternit roof weighed only a fifth the weight of a traditional tile roof. But it was soon discovered that asbestos cement panels could be a construction material in their own right, for use as a wall covering, corrugated roofing, flooring, and for the production of pre-fab parts. The unique advantages of this new construction material were that it was fireproof, had good acoustic properties, held up to the weather, and could be handled easily because it was light. With conduit pipes, the moulded asbestos cement pipes were especially suitable for drinking water and sewer pipes because particles suspended in drinking water and sewage didn't seem to corrode asbestos cement pipes.

Soon there was a global boom in asbestos cement production. After the Eternit companies had begun production as early as 1903 in Germany and France and the next year in Switzerland, ten more countries in 1910 alone established production, including Russia and the United States. Asbestos cement's share of all asbestos production exploded worldwide.

There are hundreds of products made of asbestos cement, the most important being:

- Flat panels for roofs and siding (starting in 1900)
- Corrugated roof panels (starting in 1910)
- Water pipes (starting in 1928)
- Flower boxes (starting in 1939)
- Ducts for hot air distribution (starting in 1948)
- Enamel panels for siding (starting in 1953).

To comprehend the economic success of this material, it is necessary to examine the history of construction at the time. Asbestos cement is one of the first materials to be made of compounds (composite materials) that the industry produced towards the end of the nineteenth century. Composite materials mean two or more materials are tightly and permanently

¹⁹. All four companies are mentioned in Lochhead R. (1983) *op. cit.*

bound together. The invention of these composite materials was a real technological revolution for the industry.

Asbestos cement is only one application of this principle, which inspired the experts to unbridled enthusiasm. 'With the appearance of composite materials, technology has entered a new phase to create a new order of material and to pry the original material free from nature. Based on the most important categories of materials we now have produced all possible materials thanks to chemistry and our knowledge on how to make alloys. But we remained imprisoned within the walls of the traditional categories of materials. There were metals and there were plastics. Today we see that we can unite different categories. Naturally, it was of the greatest significance to bring about this unnatural marriage, taking advantage of each material from even the most diverse families of materials.'²⁰

Entirely new sorts of materials were derived from these synthetic combinations, which were acknowledged with amazement in the scientific literature. Since time immemorial people had tried, for example, to improve clay by adding straw and gravel or sand as filler, but the material remained brittle. A breakthrough succeeded only when cement was combined with gravel and sand as the filler to make concrete. This was discovered in 1824. An artificial stone, a revolutionary invention. In 1860 they went a step further and began to embed metal reinforcement to increase tensile strength: This was the birth of reinforced concrete or 'Ferro concrete'. At the end of the nineteenth century there was actually a boom in inventing composite materials: Linoleum appeared in 1863 (from *linum*, flax; and *oleum*, oil; linseed oil was the adhesive; jute increased the strength; and powdered cork was the filler); in metal working, alloys replaced base metals such as iron and lead, which had been the choice before. In the construction of highrises and underground construction, reinforced concrete quickly replaced natural stone or fired or unfired clay. Thus masons and stone, marble, or slate cutters who had worked tiles or construction blocks turned into form workers and contractors who laid rebars and poured concrete.²¹

The new composite materials attracted capitalists who wanted to invest. At the moment asbestos cement was invented, reinforced concrete had already replaced all the traditional construction materials with exception of what was used for roofing, siding, walls, and flooring. The invention of asbestos cement thus hit a bull's-eye because asbestos cement could now be applied for roofing, siding, walls, and flooring. Since iron rusts, it must always have a concrete layer thick enough to protect it. The thickness of this layer determines the minimum thickness of a concrete panel. This is not the case with asbestos cement because asbestos fibres don't corrode. No more than a very thin layer of cement is required, so the asbestos cement panels only need to be a few millimetres thick – and this is what makes the material a resounding success. This could even compensate for the comparatively labour-intensive manufacturing process for this material. This construction material not only has known health risks from contact during handling but especially dangerous ones. Since the raw material is very sturdy it can only be moulded with difficulty. It can only be formed in melds after it has been rolled out like cookie dough. Cutting pieces was typically women's work in many asbestos cement factories, such as, for example, at Eternit in the Italian town of Casale Monferrato, where there are hundreds of asbestos victims to mourn. And then the various different products were beaten into the forms with hammers.

Effective marketing was an important key to the success of this product. The asbestos cement industry understood right from the beginning how to involve architects and

20. Blachère G. (1972) *Les matériaux de construction*, Paris, Eyrolles/Gauthier-Villars.

21. Lochhead R. (1983) *op. cit.*

engineers by publishing innumerable articles and sponsoring courses. In the book *Eternit: Asbest und Profit*, which appeared in Switzerland in 1983, this linkage is plausibly explained: 'In traditional architectural training material science is neglected. Architects and builders greatly depend on the Eternit publications, with which they are inundated. These are free and of unsurpassed quality. They are unassailable because there is no widely distributed, independent scientific journal for building sciences in Switzerland, reflecting the latest state of technology. There are foreign journals of course, but these are not widely read. There is a crass disparity between the money which Eternit spends for publications and training courses and the money spent by professional associations (such as the Swiss Engineers and Architects Association or SIA) in the construction industry or the technical universities.'²²

Lots of courses for the craftsmen were also a part of the marketing strategy, such as the ones offered by Eternit in Switzerland. The Swiss Eternit educated, for example, 2,500 roofers²³ and offered 230 free six-day courses in the years between 1919 and 1954.²⁴

22. *Ibid.*

23. Eternit #42, 1954.

24. Eternit #46, 1957.

Chapter 2

Medical findings and silencing them

'This is not a hypothesis but certain knowledge'

Medical findings first published at the beginning of the twentieth century

At the end of the nineteenth century, when the industrial use of the supposed wonder fibre began, it was noticed on occasion that asbestos workers were often sick. At a time when tuberculosis was a common and widespread disease, whose symptoms superficially resemble those of asbestosis and lung cancer, it was reasonable for a long time to assume that asbestos-related diseases went under the name of 'consumption'. Correct diagnoses of workers' illnesses in factories handling asbestos are therefore not accurately listed in the first reports that we have. In the *British Annual Report of the Chief Inspector of Factories and Workshops* of 1899 there is, for example, mention of the 'damaging effects of the fibres'.²⁵ Between 1894 and 1906, the Italian physician L. Scarpa also investigated the health of thirty asbestos workers. Of course he was treating them for what he thought was tuberculosis. He wrote in his report that these patients weren't responding to treatment but on the contrary were dying comparatively quickly.²⁶

The first proven pathological finding of asbestosis was made in 1900 by a London physician named H. Montague Murray. The Englishman found the first certain proof of asbestosis in the lung of a young asbestos worker with the 'lung

25. HM Factory Inspectorate (1899) Annual report of the Chief Inspector of Factories and Workshops for the year 1899.

26. Scarpa L. (1908) *Industria dell'amianto e tubercolosi*, in Lucatello L. (ed.) XVIIe Congresso della Società italiana di Medicina interna, Roma, 358-359.

tissue completely penetrated and destroyed by asbestos needles'.²⁷ A number of scientific articles followed.

Neither the owners of asbestos factories nor oversight agencies, however, learned any lessons from this, but American life insurance companies did. As early as 1918 the New York Prudential Life Insurance Company refused to insure asbestos workers on this basis. The 1924 report by W. E. Cook, *Fibrosis of the Lungs Due to the Inhalation of Asbestos Dust* is considered to be the first serious attempt of a physician to grapple with asbestos-related diseases.

It took Switzerland another fifteen years until 1939 before SUVA first recognised a case of asbestosis as an occupational disease and another twenty-four years until 1953 when this distinctive and widespread ailment of asbestos workers was included in the list of occupational diseases to be compensated. In comparison: In Hitler's Germany the disease was included in the list of recognised occupational diseases as early as 1936, in Italy in 1943, and in France in 1945.

Table 5 Chronological table for asbestosis recognised as occupational disease

1900	Asbestosis is medically identified in London.
1918	American insurance companies refuse to issue life insurance policies for asbestos workers.
1936	Germany includes asbestosis in the list of occupational diseases.
1943	Italy includes asbestosis in the list of occupational diseases.
1945	France includes asbestosis in the list of occupational diseases.
1953	Switzerland includes asbestosis in the list of occupational diseases.
1955	Austria includes asbestosis in the list of occupational diseases.
1969	Belgium includes asbestosis in the list of occupational diseases.

Until 1931 articles concerned with asbestos-related diseases were found mostly in English journals; these were, however, also known in German-speaking countries. In that year the journal of the newly founded German *Archiv für Gewerbepathologie und Gewerbehygiene* (*Archive for Tissue Pathology and Tissue Hygiene*) published an article by the English physician Sir Thomas Oliver. He summarised what was known, which had an incendiary effect, at least on German physicians.

In 1938 the physician Martin Nordmann described two cases of 'Occupational Cancer of Asbestos Workers'. This led workers' accident insurance fund in Germany in 1943 to include lung cancer linked with asbestosis in the list of occupational illness.

It took even longer before the suspected link between exposure to asbestos and the appearance of mesothelioma (pleural and peritoneal cancer) was proven. The groundbreaking studies were done in South Africa and the United States. The first description of a pleural mesothelioma (pleural refers to the outer lining of the lungs and internal chest wall) due to the detrimental effect of asbestos appeared as early as 1938; however, the research team led by Chris Wagner in South Africa succeeded in establishing the link epidemiologically only in 1960. The team examined thirty-two patients who had died of pleural cancer. In fifteen of these patients the effect of blue asbestos in the work place could be established. The remaining seventeen patients turned out to be residents of tracts abutting the Cape

27. Büttner J.U. (2004) *Asbest in der Vormoderne: vom Mythos zur Wissenschaft*, Münster, Waxmann.

Asbestos mining works.²⁸ This stunning observation revealed a terrible new insight to the scientists and of course to the owners of the asbestos works: Asbestos was not only harmful to the workers in the asbestos works and mines, but also to those who lived nearby even if these were exposed to a considerably lower concentration of asbestos dust.

In 1965 the distinguished American asbestos researcher, Irving J. Selikoff, presented his results of years of asbestos research to an influential congress in New York. Everyone who was anyone internationally in the field of asbestos medicine was there. Selikoff's presentations generated enormous interest. He presented an epidemiological study of 1,522 men who had worked with asbestos insulation. Among those exposed to asbestos the longest, having worked with it for over twenty years, it was found that lung cancer occurred seven times more frequently than in a control group from the general population; other types of cancers also occurred at higher rates.²⁹ Selikoff's conclusion: 'Heavy contact with asbestos during a single month in one's life can cause mesothelioma cancer decades later, and the risk of lung cancer doubles. This is not a hypothesis, but certain knowledge.'³⁰

In Switzerland, one of the vital centres of the global asbestos cement industry, it took another three decades before the medical facts were acknowledged. The asbestos lobby was particularly strong here, and the Internationale Asbestzement AG (SAIAC), the umbrella organisation of producers of asbestos cement, had its headquarters in Niederurnen. This has retarded the process of dealing with the issues of asbestos in Switzerland up to the present. For example, one can still read in the current 'Facts Sheet' put out by SUVA, the Swiss Accident Insurance Fund, that the link between mesothelioma and exposure to asbestos was first 'proven in the late 1960s and early 1970s'. And that lung cancer with asbestosis isn't even mentioned in the commission's time line, but instead there's mention of the ban on sprayed-on asbestos, which is said to have been imposed in 1975 – which is not true.

Over the past few years, SUVA has frequently been in the crossfire of its critics for its questionable conduct. Asbestos victims accuse the Commission of reacting with too little too late. One victim has even filed what is called a derivative lawsuit, under the Swiss Code of Obligations (Code of Contracts), against the Commission.

In a press statement on November 28, 2004, under pressure from the media, SUVA stated its position on asbestos issues. Here the Commission denied it had any responsibility for the late date of the asbestos ban: 'The danger of the fibrous material asbestos that has been heavily used in the past is an especially sad chapter of industrial history. Science recognised the link between exposure and serious illness only gradually, the key reason being the long latency period for these diseases. Forty years can elapse, for example in the case of mesothelioma, a particularly insidious tumour disease, before the disease manifests itself. SUVA – to the extent it has any influence – has always responded to medical advances by correspondingly tightening regulations to protect the health of workers. But SUVA has never had the authority to have the manufacture of asbestos banned, one of the reasons for which SUVA has been criticised. Furthermore, compliance with and implementation of measures for the safety and protection of health in the work place is the duty of the employer and the employee.'

However, SUVA contradicts itself in the same press statement: On the one hand, the Commission writes that it is not responsible for a ban on asbestos; on the other, it lays claim to having forced a de facto ban on sprayed-on asbestos through more stringent safety measures during the 1970s.

28. Albracht G. and Schwerdtfeger O. A. (1991) *op. cit.*

29. Catrina W. (1985) *Der Eternit-Report: Stephan Schmidheiny's schweres Erbe*, Zurich, Orell Füssli.

30. Quoted by Michèle Sauvain (2005) *Spuren der Zeit: Asbest Tod in Zeitlupe - Von der Euphorie in die Katastrophe*, TV documentary, Schweizer Fernsehen DRS, 3 September 2005.

The press statement then goes on: ‘In any event, SUVA effected the ban on sprayed-on asbestos, which is particularly dangerous, in the mid-1970s ahead of other European countries with more stringent regulations and permissible limits. For decades SUVA has encouraged employers and employees to be aware of its legal obligations to protect the health and safety in the work place through information and education.’

So what’s accurate? Did or didn’t SUVA have an influence on issuing a ban? Put another way: How is SUVA supposed to have prevailed with sprayed-on asbestos but not with a ban on other industrial applications?

The press statement is contradictory and leaves many questions unanswered. The statements of the current president of the board of directors, Franz Steinegger, who commented on these very charges in a documentary made by Swiss National Television in 2005, are everything other than illuminating. The former progressive federal parliamentarian nonetheless conceded in this interview that the Commission had underestimated the problems with asbestos for a long time.

Franz Steinegger on the original tape: ‘We underestimated the problem for a long time. It was seen only with respect to asbestosis, as similar to black lung. And it was only noted that it could cause cancer in the 1960s and 1970s on the basis of American studies. I have to say that it was recognised as an occupational disease very quickly, and the permissible limits were lowered so that at least sprayed-on asbestos couldn’t be used anymore. In retrospect, however, you’d have to say that we certainly already knew in the 1940s and 1950s.’³¹

This process of repressing the issues of asbestos was not unique to SUVA. How other federal agencies too, such as the Federal Office of the Environment (BUWAL) and the Office of Health (BAG) handled things is evidence of the asbestos industry’s successful influence on the authorities. The most recent example of this ‘cooperation’ between the government and private industry happened just two years ago: As late as 2005 BUWAL published a study³² ‘initiated and financed’ by Eternit AG, which concludes that there is no immediate danger from weathered asbestos cement roofs and siding for the residents on abutting land.

But that’s not particularly remarkable as the Swiss asbestos industry has in the past played every tune to minimise the danger of this material and to prevent its classification as a Schedule I category of carcinogens (more on this subject in the section ‘The Exit’, p. 109). For Max Schmidheiny, the owner of Eternit, the harmlessness of asbestos cement was still a fact in 1984: ‘And then this all happened, that was in the 1960s [...]. I heard about Mr. Selikoff for the first time via Eternit in Berlin. They said, the guy’s a kook who does research to get money. We said that Eternit isn’t dangerous anyway because the fibres are embedded in cement. Completely harmless, which is a fact.’³³

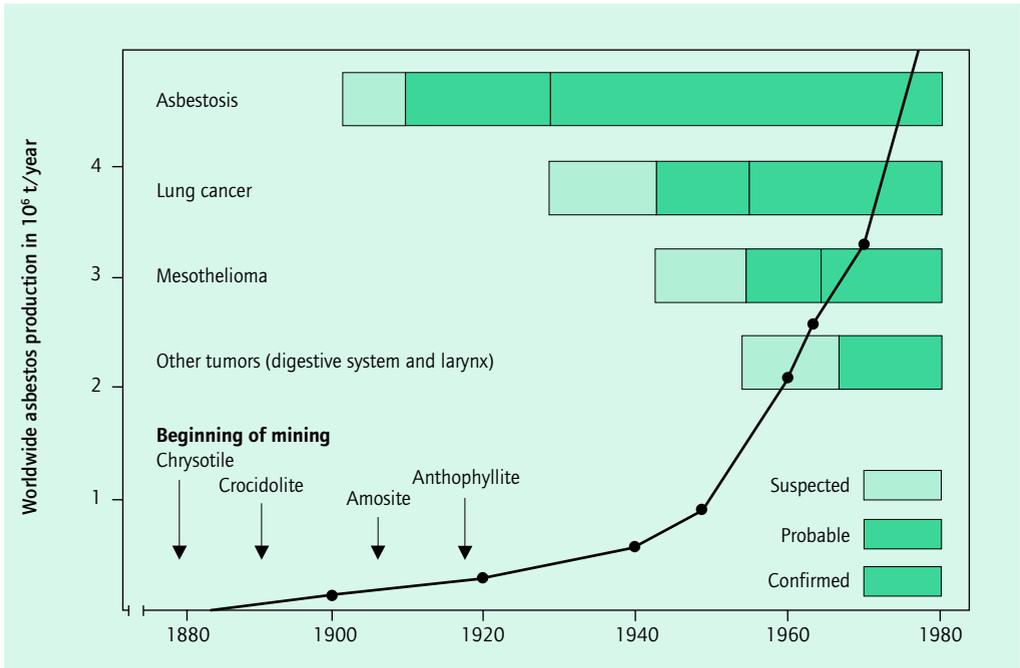
This attitude on the part of those responsible is one of the principal reasons why the first bans on asbestos followed only many decades after the medical findings were known. That asbestos was first mined and transported over thousands of kilometres before it was embedded into the cement by workers who suspected nothing was not of the least importance to these people.

31. Michèle Sauvain (2005) *op. cit.*

32. Heierli C. (Eternit AG) and Weber R. (BUWAL) (2005) Messungen von Asbestfasern bei Asbestzementdächern, Bern, Bundesamt für Umwelt, Wald und Landschaft.

33. Catrina W. (1985) *op. cit.*

Graph 2 Asbestos production and awareness of the damage



Source: Albracht and Schwerdtfeger, 1991

To conclude, we know that from the mid-1940s it was clinically corroborated that asbestosis was linked to lung cancer and from the beginning of the 1960s the link between malignant mesothelioma and asbestos exposure was proven. None of those responsible at the time can therefore seriously maintain that they knew nothing of the health risks. In fact, what did happen was that the asbestos industry tried for decades to refute these research results with counter-studies. And continues to do so in many countries to this day – with the miserable result that another hundred thousand men and women will suffer and die of an asbestos-related disease.

Portrait

Rita Feldmann

Nagging doubts

‘Cirrhosis of the liver. My father, Emil Noser, died of cirrhosis of the liver. That’s what the doctors told us at the Cantonal Hospital and that’s what’s in SUVA’s reports. But I still have my doubts. Especially after my mother died too, since in her case the diagnosis was mesothelioma, an asbestos cancer. Strange, because the course of the disease for my father and mother was identical. And now my brother has pleural plaques, which has been shown to be caused by asbestos. It’s obvious I have fear and doubts.

My father died in 1989. He started working at Eternit as a fourteen-year-old in Niederurnen in 1944 and always worked in the worst departments – where there was the most dust, where asbestos cement panels were ground. He worked in shipping only later. He died at the age of fifty-nine. Officially, as I said, of cirrhosis of the liver. But that illness comes from drinking or from jaundice and my father was neither a drinker nor did he have jaundice. At hospital they told us that he didn’t have jaundice; it had to be from alcohol. That’s absurd, putting it mildly, because, first of all, he didn’t have the money to drink and second, we would have noticed. There were ten of us, seven siblings, my parents, and my grandmother, in a four-room apartment and we would have noticed if we had had an alcoholic in the family. So we went to the senior doctor and told him this was not acceptable. But when we got the official report there it was that Father had had jaundice but wasn’t aware of it. That’s exactly how they put it. As for the hospital, the matter was finished and closed – and for SUVA too. In SUVA’s report they wrote that he did have mild asbestosis and pleural plaques, but that the immediate cause of death was liver failure. Be that as it may.

My father’s symptoms began when he was forty years old. He had problems breathing and fluid retention and from then on he was always taking all sorts of medications. These probably destroyed his liver. SUVA didn’t recognise Father’s sickness and death as work-related, so Mother didn’t even get a pension. We didn’t fight it at that time because Mother didn’t want to. But I still have my doubts.

I really got mad a full ten years later at how my father’s death was handled when my mother fell sick and her cause of death was officially mesothelioma, an asbestos cancer. My mother and father had the same clinical pattern and the same course of disease. Father was a heavy smoker, which was probably the reason his illness struck earlier. It’s been shown that smoking is especially hazardous for asbestos workers. The illness of my mother, Erika Noser, surprised us. She had never worked in production but only worked as a cleaning woman in the Eternit offices to help out with Father’s wages. At the end he was earning, shortly before his death, just 3,300 francs and when we were kids living at home it was even less. Too little for a family of nine.

During the winter of 2000-2001, Mother had a stubborn cough so she went to the doctor. But he sent her into hospital right away. There the doctors diagnosed a wet pleurisy, whatever that meant, and released her after a short time.

Mother only worked evenings for a few hours in the Eternit offices. I don't think she caught the disease there in the offices. Father brought home his work clothes covered in dust, which she laundered, and besides we did everything in those days with Eternit. The material was everywhere. Kids used to build huts with it. Adults used the panels in the garden, constructed things, cut and drilled the stuff. Everything that came from Eternit was considered good. There were even contests in the factory to invent new products. Workers got money. That's why they tried out all sorts of things, from mailboxes to flower boxes.

After her first trip to hospital my mother felt better for a while. But in October 2001 she had problems breathing again and from then on she got worse and worse. Suddenly we noticed that her movements were slightly limited on one side of her body as if she had had a stroke. Between Christmas and New Year's I took her to the doctor, who merely said that this was typical for this disease. But which disease it was he didn't say, and I didn't want to ask him in front of my mother. The next day I called him up and then he told me that he suspected it was on account of asbestos. Mother went into hospital on January 8, and on February 20, 2002, she was dead. She was seventy-four. They diagnosed mesothelioma. I'm thinking that we should almost pray that things go as quickly as they did with my mother because this disease is brutal. Her body had retained liters of water.

When we got the diagnosis I demanded that the doctors at hospital register Mother's illness with SUVA. But the doctors thought that wasn't possible because she hadn't really been an Eternit worker but only a cleaning woman in the office. I had to take matters into my own hands. So I was able to get to Eternit and asked for the form for filing with SUVA. A positive response came from SUVA. Even though my mother had been a cleaning woman, the mesothelioma was certified as work-related simply because she had worked at Eternit.

We got 2,501 francs in death benefits when my mother died. But the money wasn't the point. I just didn't think it fair that my mother and her health insurance had to pay for the medical expenses even though it was obvious that SUVA should have paid them. We pay for our health insurance after all but employers pay for SUVA. That's the main difference for me. So we applied to SUVA with the request that they pay the medical expenses – which they did, no questions asked.

After my mother's death I kept thinking of my father's death. My doubts wouldn't go away. So I asked for a meeting with Eternit and asked them to review my father's case again because we were certain that Mother and Father had had the same disease. Eternit agreed to our request but we soon got a letter from SUVA. They sent us the same doctor's report from years ago. They didn't even make the effort to review anything again.

So my father didn't officially die of asbestos but I still have my doubts. Also because we now know that one of my brothers has pleural plaques. The rest of us siblings are simply scared now.

The brother who's sick is forty-nine years old. Four years ago he went into hospital in Zurich for a check-up just as a precaution, and there they observed shadows on his lung. He was diagnosed with pleural plaques and advised to have an operation to remove these plaques. First they scraped one lobe and a year later, the other. My brother immediately got SUVA involved. So we were in contact with Eternit again and they said we had to register my brother. They were very accommodating since there weren't any personnel files or pay records for the children who had worked there but they still immediately filled out the forms and handed them in to SUVA. My brother still has forty percent lung capacity and has a pension from SUVA.

My brother, sister, and I worked at Eternit as children during school vacations. It was common in those days for lots of children to work during vacations in the factory. I sorted small pipes in shipping and cleaned the workfloors. My sister and brother were in production. We got something like 4.50 francs an hour, which seemed like a lot of money to us. I started at Eternit when I was about twelve. I volunteered to do this since we didn't have any pocket money at home. If we wanted to go camping we had to pay for it ourselves. I even bought myself a Velo motorbike with my money to get from Oberurnen to school in Näfels. I also bought skis and clothes, all the things my parents couldn't afford. I was proud of earning the money myself. I remember this time well, and it was a lovely time despite everything.

When I was a kid it was a rule in the factory that you couldn't use the compressed air hose after work anymore to blow the dust off your clothes. They said it was dangerous because if you had a wound and an air bubble was forced in, it could get into your bloodstream. They didn't tell us that it was dangerous because of the asbestos ... I've never forgotten that weird instruction.

Our past weighs on our whole family like a huge mortgage. Even now my brother-in-law is working for Eternit. This is a source of tension and arguments because he's loyal to the company and his job. He's afraid, like a lot of people, of losing his job if the company is criticised. That's normal, of course, but on the other hand we have all these cases of illness in the family.

Who's to blame? To sort out who's to blame is hard. In the beginning people thought asbestos was a wonder fibre. If people know it's dangerous and they still work there then that's their responsibility. But if they sweep it under the rug, then that's not right. I ask myself how can the Schmidheiny family live like that, knowing that so many people died of asbestos. Some didn't even work there. They say seventy Eternit workers have died from asbestos to date. That's what they say at Eternit. I'm amazed. I could name a ton of names of people who died. I can't stop thinking about this. And the family Schmidheiny, which sells the company for a profit and sneaks away from being accountable ... They should have put them through the wringer, made them set up a reserve ... If they had a conscience, they would answer for their past.'

Asbestos industry boycotts cancer awareness efforts

The case of South Africa

The English science journal, *New Scientist*, revealed in its issue of April 22, 1982, how the asbestos industry in South Africa tried to prevent the publication and dissemination of scientific studies on the devastating results of exposure to asbestos. The asbestos industry, which still denied the link between asbestos and cancer in the 1970s, prevented the publication of scientific studies, denied research money, and prohibited field studies on its sites. Several asbestos mines that were affected in South Africa were then owned by the Swiss corporate group of the Rhine Valley Schmidheiny family, according to the respected English journal.

Laurie Flynn, the English TV reporter, even described two cover-up schemes in South Africa in his *New Scientist* article. The first case was the epidemiological study by Chris Wagner and his team, who had warned at the beginning of the 1960s in South Africa that cancer cases caused by asbestos, that is mesothelioma, were increasing in the area around

Kuruman, and that this affected in horrifyingly high numbers not only workers but those living on lands next to the mines. The research team characterised the working conditions in the mines as catastrophic.

‘There were great plumes of blue dust over the mills. [...] In places, the asbestos was separated from the rock by the most dangerous and primitive method, hand labour by women often with their babies strapped to their backs. Immense dumps of milled asbestos waste, heavy with fibre, lay open to the wind. People who had lived in this area for short periods, or who had simply passed through, were developing mesotheliomas. In short, there was a public health disaster on a truly terrible scale in the blue asbestos mining areas of the Northern Cape.’³⁴

According to Flynn, the South African Council for Scientific and Industrial Research wanted to counter the results of the research and commissioned a confidential report, which, however, concluded in 1962 that ‘even after the most critical re-assessment of the findings [...] people who live or have lived in the areas of Prieska, Koegas, Kuruman and Penge are in danger of contracting asbestosis even though they have no industrial exposure to asbestos dust inhalation, [...] and that an alarmingly high number of cases of mesothelioma of the pleura [the lining of the lung] has been discovered among people who live or have lived in the North Western Cape area [...]’

The confidential report urgently advised taking precautions to decrease dust emissions. The South African Department of Mines and the asbestos industry should ‘take immediate steps to attempt to effectively deal with this hazard.’ The confidential report was then presented to the asbestos industry and the reaction, as Flynn describes it, didn’t take long: The mining companies refused any more research monies and began a defamation campaign against the researchers involved. They had been expecting, they said, research on the lung disease silicosis and not a cancer study. The researchers, wanting recognition, it was said, had not refrained from destroying their export industry. The industry was not disinclined to support research but not on the subject of cancer. A new research program was put into place, this time without reference to cancer under the euphemistic title *An Investigation into Possible Air Pollution by Asbestos Dust*.

The researchers nonetheless struggled for two years to publish their report. But the asbestos industry stuck to its veto: They would agree to publication only if the word ‘cancer’ was replaced by the word ‘tuberculosis’. The alarming report, according to Flynn, was never made public but was distributed only to the participating research institutes and to those who had provided the financial support, including the industry.

The second case, which Flynn revealed in the *New Scientist*, occurred almost twenty years later, in 1978. Two South African scientists, Leslie Irwig and Hannes Botha from the National Research Institute for Occupational Diseases, wanted to introduce two studies at a scientific congress in New York. One study was on the topic of asbestosis and the other was on asbestos-related mortality in South Africa. The second paper not only contained the controversial word ‘cancer’, but also showed that there was an increased risk of cancer for those living adjacent to the asbestos production sites.

When the South Africa Medical Research Council (MRC) learned of the plans of the two scientists, they were instructed to return home post-haste. Botha had to telephone his colleague Irwig, who had already left for New York a few days before to pass on the MRC’s instructions. The MRC’s actions in turn had no scientific basis but came from the direct pressure of the asbestos industry. But how was that possible?

34. Flynn L. (1982) South Africa blacks out blue asbestos risk, *New Scientist*, 22, 237-239.

The study had fallen into the wrong hands, namely into those of Fritz Baunach, secretary of the South African Asbestos Producers Advisory Committee (Saapac), the lobbying group for the South African asbestos industry. At the time Fritz Baunach was also the health representative of the Kuruman Cape Blue Asbestos Mine Company and of Asbestos Investments Everite, which was a subsidiary of the Swiss-Belgian Eternit Group.

Baunach, with a degree in business, was the industry's representative on a science committee of the MRC and thus knew ahead of time of Irwig's and Botha's research results. In order to refute the research results of the two scientists Saapac in turn commissioned a counter-study from another consulting firm. This paper had five parts. In the first part, four general problems of such studies were laid out. The last part recommended that future studies ignore the asbestos risk to the population because such epidemiological studies seemed too difficult to quantify.

Baunach saw to it that this counter-study was quickly distributed, and he was successful in persuading the MRC not to publish the alarming findings of Irwig and Botha.

In South Africa the revelations in the *New Scientist* caused something of an uproar. It was confirmed that publication of the Irwig-Botha report had been suppressed, but doubt about the scientific value of the study was justified. The story didn't go unnoticed even in Switzerland, the home of the Schmidheiny's. The *Tages-Anzeiger* journalist and asbestos expert Urs P. Gasche took up the *New Scientist* article and confronted Eternit AG with the serious charges in the English science journal: 'We do not know of the events described in *New Scientist*. We do not know its substance and cannot comment on them,'³⁵ was the terse comment from the company.

Portrait

Marcel Jann

The fight for justice



Marcel Jann (centre) with his brothers Roman and Charles in the 1960s

'Eternit is not dangerous because the asbestos fibres are bound in the product is what Max Schmidheiny said. He's the former owner of the Eternit factory in Niederurnen and the father of Stephan Schmidheiny, who inherited the company in the 1960s. As if he didn't know that the raw asbestos had first to come a long way from the mine to the factory, during which asbestos fibres floated free in the air and could spread their hazardous potential... I wonder just how stupid he thought people were who heard or read these arguments. By today's standards this statement is nothing more than crude suppression with criminal consequences.'*

35. Gasche U.P. (1982) Asbest-Industrie boykottierte Krebsaufklärung, *Tages-Anzeiger*, 20 July 1982.

On October 30, 2006, ten minutes before Marcel Jann died, a report was broadcast on television about Swiss landfills containing asbestos waste from Italy. Regula Jann had spent all afternoon at her husband's bedside in the hospital and had briefly come home to take a break. Her son Gregor was spelling her in hospital. 'I sat in the living room, watching the report, and thought: That's absolutely crazy! A man from this landfill was saying that asbestos cement was absolutely harmless. In the report they showed how they tossed the asbestos cement panels from a lorry, and the panels broke into a thousand pieces. Of course asbestos dust flies into the air!'

For Regula Jann, whose husband was suffering from mesothelioma and lay dying at the age of fifty-three in the hospital, the words of the landfill owner was a slap in her face. She became very upset and angry when the report was over. She felt she had to do something at once to stop this insanity. She wanted to send the landfill owners a letter that very evening to tell them what was happening to her husband.

But that's not what happened. Ten minutes after the report on television was over the hospital called. Marcel had died.

Days later – Regula Jann had gotten herself under control to some extent and had spoken with her husband's friends – she sent her husband's obituary notice to the owners of the landfill.

The first time the symptoms of his illness showed up, Marcel Jann was hiking with his wife on the Gornergrat. The fifty-three-year-old elementary school teacher was a passionate mountain climber and Velo rider. But on this day, in the fall of 2004, he suddenly couldn't breathe. It was so bad that he thought he was going to suffocate. The same thing happened the next day. It wasn't just that he had difficulty breathing; according to his wife, he literally couldn't inhale.

The lung X-ray his family doctor ordered a few days later revealed bad news: One lung lobe was almost impossible to see on the X-ray; it was filled with water.

The word 'asbestos' was mentioned during the first consultation with the pulmonary physician – as a rather offhand remark. Regula Jann remembers it exactly. And the reaction of her husband. He understood at once. 'Asbestos, really! I grew up next door to Eternit in Niederurnen.'

Marcel Jann knew about the lethal potential of this fibre. He even knew that people who had never worked in an asbestos cement factory could get sick – as he had. He had already read a lot about it and had debated with his father on many an evening. His father, Max Jann, once a bookkeeper at Eternit, was a great admirer of the Schmidheiny family and his whole life long refused to believe in the danger of this fibre. Max Jann had done his apprenticeship at Holderbank, the cement company of the Schmidheyns, and years later, after a brief interlude of unemployment, he found a job at Eternit in Niederurnen. Max was always thankful to the Schmidheyns for this job. Furthermore, his grandfather had married Berta Schmidheiny. Max Jann therefore felt himself privately connected to this family as well. In retrospect, Regula Jann is happy that Marcel's parents were no longer alive when he fell ill. That would have been too much for them.

The pulmonary physician referred Marcel Jann to the Zurich University Hospital. They've had a pilot program there for the past few years under the direction of Professor Walter Weder for the surgical treatment of patients with malignant pleural mesothelioma – which is generally asbestos-related cancer of the pleura and abdominal membrane. The new treatment methods give the patient hope that the cancer can be cured.

The doctors gave Marcel Jann good odds of living a good quality life with his remaining lung since he was relatively young when he became ill as well as being strong and

athletic. He therefore didn't hesitate a moment before agreeing to undergo this treatment so he could face the future again as quickly as possible.

After exhausting chemotherapy, the elementary school teacher underwent a seven-hour operation in the spring of 2005 to remove his right lung and abdominal membrane along with his diaphragm, a rib, and the pericardium. Ten days later there were near-fatal complications that made an emergency operation necessary. After he had somewhat recovered from the operation he had twenty-three treatments of radiation therapy within six weeks. He continued to lose weight and was pushed to his physical limits. But the tough fighter didn't give up. He repeated to his wife over and over again: 'I want to live.' The moment he began to get better, he began a training program. The Janns bought a car so they could reach the edge of the forest trails sooner, where Marcel hobbled along on canes for hours almost every day. When it rained he went up and down the stairwell of his apartment house to keep in shape. 'His love of life was tremendous; everyone thought the way he tackled things was fantastic,' his wife remembers.

There are pictures and videos of Marcel Jann from this first phase of his illness because the Swiss National Television made a documentary film with his permission. He wanted, as he said, to put a face on the asbestos victim. But shortly after the film 'Asbestos, Death in Slow Motion' was broadcast in the series 'Traces of Time' he became someone to turn to for many who were in the same boat and also for those who had lost a family member to an asbestos-related illness. People telephoned him, sent him letters; he gave interviews to all sorts of different newspapers and soon the 'fight for justice', as he called it, became his life's purpose.

Marcel Jann turned to the lawyer for the Asbestos Victims' Association, Massimo Alliotta, in Winterthur, to see about the possibility of filing a complaint. He had already previously written several letters to Stephan Schmidheiny, the former owner of Eternit. He demanded an apology and compensation. Because the elementary school teacher's asbestos-related cancer wasn't work-related – he had merely lived next door to the factory from the time he was eight until he was eighteen – he had no claim to a pension from SUVA or to an integrity payment. Nor did he have a claim for compensation for expenses related to his illness. Jann therefore asked an insurance expert to calculate what the economic damages were for his family because of his early death. The expert estimated a sum of about 1.5 million francs. But no one was coming up with that amount. Eternit under its new owners paid the fatally ill man a mere 40,000 francs when Jann made a request. That is half of the integrity payment that some asbestos victims get from SUVA.

'I wanted to talk with Stephan Schmidheiny: In two letters I asked for a sign of reconciliation, along with substantial material concessions. I wanted financial compensation for loss of income and pension and also for expenses relating to my illness. Schmidheiny no longer saw himself as responsible since business risks and inherited liabilities were transferred to the new owners when the business was sold. So we were told to talk to the new Eternit in Niederurnen. That's who paid me the damages. It's a nice sum at first glance. But measured against the losses it's mere peanuts. I can't expect any help from SUVA since the asbestos poisoning can't be linked back to an employment relationship.'^{*}

In March 2006 Marcel Jann thought he had won his battle against the disease. He could finally go back to his class in the Gut School in Zurich, although only with a reduced teaching load. He had really missed his work with the children during his illness. He had written a letter explaining to them what had happened to him. Now, after more than a year he was finally able to return. But his happiness didn't last long. On Whitsunday he couldn't get any air. The cancer was now taking over his other lung. This mesothelioma

could not be operated on. Now it was obvious that the fifty-three-year-old man, who had never worked with the fatal asbestos itself, had only a few months to live.

‘After the shattering news we went home and began doing something about our farewells,’ says Regula Jann, who is a social worker by profession, in a firm voice. Her voice and gestures express strength – although Marcel had died only two weeks earlier at the time of this interview. No, she’s not a strong woman, that’s not her, she says with a smile. She simply had promised her husband not to let this asbestos destroy her.

In the weeks after receiving the news, Marcel and Regula put together a retrospective of his life for the funeral and the obituary. In a farewell letter to his pupils he told them he hoped they would learn a lot in school so that they could be independent in the world.

Just a few days after the second diagnosis Marcel’s condition began to deteriorate: ‘I’m hooked up to oxygen practically around the clock,’ he said. ‘I haven’t been able to work since the beginning of June. I feel weak and have lost weight. My mobility is severely limited. I need morphine drops to make it easier for me to breathe and. I tire quickly, breathing is hard work. I’m all right mentally and psychologically and I’m mentally alert. I see how my body is slowly being destroyed, how violently and quickly I grow old. Cancer is like a conflagration and difficult to control. It consumes everything it encounters ... I’m afraid. Afraid of suffocating, of pain, of the unknown, of the unfamiliar. I am relying on the people around me to give me enough morphine so I don’t suffer needless pain.’*

Marcel continued to struggle, even in his last months. Despite his crippling fears at times that he was going to suffocate. Together with his fellow sufferer, Roland Schwarzmann, whom he had met when he first fell ill, who was also suffering from asbestos cancer because he had worked for Eternit as a fourteen-year-old, he decided not to file a criminal complaint against Eternit.** Both men wanted to understand what had happened in this factory in the 1960s and 1970s. ‘We didn’t want to accept without protest the fatal disease that ravages people,’ the fatally ill man told the media when he was brought, hooked up to oxygen on a stretcher, to testify before the court in Glarus. Marcel Jann found one point in the Swiss legal system particularly offensive: the absurdly short statute of limitations period. The current statute sets it at ten to fifteen years; for a cancer that is symptomatic only after ten to forty years that’s a slap in the face for those affected. ‘That’s a state of affairs fit for a banana republic,’ the tough fighter said in one of his last interviews.

Marcel Jann’s friends gathered signatures at his funeral to protest the absurd statute of limitations period in Switzerland.

* Knill I. (2006) Asbestfolgen: Bauen am Abschied, Männerzeitung, 3/06, 27-31.

** A few months later Roland Schwarzmann also died of asbestos cancer.

Chapter 3

The Schmidheiny family and the asbestos business

The unstoppable rise of an entrepreneurial family

The path from tailor's son to tile baron

Approximately ninety percent of the asbestos imported into Switzerland went to the Eternit works in Niederurnen and Payerne, which at the time belonged to the Schmidheiny family. And that's not all. In the heyday of asbestos production the Schmidheiny family controlled Eternit factories in sixteen countries with no less than twenty-three thousand workers and they owned interests in factories in another sixteen countries, operated by Eternit Belgium belonging to the Emsens family. Annual revenue in the mid-1980s for Eternit Switzerland came to two billion francs. In like fashion, Eternit Belgium also booked revenues of two billion francs, of which the Schmidheiny family share was about twenty percent.³⁶

Just how did the Rhine Valley clan rise from modest circumstances to an imperium spanning the globe?

The history of the Schmidheiny family has been told in various ways, but basically as the story of the founder and his sons and heirs Jacob (1838-1905), Ernst (1871-1935), and Jacob Jr (1875-1955). Each version paints a picture of a pious Protestant family leading a 'moral, righteous life pleasing to God' that within only one generation could work its way out of the direst poverty by great effort during an era of industrialisation.

36. Catrina W. (1985) *op. cit.*

‘Religiosity is never put on display in this clan; but it is very much an important component of the family’s philosophy and basic ethics. The Calvinist doctrine of predestination or providence really gave the founding generation of the era meaning and formed the basis of their lives. Zwingli’s and Calvin’s doctrines preached austerity and the reformers’ work ethic influenced the Schmidheiny’s values. For the Calvinist work of any sort first and foremost gives life meaning,’³⁷ wrote Werner Catrina for instance in *Eternit-Report*, which appeared in 1985. This view of upright capitalism classically illustrates Max Weber’s thesis about the relationship between capitalism and Protestantism, described in his book *Die protestantische Ethik und der Geist des Kapitalismus (The Protestant Ethic and the Spirit of Capitalism)* (1905).

In the volume *Drei Schmidheiny* (Three Schmidheiny) in the series ‘Schweizer Pioniere der Wirtschaft und Technik’ (‘Swiss Pioneers of the Economy and Technology’), published by the Zurich Association for Economic Historical Studies, the family saga of the Schmidheiny dynasty in Heerbrugg is presented almost as a saint’s legend: Founding member of the family was Jacob Schmidheiny (1838-1905), son of Hansjacob and Katharina Schmidheiny, née Nüesch. The tailor’s son with frail health from Balgach, a weaver by trade, dreamed even as a child of becoming a captain of industry. ‘He was a singular child who loved to wander through the beech wood behind Grünstein Castle and wove his plans for a brilliant future among the towering trees. His plans were wholly focused on a lofty goal; that is: I shall own a factory!’³⁸ The family legend even celebrates Jacob Schmidheiny’s legendary parsimony, which is said to have been passed down to the current generation. The weaver is said to have been so careful with his wage of one franc a day that he was able to drop 200 francs cash on the table before his astonished parents after a year and a half.

The ambitious weaver was belatedly able to complete trade school at twenty-four. Soon thereafter he received a tempting offer from his former employer to take over the post of director in a new automated silk mill to be built in the nearby town of Sorntal. With this promotion the diligent tailor’s son took the first step towards his goal. Managing the factory required Schmidheiny to frequently be out and about. This was a problem for him, because his left leg was lame from a bout with smallpox. Soon an operation became necessary to allow him to put his full weight on his foot rather than just the ball of his foot. The operation was successful and the ‘bold one’ decided to give up the post of mill director against his family’s wishes and to dedicate himself to fulfilling his youthful dreams.

To this end, he bought an abandoned pottery factory in Weisersegg, on the road between Balgach and Rebstein, where he set up a few looms. After the down payment, his business account is said to have had no more than eighty francs. This was his first step towards independence – but it was not as a weaver but as tile manufacturer that he would later go down in the annals of Swiss industrial history.

At the beginning, his mill produced material that was half wool and half silk, which the young entrepreneur sold in southern Bavaria. Business was good at first but then in 1866 the Austro-Prussian War upset his plans. Even though his factory was struggling through a difficult time, the chroniclers note, he decided to fulfil another childhood dream by buying a castle. An opportunity soon presented itself when Karl Völker, once a political refugee from Tübingen, who owned Castle Heerbrugg, put his property up for sale. With some trepidation, Schmidheiny visited the lord of the castle and blurted out what he wanted. Völker was quite taken aback that it was a Balgach village tailor’s son who was stepping forward as

37. *Ibid.*

38. Boesch J., Benedikt F. and Schmid H.R. (1979) *Drei Schmidheiny*, Zurich, Verein für Wirtschaftshistorische Studien.

the buyer. The terms of sale were more than the young factory owner could manage: The purchase price was 135,000 francs; Völker demanded 10,000 francs as a down payment, the rest to be paid over nine years at four percent interest. Schmidheiny felt ‘the numbers raining down on this head like cudgel blows’.³⁹ Although he had to forgo the purchase, he couldn’t forget the idea. And lo! Help came from above – at least in the geographical sense of the word – namely from the north. A ‘happy coincidence’ led a merchant from Schaffhausen to Weiersegg who wanted to apprentice his son Guido to Schmidheiny. Schmidheiny poured out his heart to the merchant, and after a brief visit to the property the man from Schaffhausen actually declared himself ready to advance the down payment of 10,000 francs under ‘the most advantageous conditions’. A short time later, on January 2, 1867, the overjoyed factory owner held in his hands the officially recorded bill of sale. ‘Heerbrugg, so ardently desired, was his.’⁴⁰

We do not learn from this volume, however, who this well-heeled businessman was, which otherwise meticulously records every name – even the name of Schmidheiny’s secondary school teacher. Likewise the curious or attentive reader does not learn when or the circumstances under which the remaining 125,000 francs were paid. Nonetheless, we know that the factory entrepreneur entered the profitable tile business thanks to a small tile factory Karl Völker had built on the castle grounds.

Using the tile works already at hand, Schmidheiny and Völker agreed that the clay in the area of Heerbrugg was suitable for making tiles and for pipes to drain the local swamps. Just seven years after buying his castle the resourceful factory owner succeeded in taking the next major step in his business career: He acquired a burnt-out tile works in Espenmoos near Sankt Gallen. Schmidheiny saw the possibility that the flourishing embroidery industry in Sankt Gallen would attract commercial buildings and other construction. Here begins the real Schmidheiny saga; these tile works, continually modernised and expanded with new acquisitions in the region, became the foundation of an economic empire.

The business flourished. As usual when it’s a question of a Schmidheiny company we learn very little about the working conditions in the factory. But it is documented that the dynastic founder was the first one there early in the morning and the last one late at night. Very early on, he had been forced to learn ‘It is a matter of utmost importance when workers know that everything they do is precisely controlled. That’s why I do this every day whenever possible. Those who are industrious value it and those who are lazy are revealed in this way. Daily oversight, of course, means that my time is always at a premium. But otherwise I would never have clasped the branch of prosperity.’⁴¹

No doubt a nose for business was one of the strengths of the dynastic progenitor along with the ability to recognise trend-setting technology and to exploit it early on whenever possible. He spotted the potential for electricity early, for example, and not only brought power to his factories but advocated the construction of the electric street car from Altstätten to Berneck.

Despite his daily activity in the tile works, the man from the Rhine Valley, as befits a factory owner, was also politically active as a town councilman, as a grand councillor in the Sankt Gallen cantonal parliament, and as a good Protestant in the Evangelical Synod.

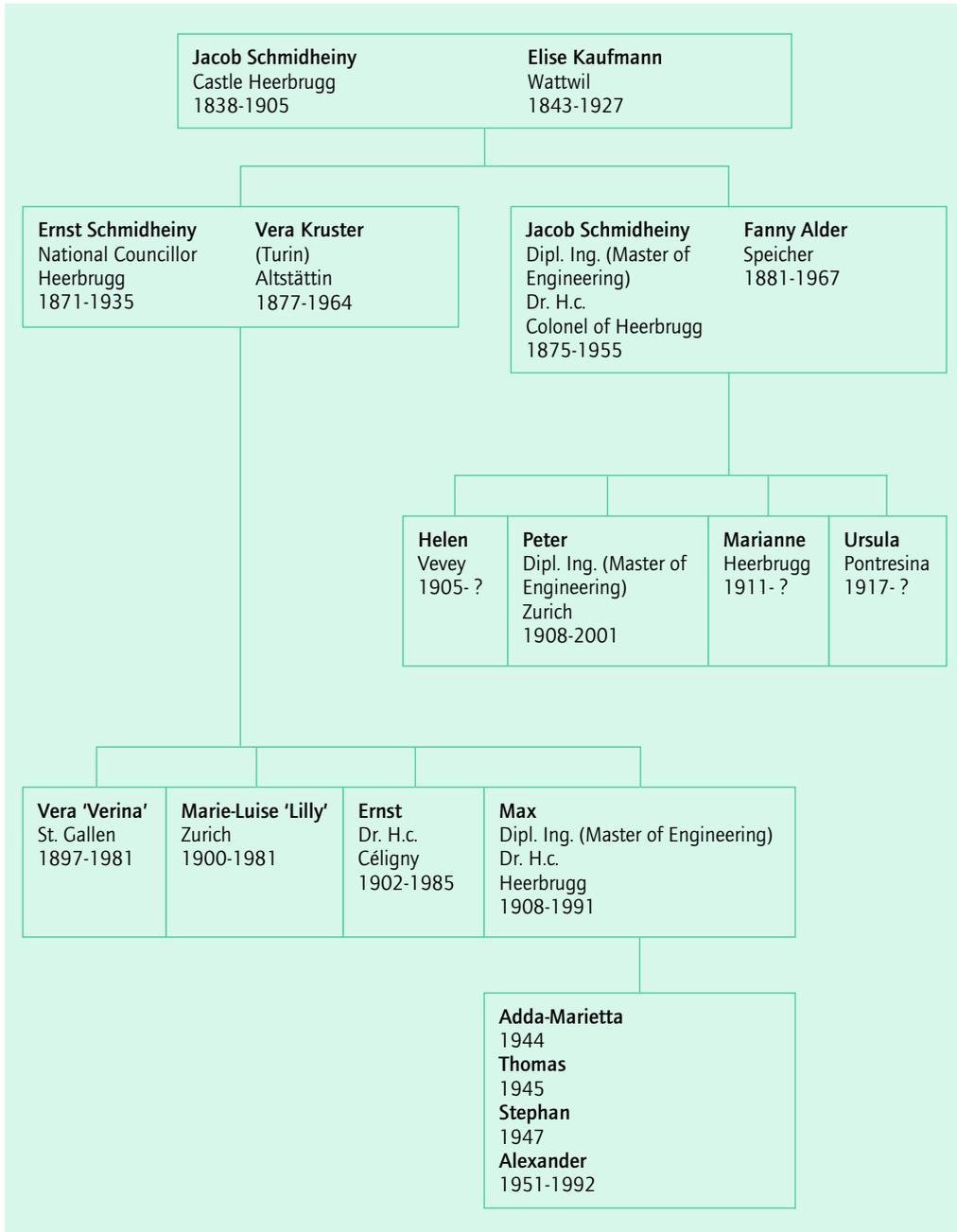
Jacob Schmidheiny bequeathed his business sense to his descendents, who renamed the family enterprise ‘Jacob Schmidheiny Sons’ after Jacob died in 1905.

39. *Ibid.*

40. *Ibid.*

41. *Ibid.*

Graph 3 Excerpt from the Schmidheiny family tree: The industrial family von Balgach



Source: Boesch, Schmid, and Fehr, 1979

A cement imperium arises

When the founding patriarch died at the age of sixty-seven, his growing company was in good hands. Ernst (1871-1935), the older of the two children, had completed an internship of several years with a Swiss wholesale cheese distributor in Italy. After a short stay in England he had wanted to study law but he returned to the paternal enterprise in 1895 under pressure from his father, who was in failing health. A year later he married Vera Kuster, the daughter of his employer, with whom he had fallen in love in Turin. His younger brother, Jacob Jr (1875-1955) was also attracted to Italy in his youth, where he worked as an engineer on a power plant construction site until 1902. The experience was to his advantage a few years later when the family went into the business of constructing power plants in a big way. The brothers split the family enterprises between them but still maintained close business relations. By doing so, they established the Schmidheiny corporate model that would last for decades and often led to one brother sitting on the boards of the other brother's companies.

Jacob, the younger of the two men, took over the tile business, which remained firmly in family hands until the present day – first under the umbrella of the Zurich tile works, which later changed its name to Conzetta. Ernst dedicated himself primarily to the growing cement business. This didn't stop him at all from advocating restructuring the tile industry after the family businesses had been divided up. A smart businessman, he soon noticed that pricing agreements among tile manufacturers alone did not suffice to stabilise the market or prevent prices from falling at a time when the construction industry was stagnating. Over-production had to be controlled by quotas, and most importantly the industry needed to be restructured – small unprofitable factories, which farmers often operated on the side, had to be bought up and then liquidated. From then on, agreements and cartels characterised the strengths of the Schmidheiny business plan.

In 1906 Ernst Schmidheiny succeeded in establishing himself in the cement industry when he founded the cement factory of Rütli AG in the Rhine Valley. The Rhine Valley in the Sankt Gallen area was located a good distance away from the Swiss cement factories, a fact that the businessman saw as an advantage. At the beginning of the twentieth century cement was the main construction material for buildings and infrastructure. When over-production threatened a price collapse in 1910 as had previously happened in the tile industry, Ernst Schmidheiny used what he had learned and together with other large producers founded the cement cartel 'Eingetragene Genossenschaft Portland'. The reputation and influence he earned during the negotiations to build the cartel would soon prove to be another advantage for him and his family enterprise. When powerful German investors in Holderbank bei Wildeggen (AG) wanted to build a new Portland cement factory fitted out with modern rotary tube furnaces in 1912, which would become one of the most important in Switzerland, Ernst Schmidheiny was commissioned by the Portland cartel to handle negotiations with the Germans. After a bellicose opening volley from Holderbank, Holderbank joined the Portland cartel in 1913. Just a short time later Schmidheiny's little cement factory Rütli merged with the new giant in a move to shake out the market, and the respected Schmidheiny took his place on the governing board of the mighty Holderbank. Six years later in 1921, he became managing director and then president shortly thereafter. Even today the successor company Holcim is one of the globally dominant cement companies. In 2006 the Swiss cement corporation reported revenues of thirty billion francs, with a net profit of 2.1 billion francs.

The two brothers, however, didn't stop with their tile and cement businesses. Before Ernst bought Eternit in 1920, thereby investing in the asbestos cement industry, they acquired interests in many other industries that promised profits. To enumerate all their

activities is practically impossible. What is known from Werner Catrina's *Eternit-Report* is that the brothers participated in building the Rhine Valley Inland Canal and obtained the concession to make use of the canal's easements. Jacob and his co-investors founded the Sais oil works, invested in the Zurich engineering firm of Escher Wyss, and bought into the automobile factory SAFIR in Rheinbeck.

Ernst was one of the founders of several different power plants and also invested in Motor-Columbus, which would soon achieve the leading position in building power plants. 'The increasingly powerful businesses of the Sankt Gallen family almost single-handedly delivered the cement to construct the retaining walls!' (Catrina). The Holderbank Group also invested rapidly in foreign companies, first in Baden Württemberg and in Vorarlberg, and then soon thereafter expanded into France, Belgium, Holland, and even Tourah in Egypt, where Ernst Schmidheiny built a cement factory in 1933. And the brothers even owned the optical company Wild in Heerbrugg as well as interests in the timber industry, innumerable real estate holdings, and landed estates.

The older son of Jacob Schmidheiny also followed in his father's political footsteps when he was elected to the National Assembly. Not only that: During the First World War, the Federal Council of Switzerland called on the well-travelled businessman to serve the state. Ernst Schmidheiny was given the task of handling matters relating to payments to the countries engaged in hostilities as Switzerland wasn't prepared for war and was struggling with enormous supply problems.

That is the well-known part of the industrial saga as it has been described in Switzerland. Less well known, however, is what the owners of Eternit did in Nazi Germany, in South Africa during apartheid, and in a number of developing countries.

Eternit: International expansion

'If you can't beat them, join them'

When Ernst Schmidheiny acquired the asbestos cement factory Eternit in Niederurnen with Jean Baer in 1920, he was thinking primarily of a market for his cement factories. Jean Baer, then director of the Eternit facility, had confided to him that he was thinking of acquiring a cement factory to supply raw material to his asbestos cement factory, which had been founded in 1903 by an investment group from Glarus. Schmidheiny didn't want to see that happen and he jumped at the chance to squelch possible competition. Moreover he saw the asbestos cement production as an ideal addition to the cement business: From foundation wall to siding and conduit pipe to the roof, the Schmidheiny Group now had all the components necessary for constructing buildings and infrastructure. Ernst Schmidheiny, who had already risked his first steps abroad with Holderbank, quickly recognised the enormous potential of this composite material, and in the very same year he started Amiantus AG with his partner Jean Baer. The purpose of the enterprise was 'participating in asbestos, Eternit, and cement industries'. Two family-owned asbestos companies thus came into existence in the same year, and that was the beginning of an almost impenetrable filigree of interlocking companies with dozens of names and locations, springing from the ground like mushrooms at the height of the asbestos euphoria.

It's not possible to name all the companies here in which the Schmidheiny's held an interest: Eternit AG in Niederurnen; Eternit Verkaufs AG in Zurich; Eternit AG in Berlin; Everite Ltd. in Johannesburg; Durisol Villmergen AG, Eternit SpA in Genoa; APC in Costa Rica; PPC Costa Rica; Tubovinil in Guatemala; Tecno Plásticos in El Salvador; Bobicasa in

Honduras; Saudi Arabian Amiantit Co. Ltd. in Damnam; Eternit SA in Brazil; Eternit in Columbia; Eternit in Venezuela; Eureka in Mexico; Eternit Ecuatoriana; Ricalit in Costa Rica; Honulit in Honduras; Duralit in Bolivia; Duralit in Guatemala; Eureka in El Salvador; Nicalit in Nicaragua; and many more.

Eternit in Niederurnen was the first to hold interests in the Belgian Eternit, and Amiantus acquired interests shortly thereafter in Cimenteries & Briqueteries Réunies SA in Antwerp. In 2003 the Swiss economics journal *Bilanz* describes this liaison with the Belgians as a 'carefully concealed give-and-go pass'.⁴² This became evident in the impenetrable network of lateral investments, joint ventures, and informal regional agreements. At the peak of the friendly expansion further afield, the Schmidheyns invested together with the Belgians in asbestos cement works in more than thirty countries. For years it was never transparent in any detail which of the two companies had effective control in which countries and therefore was legally responsible. The following division seems more or less accurate: The Swiss had control in German-speaking regions, the Near East, and in broad swaths of Latin America; and the Belgians controlled the Eternit businesses in the Benelux countries, in sub-Saharan Africa, and in the Far East. In 1985, the *Neue Zürcher Zeitung* wrote, 'Both probably control together a quarter of the fibre-cement market.' Disentangling the two groups came about only in 1989, that is, shortly before the Swiss asbestos ban went into effect when Stephan Schmidheiny, Ernst's grandson, sold his shares in the two parent companies of the Belgian group at the time when he was gradually exiting from the asbestos business. This opaque connection with the Belgians is of importance especially in view of questions of possible liability. All too willingly both sides deny responsibility these days with the argument that they held only a minority interest in the factory in question.

'If you can't beat them, join them' was one of the central business tenets that had sustained Ernst Schmidheiny his entire life. By integrating potential competitors early on into his expansion plans, he neutralised them quite effectively. Eternit production was consistently profitable in developing countries: According to a report in the *Schweizerische Handelszeitung*, the profits on invested capital of Eternit SA in Brazil in 1988 amounted to a phenomenal forty-three percent. The human costs of these fabulous profits are correspondingly frightening, according to Fernanda Giannasi, the labour inspector in São Paulo and the founder of the Brazilian Asbestos Victims Association. The Schmidheyns were in the asbestos business for decades; altogether they held interests in seven factories and mines. In 1989 Stephan Schmidheiny sold his interests to the French multinational Saint-Gobain, thereby shielding himself from any liability for the victims of his companies under Brazilian law. The largest asbestos cement work was in Osaco near São Paulo. Over eight thousand people have worked just in this factory alone since it opened. One thousand two hundred of them have joined the local asbestos victims association.

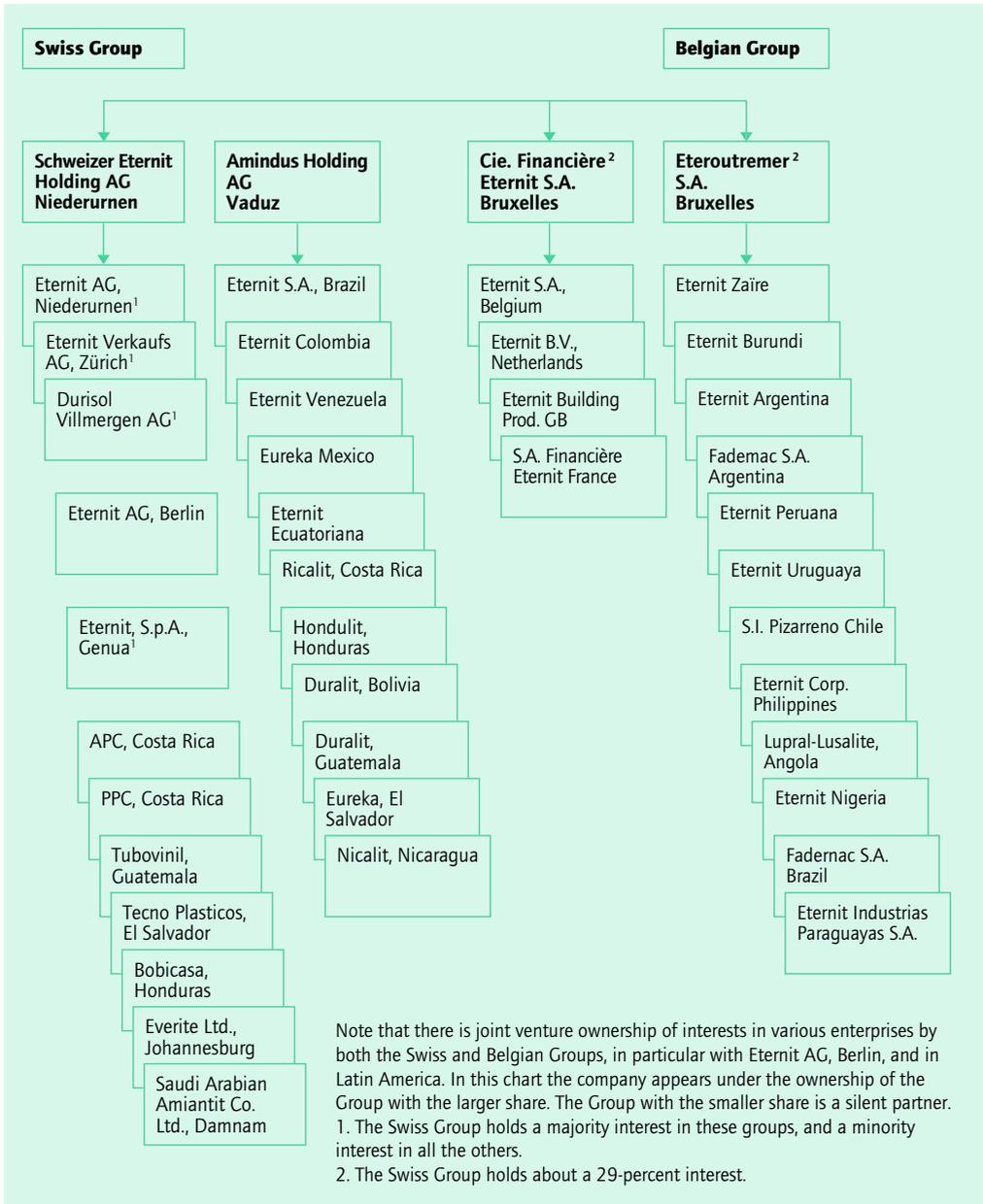
While chasing super profits as in Brazil, the corporate conglomerate owned by the man from the Rhine Valley exploited monopoly positions, and wherever possible, profited from tariff and tax exemptions in the countries in question. The Eternit subsidiary Duralit in Guatemala achieved notoriety in this regard: When the war-torn Latin American country was hit by serious earthquakes in the 1970s, 'the Duralit managers exploited the human disaster, delivering asbestos-reinforced cement slabs by the ton that had been financed with international donations. While factory production downright exploded, the wages of the Guatemalan workers were kept just above starvation level.'⁴³

42. Becher J. (2003) Die Schmidheyns (Teil 2): Gewinne ohne Gewissen, Bilanz, May 2003.

43. *Ibid.*

Or the example of Nicaragua: In this Central American country they ran their business in the 1970s directly with the dictator Anastasio Somoza, giving him a majority share in the local asbestos cement subsidiary Nicalit. The Somoza family ruled Nicaragua for decades and controlled about eighty percent of the country's economy at the time it fell from power.

Graph 4 Swiss and Belgian Eternit Groups: Control through investment



San Rafael del Sur, where there is a fibre cement factory, has had an asbestos victims association since 2000. Over four hundred former Nicalit employees and relatives are members and have been unsuccessful in their attempts to obtain their rights. On February 25, 2002, the former Nicalit employees sent a letter to Switzerland, addressed to François Iselin. Iselin, who led the anti-asbestos campaign in Switzerland in the 1980s, is an expert in Nicaraguan asbestos issues. He had frequently visited Nicalit employees. In this letter, the former employees asked him for help to proceed with a lawsuit against the former owner of Nicalit, Stephan Schmidheiny. The affected workers wrote, 'Many of us are already ill because we worked without any safety precautions. Everyone who worked in this factory is looking at a death caused by asbestos.' And they blamed the Nicalit company physician of systematically not diagnosing their illnesses. This resulted in former Eternit workers not being covered by the Nicaraguan workers' accident insurance fund for their occupational disease. Miguel Martí, spokesman for Amanco, the parent of Nicalit, denied any knowledge of such questionable medical examination methods to the Swiss press. The company claimed it had always tended to the welfare of its workers on humanitarian grounds even though legally nothing was required of them. They also had concluded an agreement with the interest group of the aggrieved workers. The agreement made possible visits to physicians for the workers and if they were ill there would be a payment of damages. But there wasn't one single diagnosis of an asbestos-related illness among the 250 workers examined.

Not one single worker with an asbestos-related disease? The former Nicalit workers saw things differently. In their letter to Iselin they declared that they had consulted a private physician, who had diagnosed an asbestos-related disease in most of them.

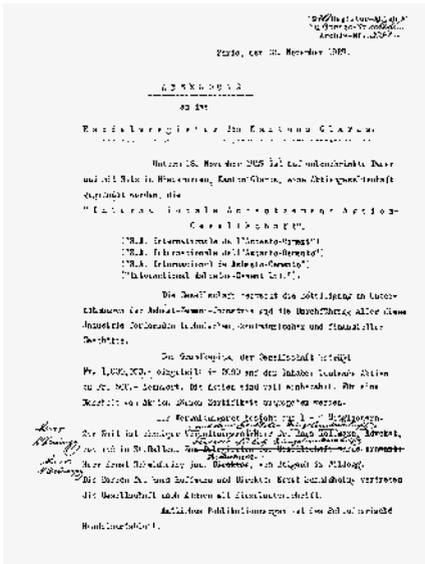
As recently as 2006 the Nicalit workers had contact with Bruno Mauro, the president of the Asbestos Victims Association in the French-speaking part of Switzerland; the workers had asked the association for financial assistance in order to proceed against the company. They wanted, if possible, to go before an American court. But it's doubtful if they will ever get justice: The Amanco Group changed owners on February 22, 2007. Amanco is one of the largest companies in Latin America in the building materials industry, with factories in fourteen countries from Mexico to Argentina, with over seven thousand employees. In February 2007, Amanco withdrew from the former Latin American corporate network of Stephan Schmidheiny and, together with all its rights and obligations, it was sold to the chemical multinational Mexichem.

Eternit offensive in Nazi Germany

Let's go back to the beginning of the international expansion under Ernst Schmidheiny. As he had recognised in his tile and cement business, he also saw that he needed a cartel to protect Eternit's interests, which depended on expansion. This time, however, it wasn't a question of a national, but of an international, global market. Eternit already enjoyed a monopoly as the only asbestos cement factory in Switzerland, in contrast to Ludwig Hatschek, who had already sold his Eternit patent in a number of countries.

To protect his interests, Ernst Schmidheiny together with the owners of the major Eternit works in other European countries founded the Internationale Asbestzement AG, known as SAIAC (S.A. Internationale de l'Asbeste-Ciment) in 1929.⁴⁴ This organisation held interests, as already mentioned, in factories in Austria, England, Spain, France, Belgium,

44. In the 1980s the SAIAC was renamed Amiantus and was still in the firm control of the Swiss asbestos magnates.



The document filed in the cantonal Commercial Registry of Glarus to record the formation of S.A. Internationale de l'Asbeste-Ciment (SAIAC) on November 18, 1929

Italy, and Switzerland as well as other business interests. The purpose of this cartel – besides establishing new factories in neutral countries and combining purchases of asbestos as well as exchanging technical knowledge, research results, and patents – was primarily to divide up the markets and to control market prices.⁴⁵ Switzerland thus controlled the fate of the global asbestos cement industry.

Even though the Swiss Eternit company had but two to three percent of the world market at that time, Ernst Schmidheiny was named president and his son, Ernst Jr, was named as a director of SAIAC, based in Niederurnen. The importance of the Swiss visibly increased over the following years: While its share of production among the companies within SAIAC amounted only to a small percentage at the beginning, by 1945 its share had climbed to more than a third.

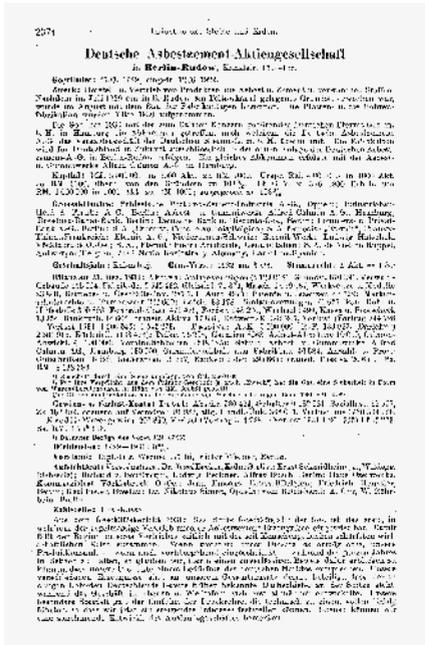
The first project of the cartel was setting up a new factory in Berlin. The German market was seen as having great potential, which the

Asbest- und Gummiwerke Alfred Calmon AG in Hamburg, the asbestos cement company already established in Germany, poorly exploited.

This company, which had acquired Hatschek’s Eternit patent for Germany, had such limited production capacity that by 1930 the asbestos cement industry had only a minor role in the market for construction materials. Moreover, Calmon AG had missed the chance to own the patent for making pipes with the Mazza process. The Italian engineer and Eternit owner Adolfo Mazza had developed a new process in which a mass of asbestos cement was wrapped around a removable cylinder. The pipes fabricated in this way were significantly more pressure resistant than those manufactured in the traditional way by forming the pipes from asbestos cement slabs, leaving a seam. Between 1925 and 1930 only eight million square metres of Eternit product were manufactured in Germany while a total of 250 million square metres was produced in the remaining European countries in the same period.⁴⁶

The major SAIAC company owners, with Ernst Schmidheiny in the lead, didn’t want to lose this market potential. They decided on a German offensive. Together with German investors they planned a new company in Berlin that would have a large facility for Eternit production. The top management of SAIAC signed an agreement with the Calmon concern and with its affiliate Eternit in Hamburg. Under the agreement the company to be established would take over the marketing company of the German Eternit GmbH that already existed. From that point on, all production would be at the new site in Berlin to comply with the clause in Hatschek’s patent license that limited the use of the brand name Eternit to only

45. GUE, NGL, Vereinte Europäische Linke, Nordische Grüne, and Parlamentsfraktion – Europäisches Parlament (2005) *op. cit.*
 46. Stahr H. (1990) Eternit: Vom Aufstieg zum Ausstieg. Die Eternit AG in Berlin Rudow 1929-1979, in Bönisch M., Gößwald U. and Jacob B. (eds.) z.B. Asbest. Ein Stein des Anstoßes. Kulturelle und soziale Dimensionen des Umweltproblems. Begleitband zur Ausstellung im Heimatmuseum Neukölln, 20. Okt. 1990 - 1. April 1991, Berlin, Heimatmuseum Berlin-Neukölln.



Page from the business register *Handbuch der Deutschen Aktiengesellschaften*, summarising the business of DAZAG

one company per country. In addition, the new company obtained the license to produce pipes using the Mazza process. The formation of the new company occurred on March 27, 1929, and on June 12th of the same year the company was filed under the name of Deutsche Asbestzement-Aktiengesellschaft (DAZAG).

The formation documents for DAZAG show that the investing companies put up an initial capital of four million reichsmarks; three years later there was an additional recapitalisation of five million reichsmarks per the entry in *Handbuch der Deutschen Aktiengesellschaften* of 1932 (see illustration). Principal stockholders at this point were: Schlesische Portland-Zement-Industrie AG, Berlin; Asbest- u. Gummiwerke Alfred Calmon AG, Hamburg; Dresdner-Danat-Bank, Berlin; Deutsche Bank u. Disconto-Ges., Berlin; Commerz- u. Privatbank AG, Berlin; SA Eternit Capelle-au-bois, Belgium; S.A. française Eternit, Prouvy-Thiant, France; Eternit AG, Niederurnen, Switzerland; Eternit-Werke Ludwig Hatschek, Vöcklabruck, Austria; S.A. Eternit Pietra Artificiale, Genoa, Italy; S.A. de Niel-on-

Ruppel, Antwerp, Belgium; and José Maria Roviralta y Alemany, Barcelona, Spain.⁴⁷

Ernst Schmidheiny Sr, who was trying to establish cement works in Tourah, Egypt, at this time, had his older son, Ernst Jr, elected acting president of the board of directors to look after family interests.

For the new factory the company acquired on the first bid seventy-five thousand square metres of land on Kanalstraße at the corner of Köpenickerstraße, in Berlin Rudow; the site had a good water supply as well as rail and shipping access. Additional neighbouring parcels were purchased later. The roofs of the buildings that were erected were made from Eternit corrugated panels of course, and even the walls of the modern steel-framed manufacturing plants were finished with Eternit panels. Most of the structure still stands today – an immense tract of derelict urban wasteland in the middle of the Berlin district of Neukölln.

The DAZAG factory began producing panels and sheets in 1930 and starting in 1931 pipes were manufactured using the Mazza process. The Eternit factory started up during the difficult period of the world economic crisis, resulting in the number of workers falling from 125 to eighty in the first years. But as early as 1933 the German economy began to rapidly improve: State support for construction began with Hitler’s seizure of power – and from 1935 on, there was a massive arms build-up. As the German historian Henrick Stahr has documented,⁴⁸ after the mid-thirties DAZAG was able to establish a strong market position and grew enormously. In the early years of the National Socialist regime it continued to expand: Already by 1938 it had grabbed a market share of fifty-four percent, reaching

47. According to the entry in the *Handbuch der Deutschen Aktiengesellschaften*, 1932.
 48. Stahr H. (1990) *op. cit.*

its high point with 1,100 workers. On the one hand, this was the result of Eternit products being perfectly suited to modern architecture and the Eternit products themselves were now in fashion. On the other hand, the sales of asbestos cement products were stimulated because the military industry needed them; for example for the construction of airports, ships, and manufacturing plants. Impressive examples would be Zeppelin airship hangars in Frankfurt and Rio de Janeiro. Earlier examples for residential construction include the house built in 1932 for Arnold Zweig in Berlin and the Eternit model house commissioned by the Reich Finance Ministry built in Berlin-Stahnsdorf in 1932. Eternit marketing made a particular effort in the Nazi years, with its obsessed ideology of *Heimatstil* in rural areas, to emphasise that the utility of the Eternit panels was architecturally wholly compatible with regional traditions in roofing or barns.

The in-house magazine *Neues Werken*, clearly influenced by the tone of Nazi propaganda, argued in 1936 for Eternit roofs and against romantic but inflammable thatched roofs: ‘Today everyone knows that our great production battles cannot be won without using machines just as battles on the field of war cannot be won without machine guns and cannons. Have you ever heard that the tractor instead of horses, the sowing machine instead of the sower [...] could seriously loosen the bond between *Blut und Boden*, the bond that connects man, *Heimat*, and tradition to the soil?! [...] A roof should be no different [...]’⁴⁹

The company’s growth up to 1938 was impressive: The number of workers continued to increase; pipe production increased by a healthy one hundred percent in three years (1936-1939); and the annual production of asbestos cement products shot up to 4.4 million square metres.

With the start of the Second World War harder times also began for DAZAG – especially for the workers. Since asbestos was considered a strategic material, imports were confiscated. This is reflected in the numbers of workers at Eternit, which sank to 380 within a year. Because processing raw asbestos for civilian purposes was totally prohibited in 1943, flexible management fell back on substitute materials, including slag wool, glass wool, steel wool, cellulose, and hemp. Using these materials to mix with cement, DAZAG produced what it called Durnat products. A range of items from ‘landmines to coffins’⁵⁰ manufactured with fibre cement was produced. According to Eternit publicity materials, the quality of these products left something to be desired: ‘Durnat had only one good feature: The customer had to constantly reorder the product to replace cracked, torn, and shelled panels.’⁵¹ Officially DAZAG did not manufacture asbestos cement products after 1943, only Durnat panels. Nevertheless, the Kaiser Wilhelm Institute, as it was called then, found that the tested panels purportedly made with substitute asbestos, ‘contrary to the claims of the manufacturer had only small amounts of synthetic inorganic fibres, but contained at least fifty percent asbestos.’

Forced labour at Eternit in Berlin Rudow

The history of Eternit in Berlin during the Second World War certainly belongs to one of the very darkest chapters of the history of asbestos, and it is also one of the least known until now. There has been little information available, especially in Switzerland. Werner Catrina’s *Eternit-Report* did mention that the Schmidheins did business with the Nazis during

49. *Neues Werken*, March 1936.

50. Cited in an Eternit *Festschrift* from 1985, which is exhibited in the local museum of Neukölln Berlin.

51. Cited in an Eternit *Festschrift*, (1985).

this period and operated an asbestos mine in collaboration with them in Yugoslavia.⁵² The picture that emerges for this period is one of an entrepreneurial family in danger of going under during the world economic crisis, compelled to fight with every means available to survive. ‘Ernst Schmidheiny’s international, structurally convoluted conglomerate with multiple affiliates, whose primary businesses were interests in cement, tiles, and Eternit affiliates, was seriously threatened by the economic crisis of the 1930s. Their foreign shares rapidly fell in value due to the devaluation of most foreign currencies [...]. Long used to success, the captain of industry even had to worry about his mortgage on the Heerbrugg Castle [...]. The Schmidheiny now went third class when travelling by train; the tycoon lodged in second class hotels when travelling on business.’ We learn nothing of the two camps built for slave labour on the Eternit grounds in Berlin during the Second World War or of the company’s own exploitation of slave labour and prisoners of war. And the family disputes this even today.

When Ernst Schmidheiny Sr was killed in an airplane accident in Egypt on March 15, 1935, his sons, Ernst Jr (1902-1985) and Max (1908-1991), took over the family empire. Max is now interested along with his brother Ernst Jr in the fate of the Berlin Eternit. According to the entry in the 1943 business register, the *Handbuch der deutschen Aktiengesellschaften*, both men were on the board of directors of the Deutsche Asbestzement-Aktien-Gesellschaft (DAZAG). Max had followed his brother in the position of vice-chairman on the board. There appear to be no qualms about contact with the regime although the Schmidheiny in Catrina’s account had disliked them. The ‘German-friendly attitude,’ at least on the part of Max Schmidheiny, was generally known in Heerbrugg, as documented by the Swiss historian Peter Hug from the Independent Commission of Experts Switzerland-Second World War.⁵³ Hug cites a report by the Heerbrugg cantonal police for the political department in the police commando of Sankt Gallen, in which it is recorded that Max had expressly ‘praised the model organisation, etc. in the German Reich’ after a stay in Germany in the late autumn of 1940. During the trip Max was reported, among other things, to have had conversations with German officers. At least one of these officers had connections at the very highest levels; it was a relative of the Reich Foreign Minister Joachim von Ribbentrop.

How often the Schmidheiny went to Germany during the Third Reich to preserve its business interests and how extensive their business connections were in Nazi Germany is not known. Just as little known is whether the two Swiss board directors ever personally came into contact with forced labourers working at DAZAG in Berlin.

Nine to ten million foreign non-military workers, concentration camp prisoners, and prisoners of war from twenty European countries were transported to Germany in the course of the Second World War. At the peak of the *Ausländereinsatz* (foreign slave labour) in August 1944 six million civilian slave labourers were working in the German Reich.⁵⁴ Over a third of these were women, transported along with their children or who gave birth to children in the camps. The infants were usually taken from their mothers and often ‘nursed to death’ in orphanages. Every fifth child born in the industrial quarter of Neukölln was a child whose mother was a slave labourer. All the countries overrun by German troops

52. Catrina W. (1985) *op. cit.* ‘Although it was clear on which side the people from Heerbrugg stood, they still pressed their advantages: They bought coal from the hated Nazis, “dirt cheap”, as Sir Max remembers, and even worked an asbestos mine in Yugoslavia with the Germans to ensure a supply of the valuable fibre as long as possible.’

53. Hug P. (ed.) (2002) *Schweizer Rüstungsindustrie und Kriegsmaterialhandel zur Zeit des Nationalsozialismus: Unternehmensstrategien, Marktentwicklung, politische Überwachung*, Zurich, Chronos Verlag.

54. Berliner Geschichtswerkstatt (2000) *Zwangsarbeit in Berlin 1940-1945: Erinnerungsberichte aus Polen, der Ukraine und Weissrussland*, Erfurt, Sutton.

were used as a labour reservoir. From 1942 on, after the failure of the strategy of *Blitzkrieg*, this state slavery increased as the German Reich switched to 'total war'. Because almost all German men were called up, the need for labour to replace them was enormous. Only by massively exploiting forced labour could the economy continue to supply the population. In 1942 forty thousand people per week were snatched from the streets. After travelling for days in freight cars they landed first in a transit camp, such as Wilhelmshagen in Berlin, where they were distributed to companies throughout the city. Hundreds of thousands of these forced labourers did not survive their work assignment. The worst-used were the *Ostarbeiter* (Eastern workers), who were stripped of all human dignity and rights, being classified as 'racially inferior' Slavic *Untermenschen* (subhumans). It is known that 137,000 Polish men and women died out of the approximately three million who were deported.

Large companies as well as small artisan works, local governments and authorities wanted more and more foreign labour and so were complicit in the system of slave labour. DAZAG was one of these companies.

The asbestos cement company continued its production throughout the war, although output was reduced. This was possible only because after the autumn of 1940 more and more foreign workers and prisoners of war were working in the factory and, after mid-1942 there was forced labour from the Soviet Union.⁵⁵

At the beginning of 1941, the number of workers at DAZAG totalled 360 men and women: In all, there were 290 Germans and seventy French prisoners of war; as the year wore on, Italian civilians joined them. In June 1942 a hundred East Europeans appeared for the first time, most of whom were women. The number of *Ostarbeiter* increased by the end of 1943 to 263, of which 207 were women. At this time the workforce of DAZAG had 563 workers in all, half of whom were foreigners.⁵⁶

That slave labour was used in the work force at DAZAG is documented in a number of files. In the Museum Neukölln in Berlin there are two binders on display, showing documents just for the building permit of the barracks, originally built to house what were called Italian civilian workers, in which the forced labourers were housed. Next to a detailed site plan, on which the three barracks built in 1941 on Kanalstraße are meticulously drawn, the museum archive also has various letters addressed to the building inspection department. Of particular interest is a letter dated May 5, 1941. In the application on Eternit letterhead a handwritten note says that the barracks 'for housing the Italian workers' would be built 'by prisoners [themselves] working in the factory'. The letter is evidence that not only forced labour but also prisoners of war were working in the asbestos cement factory. Evidence for the existence of slave labour in this factory can also be found in the files of the Berlin Department of Health, which regularly visited the barracks of the forced labourers, and in 1943 a document memorialises that 267 people were housed in this barrack. Moreover DAZAG had itself registered as a strategic war facility at the Ministry of Trade and Industry. We now know this thanks to the work of Berlin historian Bernhard Bremberger. In this registry, maintained by the Nazi regime, any company could register that was of industrial military interest for the regime. Among other reasons, DAZAG justified its entry by claiming they produced inflammable bunker doors, so-called 'Fortis air raid doors'.

In the Museum Neukölln, annual reports of DAZAG from the years 1941 to 1943 are on display. These reports clearly show that the asbestos cement company reported a profit even during the war years and distributed dividends (six percent) to its shareholders. The

55. Stahr H. (1990) *op. cit.*

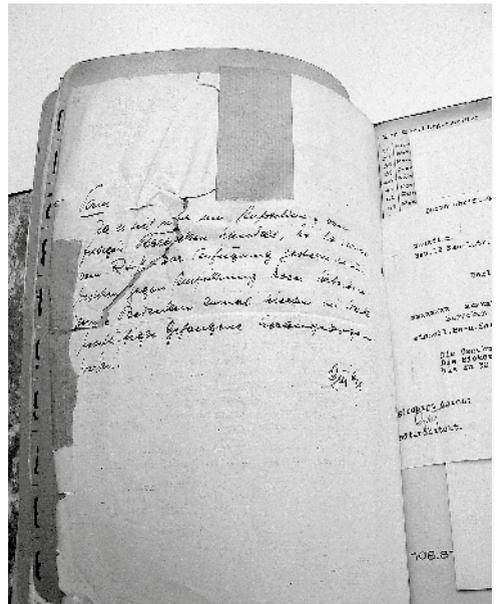
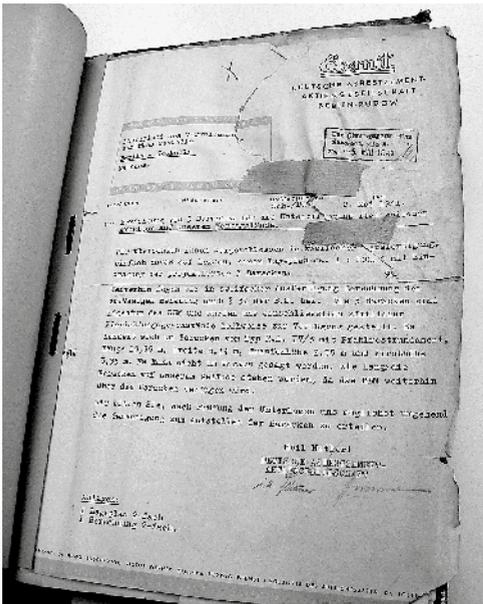
56. *Ibid.*

three annual reports in the museum show that, after deductions, there was an after-tax profit of approximately 350,000 reichsmarks per year.

DAZAG was apparently active in the *Leistungskampf* or Production Competition, which had been created by the *Deutsche Arbeitsfront* (German Work Front, DAF), for German businesses. In the annual report for 1943, management puts on record that DAZAG had been awarded the *Gaudiplom* or the district honour, for ‘distinguished achievement’ for the fifth time in a row. Management’s comment about health care for workers rings particularly hollow in the 1943 annual report: ‘We continue to implement and expand the health care for our *Gefolgschaft*’ (Nazi term for ‘followership’). And then there’s the tribute by management to the work performed by their labour force, which is a hypocritical tour de force: ‘Our *Gefolgschaft* has loyally performed its duty, accepting and fulfilling the additional obligations assigned to them in the past year so that our gratitude and our acknowledgment are their due for their ungrudging initiative.’

The slave labourers from the east, considered subhumans or *Untermenschen*, numbered in the hundreds at this factory during the war. They did not call the place DAZAG but simply Eternit – for this was the name emblazoned on the factory gates.

One of these women, perhaps the only one still living today, is Nadya Ovsyannikova. Now in her mid-eighties, she originally came from what is known as White Russia or Belarus, and is living today in an old age home in Riga, the capital of Latvia. She still remembers a few German words from her time as a slave labourer: ‘quick, work quickly’, ‘asbestos cement’, and ‘Eternit’.



The letter, typed on Eternit letter-headed paper, dated 2 May 1941, and addressed to the Berlin construction police, concerns the building permit for the erection of three sheds to accommodate Italian labourers on the factory site. A floor plan of the projected buildings is attached, together with an estimate of the charges entailed. Each of the sheds placed on loan by the Nazi authorities measures 160 square metres. The letter closes with the greeting ‘Heil Hitler’. A handwritten note on the back states: ‘Since it is merely a question of erecting prefabricated sheds supplied and placed on loan to us by the air ministry, there is no reason to hesitate, since the necessary work can be carried out by prisoners employed in the factory’.

and almost froze to death. When we arrived, there were already a lot of women from nearby villages gathered there. Soldiers herded us onto a freight train. There was straw on the floor like a cattle transport. We were squeezed tight in the freight car. It was very cold in the car. There was only a tiny window high in the wall. We didn't know for how long or where we were going. After one or two days of travel, we were let out of the car under guard. We were told we'd get something to eat. They gave us soup and water. But when we came back to our car, it had been burned out and we stood there without our things. We didn't have anything that would remind us of our families and home. Then we were locked into the freight train again and went on. In Warsaw armed men showed up and said we had to get out and arranged us in rows so the factory bosses could pick the workers they wanted for their factories.



**Nadya as a fifteen-year-old girl,
four years before she was deported**

When we got to Germany we didn't even know what city we were in. They took us to a concentration camp. I don't really know its name anymore, but I'm almost sure it was Tempelhof. That's where we were forced to work. At first I was in a sewing factory with thirty other girls. Every day a German fetched us from the concentration camp and took us to the factory and then he took us back in the evening. The work wasn't hard in this place but you had to have good skills. We sewed uniforms for soldiers at the front. I still remember this workplace well. The building was heated and that gave me strength that icy cold winter, and I didn't totally despair. But after a short time the Allies bombed the factory and then we were transferred to the asbestos cement factory in Berlin Rudow.

They housed us in barracks on the factory grounds. There were four barracks, three where we slept and one where we washed.

In this camp the work we had to do took more strength than we had. I had to drag the finished asbestos cement panels from the shipping hall onto the train. I don't know where they shipped them after that. We weren't told. We worked out in the open because the work hall had no roof. Our work clothes were synthetic cotton and we wore wooden shoes. It was ice cold. The work was very hard. Each panel weighed about twenty kilos, which made my arms ache. I was close to despair. Sometimes I just wanted to die. I cried a lot. After a while I took heart and asked the supervisor to transfer me to the moulding section. But the work there was anything but easy. I had to grind the finished asbestos cement forms with sandpaper and stood there covered in dust from head to foot. The factory where I worked was called Eternit and was on the bank of the canal on Kanalstraße. Our barracks were there too. There was a barbed wire fence around the entire factory. Only the side along the canal wasn't fenced. Armed guards were posted. It was like a concentration camp. Like Tempelhof, only smaller. We also had numbers and a factory ID card we always had to show.

I can't remember the names of the factory owners now. The manager was a man in the prime of life. He didn't behave too badly towards the Russians. I can also remember a German girl quite well. Her name was Elsa. She worked as a bookkeeper.

It's hard to understand how I survived all those years. We had to work even when we were sick: Twelve hours a day, six days a week. There weren't any holidays. As the Russians were closing in, the pace increased. I don't know why. Maybe the Germans needed

the components we made. We had to start at six in the morning and than work late into the evening. Once I had a lung infection, but I wasn't allowed to stay in bed – no one was allowed to do that. Another time I had an abscess under my arm that had to have surgery. There was sort of a camp nurse who did that and afterwards she sent me right back to work. There was a woman from my barrack who fainted during work and later died. They just carried her off and we were told later that she had had tuberculosis. All the other women from my barrack survived.

Sometimes we were allowed to go as far as the factory gate, next to the little guard house. But it was useless to try to escape because we knew there was little chance of running away. Where to? We all could be identified by the 'East' we had to wear. They would have caught us at once. Once a couple of women tried to escape but they didn't get far and were caught right away. The Gestapo stuck them for a month in the cellar as punishment, and when they came back to the factory they had to do the hardest jobs in the factory.

I got to know a German woman when we were cleaning up in front of the factory. She approached me and asked where I came from. I told her that I was a White Russian and she felt sorry for me. She told me her son was serving in White Russia. She wanted to help me because she hoped someone in White Russia would help her son. She applied to the head of the camp for permission to let me visit her on a Sunday. That was possible because sometimes we were allowed to leave the camp with permission for a short time. That was the only time I left the camp. The woman picked me up and took me home. She still had her younger son at home. The boy didn't seem to be happy about my visit. But the mother explained to him in German what my situation was and he seemed to understand. A few days later he did ride by our fence on his bicycle and waved to me. That human gesture filled me with joy. The woman gave me an old dress. Once when the camp photographer came to our barracks I had myself photographed in this dress.* I paid him a few coins. The little bit of money they paid us now and then for our work didn't do us any good. We weren't allowed out to buy anything and of course we didn't have any ration cards.

The food in the camp was miserable. They gave us gruel for breakfast, soup made from fodder beets for lunch, and a hundred grams of bread in the evening with a tiny bit of margarine. The hunger was unbearable. When we came to the barracks midday, covered in factory dust, the soup was already in the bowls. The barrack guard, a fat German woman, watched us the whole time and directed every movement. If one of us didn't obey, she beat us brutally. We had half an hour to eat and to relax and then it was back to work. In the evening one of us weighed out every piece of bread on a small scale and the guard checked very carefully that no one got more than a hundred grams of bread. After work we were so exhausted we fell into our bunks. But I was so hungry so I sometimes couldn't fall asleep many nights.

There were also German men working in the factory. Some of them had to do guard duty. Sometimes I asked myself how I could survive so much human misery. I kept thinking of my family and how they were probably getting along. I got two letters from my mother. I can't describe how happy I was. I would read them again and again and cry and I carried them with me until the paper dissolved.

In April 1945 we were bombed again. Luckily we were allowed to go into the cellar with the Germans. Then the factory was hit by a bomb and everything, except our barracks, was destroyed. We were liberated a short time later. The Russians entered the factory and announced we were now free. The women began to celebrate and fell into each other's arms. They hugged the soldiers too. But they didn't stay long. For them the battle wasn't over. They took their weapons and headed off towards the centre of Berlin. Now I was afraid. How was I supposed to get home?

We had to walk home. I can't imagine now how we managed such a difficult thing. No food, no transportation. Sometimes soldiers would pick us up.

When I read in the paper in 2000 that the people who had been slave labourers in Germany could get reparations, I went to the archive and applied for a certificate. But they sent me a document that said I had gone to Germany voluntarily to a concentration camp.** This information made me very sad. But how was I supposed to prove otherwise? I also sent a letter to the place where we had been deported but I never got a reply. When my father was still alive he went to White Russia and got a certificate that said I had been deported to Germany against my will. I sent this document to the place where I worked. Today it can't be found.'

* Photographers visited slave labour camps to make propaganda photos. Moreover, the slave labourers were supposed to send the pictures home to reassure their families.

** That was customary in the USSR. The slave labourers who worked in German factories were considered traitors and often were put into re-education camps. Only in 2000 did the authorities acknowledge that all the Soviet citizens deported after 1942 had been forced to work in German businesses.

German Eternit AG's difficulties with its past

In 2000, as the debate on reparations for slave labour in Germany was in full swing, Nadya Ovsyannikova happened to meet the German physician Christian Richter in a restaurant in Riga. 'I was quickly recognised as a tourist since, although I do speak Russian, it's limited school Russian. When I mentioned that I come from Berlin-Potsdam, a lady who was seventy-six years old at the time bubbled, 'I worked at Eternit during the war in Berlin, in Berlin Rudow, on Kanalstraße, and we even slept in barracks next to our workplace.' Christian Richter thus describes his first encounter with Nadya Ovsyannikova. As a German, the doctor was drawn to the woman's story and promised to look into her case at Eternit in Berlin to make sure she wouldn't be barred from receiving any reparation payments. But back in Berlin Christian Richter's undertaking proved anything but simple because Eternit claimed to know nothing about slave labour.

In a letter dated November 20, 2000, the company replied to the German doctor, 'Unfortunately we cannot confirm if the claims of Frau Nadya Ovsyannikova are true. We also would not like to disavow these claims in general. Most of the personnel files have been lost due to the effects of war. During the war years production mostly ceased due to the lack of raw material. On April 23, 1945, Russian troops occupied our factory and dismantled all the machinery in the summer of that year. What is known, however, is that a prison camp with ten barracks was erected on the land that once was the property of the asbestos cement company belonging at the time to the Rudow Work Group at Köpenickerstraße 39-45 next to the Johannisthal GmbH airplane works. Where the forced labourers were actually housed can no longer be established.'

No word of apology, nothing in the way of an admission of having done anything wrong. The company, however, let Christian Richter know that they, like many other German companies, had joined the *Stiftungsinitiative der deutschen Wirtschaft* (German Economy Foundation Initiative). The purpose of the Foundation Initiative was to pay reparations to former slave labourers still alive out of contributions from private and state sources. Nadya Ovsyannikova, it was suggested, should direct her claim to this foundation.

This response struck Christian Richter as well as others as quite surprising. The German historian Bernhard Bremberger, who had been working on the issue of forced labour

for years, also received the same response, which made no sense, from Eternit Berlin. Bremberger, who had searched the records in the registry office of Neukölln (Berlin Rudow) in 2000 for entries chronicling the children of slave workers who had been born or died in the camps, could prove the existence of two camps that were on the grounds of DAZAG. Bremberger wrote in an essay:

Kanalstraße 117-155. This is where the camp of barracks was for foreign prisoners of war and women from the East, starting in the autumn of 1942, on the grounds of the Deutsche Asbestzement AG. Of record in the registry office from April 11, 1943, to March 9, 1945: Several women from the area of Stalino (today Donezk in the Ukraine) and other Ukrainian women gave birth to children in the camp (also one married couple). One child died at the beginning of 1944 from lack of nourishment. In April 1944 a seventeen-year-old girl died in hospital of peritonitis. Partly destroyed in the autumn of 1943 by a bombing raid.

Köpenickerstraße 39-45. On the DAZAG (Eternit) grounds built by the Rudow Work Group. (Members of the Work Group were the companies of Bauer, Daubitz, DAZAG, DeTeWe, DVL, Dolberg, FRW, JoFlug [probably: the airplane works of Johannisthal], Ganswindt, Germania, Graetz, [Rud. A.] Hartmann, Hempel, Krone, Metalloxyd, Neuling, Petrix, Coal Association, Wiegandt, Wintershall.) Large camp of barracks, according to record in the registry office from January 18, 1943, until after the end of the war. Over a dozen women, primarily from Poland, but also from the Ukraine, gave birth within the camp; only a few in hospital. There was a camp nurse and other personnel who registered the births. At least seven small children died in the camp. In May of 1943 the camp was named 'the Polish camp.' The services barrack still stands.⁵⁷

Moreover, Bernhard Bremberger had obtained a document in the course of his research on the history of the Berlin factories – a letter on Eternit letterhead, dated February 1941 – which unambiguously laid out that DAZAG had given permission for the construction of a prison camp on its grounds. In this letter the company wrote, 'The Rudow Work Group, which has recently been established for the purpose of securing the required work force for its factories from foreign prisoners of war and which we have joined as a member, has leased [...] from us property owned by us and located [...] in Berlin-Rudow at Köpenickerstraße 39, 41, 43, and 45 [...]. We expressly agree herewith to the use of the above-described property and construction of buildings generally found in a prison camp [...] [Signed] Heil Hitler! Deutsche Asbestzement-Aktiengesellschaft.'

Eternit's claim that the company's archive disappeared in the war puzzles the historian. He knows that just a few years ago copies of the annual report from 1943 were made. Moreover, there are various treatises with documentation on the issue of forced labour at Eternit. A company history from 1985, for example, specifically mentions 'the construction of three worker barracks Type RL IV, and the construction of a wash barrack for foreign workers (at first for Italians, then for *Ostarbeiter* women)'. With the exception of the eyewitness account of Nadya Ovsyannikova, few records have been found on living conditions of the slave labourers in the two camps and there have been no specific accounts until now, but there are clues. For example, in the Neukölln Museum, Bramberger says, there is a noteworthy death certificate from 1943. 'This document proves that at least in 1943 Polish women were held prisoner in the Köpenickerstraße camp and that a child born in August died a few days after birth.' The registry office clerk noted at the time as the cause of death

57. Bremberger B. (2008) "Haben wir nicht!" Erfahrungen mit Nachfolgefirmen und ihren Archiven, in Bremberger B., Pagenstecher C. and Wenzel G. (eds.) Zwangsarbeit in Berlin, Archivrecherchen, Nachweissuche und Entschädigung, Berlin, Metropol.

‘feverish illness, circulatory weakness’. According to Bremberger this is the expression used during the war to conceal the true cause of death: Starvation.

Only in the spring of 2007, in the course of research for this book, did Eternit AG come to the decision to no longer cast doubts on its use of slave labour in view of the evidence. Udo Sommerer, chief executive officer of Eternit AG, confirmed in a letter, ‘[...] We do not have direct evidence for the use of slave labour since apparently all personnel files – even for the German employees – were destroyed by the events of war. Indirectly there is ample support for having used slave labour. The participation in the Work Group Berlin Rudow is documented. There are the inquiries (after 2000) from women who were formerly slave labourers, asking for confirmation of their labour employment. Likewise, we have the construction permit for the camp with barracks on Köpenickerstraße and Kanalstraße. [...] It is true that two members of the Schmidheiny family were representatives on the nine-member board of directors of DAZAG during the war. Eternit AG joined the *Stiftungsinitiative Erinnerung, Verantwortung und Zukunft* (Foundation Initiative for Remembrance, Responsibility, and the Future) effective July 6, 2000. We contributed 400,000 D-marks. We have no knowledge concerning the use of the funds since the monies are distributed through the Foundation.’⁵⁸

In July 1945, three months after the Russians had liberated the workers, DAZAG resumed production in Berlin, although in a very limited way. New machines were cobbled together from parts of old machines and airplanes. Raw material came from supplies once intended for insulation of air raid shelters. The needed capital once again came from Switzerland in 1949: Max Schmidheiny still believed in the German market that was going to flourish thanks to reconstruction. The factory owner therefore helped out the asbestos cement factory in Berlin with a personal loan in the amount of a million D-marks. His calculations paid off: While the company had revenues of 350,000 D-marks in 1949 and about a hundred workers, a year later the workforce had almost doubled and revenues shot up to over two million D-marks.⁵⁹ The dollars generously flowing at the time from the European Recovery Program ensured the rest of the company’s success. Business expanded into West Germany and commerce with the lethal stone flourished.



Aerial photograph of the Eternit factory in Berlin-Rudow, probably from the 1970s

Source: Museum Neukölln

58. Letter from Udo Sommerer to Maria Roselli, 8 May 2007.

59. Stahr H. (1990) *op. cit.*

In 1980 the Swiss businessman Max Schmidheiny was awarded the Ernst Reuter Medal by the Berlin Senate in recognition of his 'courageous' investment in post-war Germany. It didn't seem to disturb anyone that he had been on the board of directors during the Nazi period.

In 1990 Stephan Schmidheiny, Max's son, sold his shares to the Belgian Etex Group, which closed the factory in Germany's capital in 2003.

But what does Stephan Schmidheiny say of this history about which little has been known until now? Stephan, who was even the chairman of the board of Eternit Berlin in the 1980s? Although he was personally asked to respond, the erstwhile asbestos cement businessman was not ready to answer questions. He leaves this delicate task to a publicist, the Zurich communications consultant Peter Schürmann. Anyone who expected that Schürmann would simply admit to and regret the use of slave labour was disappointed. Indeed, Schürmann continues to cast doubt on this sad chapter of corporate history: Whether, for example, a given number of slave labourers really had worked at the German Eternit cannot now be determined from the records. It has been established, however, that a Work Group of various companies did build three worker barracks and a wash barrack on land next to the factory during the war years. A hundred slave labourers, 283 by war's end, as mentioned in a German newspaper, must have been housed here. The Work Group members had requested the number of workers they needed. From written documents it is clear that cement was rationed as early as 1938 on account of the construction of the West Wall. Moreover, the limited allotment of asbestos due to lack of foreign currency had led to shutting down all machines at Eternit in September 1939. Thus, the question arises, 'Why would Eternit have used forced labour?'⁶⁰

This is a statement that no one would dare make in Germany anymore in this form. But why does Stephan Schmidheiny's publicist twist himself up in such a sibylline explanation after the German Eternit has admitted there is very likely evidence forced labour was used? Didn't the current German Eternit top management talk with the former owners? Or are they of the same opinion? What is clear is that Stephan Schmidheiny's publicist is passing the buck to the Germans and is downplaying the role of the Swiss in management. It's claimed – according to family accounts – that the Schmidheiny's held only a minority share in the German company. Max and Ernst Schmidheiny did sit on the board of directors, but this body had, under German law, 'no operative authority' as opposed to the powers of a Swiss managing board. And not only that: At that time foreigners were absolutely forbidden to fill management positions. And besides, practically all German companies used forced labour because that had been, according to the publicist for Stephan Schmidheiny, 'an order of the NS regime'. The fact that Max Schmidheiny had been awarded the Ernst Reuter Medal in 1980 is evidence of his integrity. Schürmann let it be known, 'Such prestigious awards always came after one's role in the Nazi period had been vetted.' Max Schmidheiny therefore did not need to be ashamed of his role on the DAZAG board of directors.

Nadya Ovsyannikova had good fortune in her misfortune in that asbestos was partially replaced with alternative fibres during this time and the forced labourers worked mostly outside. She therefore was spared the typical asbestos diseases. What became of her comrades in misery she does not know.

In 2001 the White Russian authorities acknowledged that Nadya Ovsyannikova – along with hundreds of thousands of men and women – had been deported to Germany not voluntarily but as slave labour. Two years later the woman from White Russia received

60. Letter to the author, June 2007.

750 euros, her first portion of the reparations payment from the Foundation. In 2005 the remaining payment arrived: 1,250 euros.

On June 13, 2007, Nadya Ovsyannikova returned to Berlin at the invitation of her friend Christian Richter. Sixty-two years after her liberation she wanted to see the factory again, where she had been kept as a slave. She went to the work halls of Eternit three times during her short stay in Berlin. She walked over the grounds for hours and told her friend her whole story again, showing him where the barracks had stood, where the little guard house had been, and the old bridge that led to freedom across the canal. Fragments of memories spontaneously materialised that she put together like pieces of a puzzle. She remembered one evening when she was too weak to climb up into her bunk and had tumbled unconscious to the floor. She spoke of the crippling fear that she had had of the fat woman guard. She described the incredible feeling of happiness that washed over her when she arrived home after a trek of many weeks and saw her mother again. Only after her third visit to the factory on the canal could Nadya Ovsyannikova get a new perspective on her emotions. No more tears flowed on this third visit. In a steady voice she said to her friend, 'Time doesn't heal the wounds, but I survived.'

Asbestos business courtesy of apartheid

Beginning a profitable business with Blacks

Let's leave Germany and turn our attention to the southern hemisphere: From Nazi Germany to the apartheid government of South Africa. Here too the asbestos companies, including the one belonging to the family from the Rhine Valley, wrote another dark chapter of corporate history. There were three crucial factors: the Second World War rapidly spreading throughout the northern hemisphere; an army of cheap black labour with no legal rights; and almost infinite asbestos reserves.

Although the former British Cape Colony belonged to the British sphere of interests in SAIAC, the Schmidheyns decided to apply for a larger share in South Africa within the asbestos cartel. Shortly thereafter approval for expansion came from the British asbestos cement giant Turner & Newall. The British company wasn't interested in investing in a country that had been fought over by the Boers and the English.

On April 22, 1941, Max Schmidheiny founded Everite Limited, acquiring his first factory in Klipriver shortly thereafter. In the following years, his asbestos business prospered, and Everite became one of the leading companies in the country through the purchase of a number of asbestos mines and factories.⁶¹ To reduce risks for their foreign investments as much as possible, the Schmidheyns customarily looked for a strong local investor. If legal considerations demanded it or local laws required it, the clever man from the Rhine Valley had no reservations about slipping into the role of a minority shareholder. They had no fears about such a manoeuvre because they knew they were financially and technologically more advanced than their counterparts in developing countries. Thus Everite held forty-seven percent of Asbestos Investments, a holding company that owned some of the largest South African asbestos mines. Max Schmidheiny became the president of the flourishing mining company.

61. Roselli M. (2002) Mit Asbest von der Apartheid profitieren, *Work. Die Zeitung der Gewerkschaft Unia*, 22 March 2002.

An anecdote, told by the South African Sarel de Witt in connection with a meeting that took place in Switzerland in 1961, illustrates what sort of brazen arrogance the Swiss owners displayed in their dealings with their business associates. ‘During the meeting, where we were discussing the Schmidheiny’s coming in on the asbestos mine in Danielskuil – a deal running in the millions – the South African guest jotted down a few catchwords on the back of an empty cigarette pack. Ernst Schmidheiny Jr is reported to have asked him after skimming over the scribbles, ‘Can’t we use that as the contract?’ And signed it with a ballpoint pen.’⁶²

Starting in 1942, approximately fifty-five thousand people worked for the Schmidheiny’s network of companies during the South African apartheid regime; the majority of the workers were blacks, who had no legal rights. One of the ten thousand South African workers exposed for decades to the carcinogenic material without their knowledge is Fred Gonna. For twenty-five years Gonna worked in the Everite factory in Brackenfell. A union member today, he well remembers his time in the ‘factory with lots of dust’.

Interview

with Fred Gonna

South African trade unionist

‘They treated us like stupid children’



What were the health protections and working conditions at the Everite factories?

F.G. – Absolutely terrible! There was dust everywhere. No one told us that it was deadly. If one of us got sick, the company transported him back to his homeland. No one knew why the workers were getting sick. Explanations only began in the 1980s when the unions organised at Everite. Management came under pressure and they realised that they could no longer stay silent. They handed out flyers to tell us to watch out for the dust. They called the deadly asbestos dust ‘Mister Fibre’ in these flyers and told us that this gentleman wouldn’t do anything to us as long as we didn’t disturb it. But if we did disturb it, it would become dangerous.

That was absurd. They treated us like stupid children. They should have said that asbestos dust causes cancer.

Did the workforce in Everite have direct contact with management?

That’s another story. We had been asking ourselves for years why management – especially the managers from Switzerland – avoided coming onto the factory floor. The few

62. Becher J. (2003) *op. cit.*

times that they were there they stood far away from the machines. Only later did we realise that they didn't want to breathe in any dust. They knew right from the beginning that it was deadly, but they didn't want to tell us that.

Did the Swiss management explain to you why they sold the company in 1992?

They told us they just weren't interested in doing business in South Africa anymore. It's obvious, of course. When apartheid ended they couldn't exploit us blacks anymore. Most of the workers were blacks, earning a lot less than the whites.

For the same work?

Yes. They justified the difference in pay by saying the whites had to buy houses and furniture. They just stuck us in that horrible housing for workers where we had to live for years and years without our families. They couldn't do that after 1992. That's why Stephan Schmidheiny got out of the business in South Africa, selling the company to a local firm. Schmidheiny ran off before the new government could hold him accountable. We didn't want to take that lying down. So we sent a letter to him in Switzerland addressed to his Neuva Holding. We made it clear that he had to accept responsibility for paying compensation to the sick and to the families of those who had died.

Did Schmidheiny reply?

Not personally. We got a letter from Nueva's management. They informed us that they always complied with South African laws and therefore had no obligations – neither legal nor moral.*

* Roselli M. (2002) Sie behandelten uns wie dumme Kinder, Work. Die Zeitung der Gewerkschaft Unia, 22 March 2002.

Also an ecological disaster

Stephan Schmidheiny (born 1947), second oldest son of Max, completed his applied management training in South Africa, of all places. The smart businessman, who was supposed to be celebrated at the UN's Earth Summit in Rio in 1991 as the pioneer of exiting from the asbestos business, spoke there for a change of course in the direction of a 'sustainable, intelligent, and ecologically compatible capitalism'; thus spoke the principal shareholder of Everite during the worst years of the apartheid regime, notably at the time when the machinery of racist repression was desperately trying to hold on to power, no holds barred.

By the end of the 1980s, Stephan Schmidheiny, who managed all the Eternit family works abroad from the mid-1970s on, had disposed of the important mines. Blue asbestos, which was mined in South Africa, had fallen into disrepute because of its particularly aggressive potential for causing cancer and was therefore less in demand. After the fall of the apartheid regime in 1992 the businessman pulled out from Everite, which was bought by the South African Group Five.

But the Swiss billionaire's attempt to avoid liability before it was too late failed. The past caught up with Stephan Schmidheiny in 2002: A lawsuit was filed in Johannesburg against the former asbestos cement company. John Ferreira, a white manager who had become ill with mesothelioma, was suing Everite for a million francs. Ferreira, who has since died, had grown up right near Everite, but had never worked in the plant itself. Ferreira's exposure to asbestos started in the 1960s when his father and brother worked at Everite and brought their dirty work clothes home. Richard Spoor, Ferreira's lawyer, spoke bluntly to the Swiss press in 2002. 'The lawsuit is a first step in holding Everite accountable. But those who are really responsible are sitting in Europe and presently they are still beyond the jurisdiction of our courts.' For him there would be justice only when the investor's family in Switzerland could be called to account, seeing that the family had profited from the apartheid regime over the years and had, with its factories and mines, created a public health calamity and, above all, an ecological disaster.

'Public-spirited' housing construction

Sophia Kisting, a physician for occupational health at the University of Cape Town, considers the damages from asbestos to be one of the biggest environmental problems in South Africa.

Closed asbestos factories and mines, and not just those once belonging to the Schmidheiny's, are in urgent need of remediation. The former factories are not only dangerous, the occupational health doctor told the Swiss press in March 2002: Thousands of blacks in the townships are living in houses with the asbestos roofs and walls in poor condition. According to a study of the National Centre for Occupational Health, asbestos measurements in the houses of Soweto are ten times higher than the legal permissible limit. Approximately seventy percent of the asbestos corrugated roofs in Soweto came from Everite. Many of these roofs are more than forty years old and deteriorating badly. And the people who live in the houses don't realise the danger when they do roof repairs themselves.

The Swiss company did a profitable business providing asbestos roofs for blacks in the townships and not just in the 1950s and 1960s. Everite CEO Georges Thomas explained as late as 1990 in an interview with the magazine *Bilanz*, 'We are optimistic about next year after a poor performance for 1989.' The basis for so much joy: The budget of President Frederik de Klerk. Approximately three billion rands – then 1.8 million francs – were budgeted for state supported housing construction for blacks in the townships. The company had also continued to do well in the past years with the help of public spending.

But it wasn't just the Swiss affiliates of the Schmidheiny's that inflicted enormous environmental damage in South Africa. The British corporations, which earned billions with the 'wonder fibre' while ignoring known dangers to health, were also primarily responsible for this environmental disaster.

According to Everite's claim, 508 former Everite workers were sick due to asbestos exposure by 2002, when Ferreira showed up in court. Under South African law these former workers cannot sue their employer, but are compensated by a fund with contributions from workers and employers for their work-related illness. But it is a different matter for family members who are ill, as John Ferreira's case shows.

Hans-Rudolf Merz: A friend for all seasons

The media campaign against the company and its erstwhile Swiss owners by John Ferreira's lawyer soon brought results: In the spring of 2003 the management of Anova Holding AG – the successor corporation to Amiantus AG, into which the foreign holdings of the asbestos cement company had been organised – contacted the South African asbestos victims' lawyer Richard Spoor and invited him to a meeting in Switzerland. What had happened? Why did the company initiate contact with the South Africans so quickly?

An 'old business acquaintance' of Stephan Schmidheiny had facilitated the contact to the South Africans: The then-current member of the Council of States, the upper house of the Swiss parliament, Hans-Rudolf Merz. The man who is now the Swiss Minister of Finance had advised the Schmidheiny family businesses in personnel development matters for years as an independent consultant, and in particular had recruited division personnel for the global asbestos cement empire – including South Africa. Facing the risk of asbestos trials in various countries, Stephan Schmidheiny resigned from the Anova board of directors in August 2002 and thrust his old friend into the president's chair that was now open. 'After I had dealt with these issues for more than a quarter of a century, people with new perspectives should review possible new ideas in asbestos matters. I want to ensure that my holding company contributes constructively to this debate and assists in looking for appropriate solutions to existing problems,' the billionaire's son wrote in a press release at the time. And he announced that from now on 'hardship cases without a legal basis should be unbureaucratically resolved on a humanitarian basis'. Schmidheiny signalled no concessions, on the other hand, towards former workers whose claims were to be covered by insurance agencies, SUVA for example, or covered by successor companies. He would let these cases like those of the victims who would seek legal remedies be dealt with under existing law. The philanthropist, who had played with the idea of becoming a missionary in his youth, had in mind humanitarian projects for successful development in the affected regions to take care of the hardship cases. The accusation that the plan for dealing with hardship cases would serve mainly to shield against any class action suits was rejected by his Zurich publicist Peter Schürmann as a malicious allegation. The publicist also had no patience for the Swiss press calling Schmidheiny's resignation 'running from asbestos dust'.

As the new president of the board, Hans-Rudolf Merz was also completely behind his beleaguered friend: Merz told the Swiss press that Stephan Schmidheiny had shown respect for asbestos issues early on and had looked for alternative fibres. But the public unfortunately had failed to understand his pioneering efforts.

As early as April 2003 the first meetings took place with Richard Spoor, the South African lawyer for the asbestos victims. He presented a fat briefcase filled with records that documented the horrible working conditions in the South African factories. As a gift he brought along a delicately wrapped shimmering piece of blue asbestos stone for the negotiating team, which, it is said, he put on the table right at the beginning of the meeting. But the fifty million euro settlement that he had just concluded with the British asbestos company Gencor probably boosted the reputation of the internationally experienced lawyer.

The positions of the opposing parties were certainly miles apart at this first meeting: Schmidheiny's representatives wanted to finance humanitarian projects in the affected area. The suggestion was specifically for a museum and continuing education courses for the unemployed. Richard Spoor, on the other hand, insisted on compensation payments for the asbestos victims.

Compensation fund for some victims

After this first meeting the media were silent. The South African lawyer had to promise silence or the negotiations would be broken off.

In December 2003, only nine months later, Anova announced to everyone's surprise that an agreement with the South Africans was practically finished and would be signed in April 2004. Board president Hans-Rudolf Merz was approving a reserve in double-digit millions. But it is a fact: The agreement was completed only much later, and it wasn't signed by Anova but by Becon, another affiliate in the Schmidheiny family of companies. Moreover, the agreement as concluded no longer applied to the victims of the Everite asbestos cement factory, as Hans-Rudolf Merz had originally announced, but provided compensation to miners in the Schmidheiny asbestos mines. The compensation fund was formed by Becon under the name of Kgalagadi Relief Trust in March 2006 and started operating in June of the same year. Why then was there the premature announcement in the winter of 2003? The delay was explained away as a time-consuming matter of negotiating the final details. The business was begun by one company and then implemented by another.

But according to speculation in the Swiss press⁶³ the timing of the announcement was convenient for just one person, namely for Hans-Rudolf Merz alone. He had landed in hot water months before for 'naïve' statements on the apartheid state of South Africa. Merz had told the Zurich paper, the *Tages-Anzeiger*, 'There are also a lot of people who saw apartheid as an aspect of education and not as a matter of race. It's said that we have to educate the people who join the industry. It's not so much a matter of segregation by race as such.' The candidate for the Swiss Federal Council now had to work hard on his image because he wanted – when he found that the presidency of the FDP party was closed to him after this statement – also not to spoil his chances for election to the Council. The agreement with the South Africans for black asbestos victims presented a most excellent way to achieve this.

Was it therefore merely a question of image for the candidate to the Federal Council? Anova spokesman Peter Schürmann dismissed this as speculation: 'The allegation that Anova, Stephan Schmidheiny, and Hans-Rudolf Merz wanted to pay off their obligations to South African asbestos victims on the cheap with a deal is completely without merit since there are no obligations at all that Anova or their representatives could buy themselves out of. There are no legal proceedings against these parties whatsoever in South Africa.' The press spokesman said that Merz had agreed to the deal because the South African lawyer was persuasive and categorically rejected any connection between Merz's political career and the quick final agreement.

Merz justified his position to *work*, the Swiss union newspaper, which had confronted Richard Spoor, the South African asbestos victims' lawyer, with the remarks of the Anova president by saying he didn't want to interfere in the apartheid state of South Africa for the reason that a businessman shouldn't meddle in its politics. He wrote in a letter, 'Whoever works and travels a lot in a foreign country knows that a businessman has to stay out of politics and must concentrate on his professional tasks. [...] People know that Switzerland wasn't a member of the UN and didn't participate in its sanctions.'⁶⁴

63. Roselli M. (2004) Asbest: Schmidheiny will sich billig freikaufen, *Work*. Die Zeitung der Gewerkschaft Unia, 18 March 2004.

64. Letter from Hans-Rudolf Merz to Maria Roselli, 22 November 2002.

According to leaks, the Kgalagadi Relief Trust, which was administratively combined with the Asbestos Relief Trust in existence since 2003, was funded with ten to twenty million U.S. dollars. The term of the fund is limited to twenty years. Former workers from the mines Kuruman Cape Blue Asbestos and Danielskuil Cape Blue Asbestos are supposed to be the main beneficiaries. Considering the fact that there are hundreds of asbestos victims who are supposed to be compensated by the fund, the money that has flowed in seems meagrely calculated indeed.

‘If the numbers that have become public knowledge about the deal are correct, then it’s really parsimonious. Blacks are still worth less in the eyes of whites,’ was the comment on the deal by Mascha Madörin, economist and South Africa expert, speaking to the Swiss press. From Anova’s point of view there was a particularly compelling reason, according to Madörin, to put the agreement with the South Africans into effect as quickly as possible: South Africa’s President Tabo Mbeki had changed course on his original reservations about demands for compensation for the victims of apartheid; it turned out that the government itself wanted to set up a compensation fund for the victims of apartheid. A mandatory payment into this fund would have been far more expensive for Anova.

At the end of February 2007 the Kgalagadi Relief Trust published the figures for asbestos victims compensated in the first year. The fund paid a total of approximately six million rand, which is a little more than one million francs. By comparison, in Italy recently compensated asbestos victims received an amount between 800,000 and one million euros per deceased person, and in the United States two-digit millions are not infrequently paid out per person.

How many victims were compensated in the first year of the South African funds is not public knowledge. But the rate of approval for victims is known: Only 25.8 percent of the claims submitted to the administratively combined asbestos victims funds (Kgalagadi Relief Trust and Asbestos Relief Trust) were approved – 21.3 percent for a mild case of asbestosis, 2.8 percent for a serious case of asbestosis, only 0.3 percent for asbestos-related lung cancer, and 1.4 percent for mesothelioma. In other words: Only one out of four claims was approved and compensated. If compensated by the fund, the person must agree to waive legal action. Former workers from the designated mines who are now ill have a right to compensation, as do their family members who have become ill, and those living on lands next to the mines who have become ill. Also family members of asbestos victims who have died have a right to compensation but only, it should be noted, if the person died no more than three years⁶⁵ before a claim was filed.

For the families of the asbestos mine workers who died before 2003 there is no compensation from the fund. The same is true for all the victims who worked, not in the mines, but in the former asbestos cement factories that belonged to the Swiss family, because these mines were sold with all rights and liabilities. Anova press spokesman Peter Schürmann commented, ‘In South Africa civil claims fall under the statute of limitations after three years, which is why the fund accepted this condition. This three-year solution has nothing to do with being public-spirited or not but is based on existing law.’

The fund is run by three administrators named as trustees: Phiroshaw Camay, the former unionist, was named by the asbestos victims’ lawyer Richard Spoor; Brian Gibson, manager at Everite, was chosen by Becon; the third trustee is Markus Heitz, a Swiss physician from Zurich.

65. See <http://www.asbestostrust.co.za>

As a reminder: Between 1942 and 1992 it is estimated that fifty-five thousand people worked in the mines and factories of affiliates of the Swiss company. It is certainly not known how many of them died as a result of asbestos exposure because for a long time victims of asbestos were registered as tuberculosis victims.

South Africa: Will there be an asbestos ban or not?

In 2004 the South African government of Thabo Mbeki announced an end to asbestos. The ban would gradually phase in by 2009 (and did – see Laurent Vogel’s essay in this volume). Even though some companies, including Everite, had already switched to asbestos-free products, it wasn’t clear if the law would go into effect. Pressure from the asbestos lobby is enormous. The fight against a ban in South Africa is led principally by the asbestos producers in neighbouring Zimbabwe. This country, which produces almost exclusively white asbestos, earned approximately forty million U.S. dollars in 2005 alone from the export of white asbestos to over fifty countries – mostly in Africa and the Far East. Up until now South Africa has been one of the largest importers, a good forty percent, of various asbestos products from neighbouring states.

In November 2006, the former spokesman for President Robert Mugabe made a promotional tour in Zimbabwe. Munyaradzi Hwengwere promoted the supposedly ‘internationally proven harmless’ of white asbestos’, which is different from blue or brown asbestos because of its fibre structure and chemical composition, and therefore, he said, non-toxic to humans and the environment. A scientific superstition, which is still actually promoted by the asbestos lobby all over the world. White asbestos supposedly disappears from your lungs after a few days. Mining this type of asbestos is supposedly no more dangerous than mining other minerals, such as gold or coal.

Zimbabwe’s effort to persuade South Africa to change its mind is currently still falling on deaf ears in the country next door. South African Minister of the Environment Joanne Yawitch commented laconically on Munyaradzi Hwengwere’s statements, ‘Probably the only difference between the white and the brown or blue asbestos is that you die more slowly.’

Another argument still put forth by the asbestos lobby today – as it did in the 1970s and 1980s – in order to continue with the lethal as well as the profitable business that earns billions, is the fairy tale about ‘controlled use,’ that is, the safe and controlled handling during the processing of asbestos. This argument has been dismissed out of hand as baseless in some European courts – such as in Italy for the Eternit factory in Casale Monferrato. Even South African Brian Gibson, who worked at the head of Everite for over twenty years and implemented the ‘risk-free’ production techniques in his factory, now candidly admits that workers in his factory still got sick with asbestos-related diseases even after the techniques were introduced: ‘In the early 1980s Everite tried to eliminate the asbestos risks by using what were arguably the most advanced occupational health and safety programs in South African history. [Regardless of the safety measures and] excluding employees with previous exposure to asbestos, nine Everite employees who joined the company in the early 1990s were recently diagnosed with asbestos-related ailments.’⁶⁶ Gibson noted that another forty-two workers, who also had started in the factory after 1980, but already had been briefly exposed to asbestos, had fallen sick too.

66. Kazan-Allen L. (2005) Canadian asbestos: the fallacy of controlled use, London, IBAS, http://ibasecretariat.org/lka_can_asb_fallacy_con_use_05.php

Revising the opinion of the long-time Everite manager is certainly not entirely free from self-interest. The South African companies, such as Everite, that have switched to asbestos-free products, have had to absorb millions in costs and now are heavily competing with asbestos products from Zimbabwe. Importing asbestos cement construction products from the neighbouring state has gone up a juicy fifteen percent since Everite took its asbestos products off the market.

Chapter 4

Switzerland, the land of asbestos

From an asbestos village to a country of asbestos

Switzerland illustrates the way once-common use of asbestos has now and in the future devastating health consequences both at home and abroad.

A village in the shadow of Eternit

The neighbouring villages of Niederurnen and Oberurnen lie at the entrance to Glarnerland, just past Ziegelbrücke. The slopes on both sides of the valley are quite steep. Peaks of snow push against the horizon. A vineyard, a small castle, and a villa adorn the northeast slope. The two villages squeeze together in the valley. The population of both villages is about five thousand. It's hard to tell where one village ends and the other begins. A huge factory: You can't miss it right in the middle. Eternit has controlled the fate of the villagers for decades; it embodied the very idea of a guaranteed job for many of the local residents. It wasn't only the full-time employees who had a job at the factory over the years. Many farmers also worked there in winter when they weren't needed in the fields to earn welcomed extra spending money. And boys and girls from the surrounding area also added to their pocket money by working in the factory during school vacations. In its heyday the construction material manufacturer employed up to one thousand workers in its shift operations.

Behind the church in the cemetery dozens of former Eternit workers are buried. More than the expected statistical average, many of the village inhabitants who lie here died of mesothelioma. Some families can count several victims

from their circle of friends. That many of the former Eternit workers sickened and died of asbestos cancer was a fact of life for the local folks for generations; they preferred not to talk much about it, and even today most of the villagers and officials wrap themselves in silence.

‘That’s an old story. The company’s been asbestos-free for years. As fatal as the effects have been for those affected, that was twenty or thirty years ago. That’s when we should have taken note and sounded the alarm,’ says Fritz Zweifel, the municipal president of Niederurnen.⁶⁷ Asbestos isn’t talked about in the town council nor does he see any need for discussion. The municipal president isn’t the only one to think this way; this is a widespread attitude among the villagers who live in the factory’s strong shadow.

But some of those affected have had enough of suppressing their anger after years of silence. Franco Basciani, a former Eternit employee and later the secretary of the Swiss trade union Unia, is one of them. Basciani is used to things not just falling in his lap. He followed his parents to Switzerland at seventeen from southern Italy and, like his father, he worked at Eternit in Niederurnen as an assistant lathe operator. He is now forty-four years old and has his own family. Ever since 2002, when the threat of a court case in Italy reignited media interest in Eternit, he has taken the lead. He looked up former co-workers in Switzerland and Italy to ask about their health status. He discovered how many of these co-workers had died.

When Basciani was employed as an assistant lathe operator in the pipe department at the beginning of the 1980s, the company was gradually starting to market asbestos-free products from other departments. But in the pipe department they continued to work with the carcinogenic material. ‘My job was loading pieces of pipe onto a semi-automatic lathe on the assembly line and measuring them,’ Basciani recalls. ‘The lathe itself was protected by a vacuum mechanism. But on both ends of the table lay splintered pieces of the material, and fine dust flew into the air, which obviously we inhaled.’

People certainly knew in his day that the dust was dangerous but factory management didn’t give them much information. ‘They would maybe tell a worker to use a vacuum cleaner instead of a broom to clean the floor. But there wasn’t any systematic information, not about safety measures or health risks.’⁶⁸ For a long time Basciani was the only former employee who had publicly aired his concern. Sometimes he had the feeling that the *omertà*, the law of silence, ruled in Niederurnen as effectively as in Sicily.

This has not been the case for some time – thanks in large part to Basciani’s efforts: After years of silence some asbestos victims in Niederurnen and Payerne are now demanding justice by stepping forward with their stories. Switzerland has had two asbestos victims’ organisations since 2002, one in the Romandie and the other in the German-speaking region of Switzerland. Some members worked directly in one of the Eternit factories or are family members of deceased workers. One of them is the daughter of K.M. The woman, who wishes to remain anonymous, filed a criminal complaint against her father’s former boss. The man had worked only briefly at Eternit in Niederurnen, from 1977 to 1978, in the pipe department. The same department as Franco Basciani. In 2005 at the age of fifty-six he died of asbestos cancer. The fifty-page criminal complaint, which asbestos victims’ lawyer Massimo Allota filed on her behalf, listed seventeen witnesses who attested that they worked in the factory without any protection from the dangerous

67. Bosshard P. (2002) Über Asbest spricht man nicht, man stirbt daran, *Work. Die Zeitung der Gewerkschaft Unia*, 22 March 2002.

68. Franco Basciani’s quotations come from various articles in *Work. Die Zeitung der Gewerkschaft Unia* in 2004.

dust even though it's been known for years that asbestos can cause terminal cancer. But the criminal complaint, which has been joined by three more victims, stands on shaky grounds. The Swiss system of justice protects the companies: Even though asbestos cancer appears ten to forty years after exposure, there is a statute of limitations period of ten to fifteen years. The court with jurisdiction threw out the complaint, of course, but the victims filed an appeal against quashing the action and have appealed up to the Swiss Supreme Court.

The company that was founded as a Glarus joint venture in 1903 was acquired in 1920 by the Schmidheiny family and has remained under tight control of the Rhine Valley industrial clan for well over eighty years. Son Stephan took over the rudder of Eternit Switzerland from father Max in the 1970s and announced that he was getting out of the asbestos business as early as 1978. Even though the first asbestos-free products could be manufactured at the beginning of the 1980s, it took more than fifteen years until this trend was fully implemented. The company always said the reason for the delay in the departure was that for a long time no suitable substitute materials could be found despite exhaustive efforts. But the reality is that substitute fibres to manufacture so-called Durnat products were used, for example, during the Second World War in Eternit Berlin (see Eternit: International expansion, p. 50).

Stephan also inherited all foreign asbestos cement interests of the Swiss Eternit Group. His brother Thomas, two years older, took over the entire cement and concrete portion, worth millions, of the Holderbank (later called Holcim). In 1990 Stephan then sold the two Eternit factories in Switzerland to brother Thomas in connection with the final settlement of family interests. In the meantime, the foreign asbestos cement interests remained in Stephan's portfolio and were merged into Nueva Holding; only later did the Eternit heir sell the foreign factories. On November 10, 2003, only after an investigation of manslaughter had been initiated in Italy targeting the former Swiss head of Eternit did Thomas Schmidheiny, or rather Holcim, at last rush to separate itself from the 'incriminating' Eternit factories in Switzerland. These were sold to the Swiss entrepreneur Bernhard Alpstaeg. Alpstaeg is the owner of BA Holding AG in Baar and majority shareholder of the Swisspor Group in Steinhausen. The Swisspor family business makes insulation, sealants, and windows. The group employs 1,800 people in twenty locations in five European countries. The parties agreed to keep the sales price of Eternit confidential. In a laconic communiqué Holcim announced that Eternit had been sold because it no longer fit Holcim's corporate strategy. After exactly eighty-three years the industrial clan from the Rhine Valley finally gave up their former 'family jewel'.

Portrait

Therese Omlin

'Dad grew a second tongue'

There are days when everything comes back to Therese Omlin. Then she remembers. Her father's illness. The second tongue growing out of his throat. The blood-smearred handkerchiefs she took home from the hospital to launder. The poverty of her childhood. The freezing four-room apartment on Tschachenstraße in Oberurnen just across the street from Eternit, where Marie and Josef Omlin raised their eight children.

Therese is the second-oldest Omlin child and the oldest girl. She really had to pitch in with household tasks wherever help was needed. If she had time she loved best of all to play with the other children down by the

pipes, the Röhri, in Eternit's pipe department. She crawled around in these oversized pipes and threw sticks and stones just to create noise. Therese had to help out at the age of eleven in a restaurant during vacations. They needed money at home. A family of ten couldn't exist solely on her father's wages. Those were hard times according to the woman who is now sixty-two. She hadn't had real shoes, only wooden soles with a piece of leather that barely covered her feet. That's what she wore when she walked through the snow to reach her father at the factory. She had to stop every few metres to shake off the snow that stuck to her wooden shoes. When her father worked the evening shift he didn't come home for supper. The older children traded off taking him dinner at the factory. Coffee in a thermos, a piece of bread, and sometimes a sandwich. Getting into the factory was no problem for the children. Everyone in her father's department knew them. Men ground Eternit panels made of asbestos cement. Therese liked watching the men work but her father didn't. 'Get out of the dust, child,' her father always said. Not that he knew how dangerous the dust was. The dust was simply annoying. She will never forget the smell of the factory. Asbestos has a very distinctive odour.

More and more images from her childhood in Oberurnen occur to Therese Omlin as she speaks. She remembers the poverty that prevailed then, and how people simply accepted things as being God's will.

The Omlin father had moved from Sachseln to Oberurnen. After he married in 1941, he started working at Eternit and stayed there until he retired in 1976.

He ground asbestos cement panels eight to ten hours a day and in the evenings, if he wasn't on the late shift, he worked as a night watchman at the factory. Sometimes he also worked in his time off for a construction firm. But what he earned still wasn't much more than enough to buy potatoes, which he could get at a discount from Eternit in fifty-kilo sacks. The children got canker sores in their mouths that stank horribly from such a restricted diet. The doctor explained this came from a vitamin deficiency and prescribed cod liver oil. Therese Omlin remembers that this was common in a lot of families in the neighbourhood. Poverty bound the village together back then. Only the families that came from Oberurnen who were helped by the community had it a bit better.

As a night watchman, the Omlin father made his rounds in the factory at night, also going to the barracks below the *Röhri*, the pipe department, where the Italians lived. There were five huge Eternit barracks, full of Italians. That was a world apart. Her father sometimes told her mother what he had seen there. ‘This is another great migration,’ he would say with a smile. That was a big draw, he said, for the women in the village, all these men. Her father told the story that once a Swiss man was looking for his wife. He went to the barracks with a rifle and fired wildly. And a woman came running out of every door.

Therese Omlin stops a moment in her story and her expression turns serious again. So many people she knew from back then are now dead. When she was young, there were always funerals although no one talked about why they died. She can’t explain why that wasn’t talked about. They just said it was cancer. But no one said anything about asbestos causing it. Even today one scarcely talks about it and certainly anyone still working in the factory doesn’t. One of the workers she recently met at the doctor’s had indicated that he couldn’t talk about it.

Her father died May 15, 1990. He was seventy-seven, relatively old in the daughter’s opinion, considering the sheer abundance of asbestos he must have inhaled. He died five weeks after he was admitted into hospital. He had had a strange cough for some time and had lost a lot of weight. The doctors diagnosed a cold lung infection, but then suddenly everything began to happen. Josef Omlin began coughing up blood and a tumour grew on his throat; it was like a second tongue. The daughter kept asking herself what in heaven’s name was wrong. Therese visited her father every day in his last weeks in hospital, and she was with him when he died. She can’t get rid of the image of that ‘second tongue’. She spoke with the doctor after her father died and told him she finally wanted to know what sort of disease her father had died of. The doctor casually mentioned ‘asbestos lung’. As if



Therese Omlin (first from left) with six of her seven siblings

that were the most normal thing in the world. No one told her that this was a work-related disease and SUVA was really supposed to pay for the costs they had incurred. She learned this only after a lot of news stories on asbestos appeared. Again, Therese stops speaking and then her voice is angry: Two weeks after her father's death, SUVA contacted her but for a completely different reason. Frau Omlin was told to bring in her husband for his annual check-up. 'I'm supposed to bring in a corpse?' she asked. They had checked her father every year. 'Why weren't we told about this illness?'

The rage in Therese Omlin's voice ebbs and her thoughts focus elsewhere, for there's another story she wants to tell. The story of her brother, Sepp, who only worked for about a year and a half at Eternit. Sepp Omlin died of heart failure the day before Christmas in 2001. He was fifty-nine. Three months before his death he had a long talk with his sister. She should be prepared for the fact that he wouldn't live much longer. He too had asbestos lung. Three months later Sepp Omlin was sitting in the car with his sister when he suddenly collapsed and died of a coronary.

Therese Omlin interrupts what she's saying; she can't go on. She is seething with rage towards Eternit and their owners, and she is especially angry with SUVA, which must have known how bad the whole thing was. Frau Omlin opens her purse and carefully takes out some family pictures. Pictures from her childhood in the village of Glarus with the large factory, from the time when the Omlin children loved to play in the Eternit pipes.

They sought work in Niederurnen and found death

Since the beginning of the 1960s, a majority of Eternit workers in Niederurnen came from Italy and other southern European countries. The migrants thought they had found their fortune in the industrial town of Glarus and encouraged their relatives and friends to seek jobs in the asbestos cement factory too. They could live in the barracks behind the train station. Some migrants stayed with their families; others went back home in the course of time. They lost their jobs during the crisis in the 1970s or they had achieved their goal of building their house, of having saved money to start a better life. A rude awakening for most of them came years later, when their cancers appeared, and when their relatives and friends began to die after they had returned home. One place that sent a particularly large contingent of migrants is the association of municipalities around Santa Maria di Leuca in the southern-most corner of Apulia.

Cacti line the road that leads from Santa Maria di Leuca to Tiggiano. Cliffs sparkle green in the light of the last rays of the sun. On the other side of the road there are olive groves as far as the eye can see. In this southern-most corner of Apulia people live from farming more or less as they always have. Apulia is one of the poorest regions in Italy. Starting in the late 1950s, people emigrated by the thousands from this region. They went to Belgium, Germany, and Switzerland, and now the wealthier Italian North attracts the young.

People from Tiggiano, Corsano, Alessano, and other villages surrounding Santa Maria di Leuca arrived by the hundreds in the little Glarus village with the big factory. Ermelinda De Francesco still remembers those times well because she was the one who got jobs for many of her compatriots in the Eternit works. She swears right at the beginning of the conversation that she didn't know then these jobs would spell doom for so many. The woman, now in her seventies, runs a gas station in Tiggiano. In 1956 she migrated to

Niederurnen as a young girl; a relative had helped her get a job in a textile factory. Those were lovely times, she says wistfully. 'During the week we worked like dogs and on the weekends we went dancing in the pub called The Stag and drank coffee. The locals were leery of southern Italians at first. So we mostly stayed with our own kind in The Stag.' Still the young woman became friends with some Swiss. Even the Eternit boss took a shine to the affable Italian woman. Once the boss even came to Tiggiano during the holidays. He found the village and the friendly people utterly charming. Word of the friendship between the young woman and the high-ranking boss soon got around the village. Ermelinda became the contact person for Eternit. Whoever wanted to go to Niederurnen from then on went to her father. He ran a coffee bar in those years. Anyone who was thinking of emigrating gave his personal information to her father and he mailed it to his daughter, who then handed it in to the boss's office. Ermelinda De Francesco has no idea now how many compatriots she helped in getting a job. But it was a lot. Sometimes she had the impression that half the village had left for Niederurnen. She met her fellow Italians everywhere. On Sunday walks or during the week after work at the Migros food store, wearing dirty work clothes and carrying plastic bags full of groceries.

Now the woman is worried about her former friends. Taggiano's village doctor told her that many of them have been consumed by cancer. The numbers have been increasing over the past several years to a terrifying extent: Already dozens of former Eternit co-workers in the villages surrounding the town of Santa Maria di Leuca have died of asbestos cancer. Everybody knows someone here who's died or is sick. But there are no statistics. Not even at Eternit. According to the current Eternit head Anders Holte, approximately 2,500 Italians altogether worked at the factory.

Once the Turin state prosecutor Raffaele Guariniello opened an investigation of Eternit in Niederurnen in 2001, people in the region became aware of these things. People speak openly about the tragedy that touches everyone. Some of those affected no longer wanted to remain silent about the deaths no one spoke of. For the first time, Biagio Mastria, who has been active for several years in the local Association of Former Migrants, held an information meeting for this purpose one evening in February 2005 and even invited the lawyer of the German Swiss Asbestos Victims Association, Massimo Aliotta, and the trade unionist Franco Basciani from Unia.

The town hall in Corsano is packed to the gills. People have travelled from Alessano, Tiggiano, Casorano, Gagliano, and Santa Maria di Leuca. They all know each other. The mood is gloomy. Everyone shares the same fate: They or someone in their family inhaled the deadly dust for years in the factory and they're now worried about their health. Many of them are already ill. Difficulties with breathing, asbestosis, and cancer. Others are now too afraid to go to the doctor. 'Justice for Eternit's Asbestos Victims,' reads the banner behind the lectern.

Dolorata Cazzato is sitting in back of the hall. The mother of four children can't sleep at night. She's always coughing and has difficulty breathing. She doesn't know why. 'I hope they don't show pictures of sick people. I couldn't stand that,' she says softly to her husband, Salvatore Chiarello. Next to him sits Mariarosaria Antonazzo. She tells how her father, Cosimo Antonazzo, died of lung cancer in 1984 after he came back from Niederurnen. Mariarosaria was thirteen at the time: 'He screamed in pain and vomited blood.' Farther down in the audience are Elvira Longo and Christian Marini. Their fathers also died of asbestos cancer.

Assunta Orlando is, as she puts it, very disappointed with Eternit. Her husband, Ipazio Chiarello, died in 1990 of cancer, four months after he came back from Niederurnen. 'The doctor in Switzerland told him everything was okay when the cancer had already

metastasized to his bones.’ His widow never applied for a survivor’s pension from SUVA because she didn’t know she had the right to it.

Standing up front in the Corsano town hall is Franco Basciani. He personally knows many of the people here from the time when he worked at Eternit in Niederurnen. He organised the information program together with the Corsano Association of Former Migrants. ‘People are desperate and furious because no one told them how dangerous asbestos is,’ Basciani says.

There’s another problem: People don’t know about their rights. Many didn’t even know before this information program that family members who died were insured by SUVA as Eternit workers. ‘Most people don’t know at all they have a claim to a pension and damages,’ says Massimo Aliotta annoyed.

A majority of the former Eternit workers didn’t have any more contact with Swiss Accident Insurance Fund after they came back. Only recently, after the media had taken up this issue, did SUVA take up the matter and, among other things, organised a meeting in May 2006 with representatives of the Italian accident insurance fund.

But money isn’t the only thing that interests people at the meeting in Corsano this frosty February evening. Fontana Alessio, the daughter of a deceased Eternit worker from Taggiano, gets to the point: What she wants more than anything else – justice. The young woman asks if a lawsuit can be filed in Switzerland against Eternit. The Swiss lawyer explains to those present it is not a simple matter. Employees are poorly protected in Switzerland. For most of the people here the statute of limitations period of ten to fifteen years is pure mockery because they all worked at Eternit in Niederurnen in the 1970s and 1980s. Even if they fell sick only now, it’s generally too late for a criminal lawsuit to be filed.

After the meeting some people from the audience meet in a bar across from the town library. Fernando Domenico Crudo, who worked at Eternit from 1967 to 1979, tells how he was one of the first to have acquired a face mask. ‘There was dust everywhere, which was very irritating, so I went to a pharmacy myself and bought a mask.’ What Crudo doesn’t know: The masks for sale at the time were just about useless.

Crudo still remembers the 1970s quite clearly when Stephan Schmidheiny took over the factory from his father Max. The son Stephan did look for alternative fibres and undertook various technical innovations but work conditions didn’t improve. ‘On the contrary,’ Crudo believes, ‘Stephan introduced piece work. Suddenly one day a man was standing there in our department with a stop watch and a pad; he carefully wrote up how much time we took for our work and a few weeks later we had to follow management’s instructions. The pressure really increased a lot.’

Antonio Mariello also worked for nineteen years at Eternit, from 1964 to 1983. ‘Asbestos arrived from Russia by train. We had to unload it, mix the different asbestos types, and fill seventeen-kilo sacks with a pitchfork. Sometimes our section was so full of dust we could barely see each other,’ recalls the man from Alessano. No one explained to them this work was dangerous. ‘If we got sick and started coughing, they just sent us to a different department where there wasn’t so much dust,’ Mariello went on. His friend Francesco Treveri is also worried about his health. Too many died who worked there. ‘When SUVA showed up we had to clean the factory spic-and-span,’ the man recalls. And something else: They put in a smoking ban at one point. There was a fine of two francs if you smoked. But the workers just hid in the rest rooms. After a little while they just lifted the ban because the men were taking too many breaks. For Treveri it’s obvious: ‘They must have known then that smoking was especially dangerous for asbestos workers, otherwise they wouldn’t have told us not to smoke.’

Mario Muccio is sad. His brother Virgillo and his cousin Antonio Muccia died of cancer just a few months after they came back from Niederurnen. He now asks himself, 'When am I going to get it?'

Fontana Alessio is also rather depressed by the end of the evening. She asks over and over again how is it possible that the statute of limitations period in Switzerland is so absurd? She keeps asking herself why her Swiss co-workers at Eternit scarcely lifted a finger against the company. 'If the Swiss do nothing, and they know the language and know the laws of their country, what can we do, sitting in Italy, against this powerful factory?' the young woman asks. 'And Italy, what's our country done for us?'

Antonio Martella would have also liked to been at the meeting in Corsano. But he stayed home. He always needs his oxygen and is exhausted from chemotherapy. He has asbestos cancer and knows he only has a few months left.⁶⁹

Interview

with Anders Holte

CEO of Eternit Switzerland

'Asbestos is a dark chapter in corporate history'



Herr Holte, how long have you worked for Eternit Switzerland?

A.H. – I came to Niederurnen as chief financial officer for Eternit Switzerland at the end of 1986 and at the end of 1990 I took over operations. Before that I was employed in the Swiss Eternit Group in Germany.

Former workers from Eternit are raising serious charges against your company. They are saying that although the company knew how dangerous asbestos was, for decades the company took no measures to protect the workers and that the workers were not informed about the dangers. How do you see this?

What you say isn't true. Eternit always took measures that complied with the scientific standards of the day. I also have to ask whom you mean with 'former workers'? I am convinced that workers who were hired at Eternit in the 1980s would report quite different conditions from those who worked with us in the 1950s. That's because in the 1950s people didn't know about the dangers of working with asbestos to the same extent. Keep in mind that the Swiss Eternit Group's safety manual was later used by the ILO (International Labour Organisation) as the basis for required safety measures.

69. Roselli M. (2005) Sie suchten Arbeit und fanden den Tod, Work. Die Zeitung der Gewerkschaft Unia, 24 February 2005.

Former workers at Eternit also say that SUVA's control surveys in your factories were announced ahead of time.

Yes, that's true. Why?

Because there was the possibility that the factory was thoroughly cleaned up the day before and on the survey days the machines that produced a lot of dust weren't even turned on. That's what former workers say at least. Was this actually customary in your factory?

No, that is an insinuation I absolutely deny. You just can't make a workplace clean in a flash. Naturally measurements were also made at those machines that effectively produced the most dust. That we falsified the measurements and thus intentionally endangered our workers is a malicious lie.

The fact that not only workers from production but also people who lived next door, a cleaning lady and a former bookkeeper who weren't on the production floor, have died seems to contradict the safety measures taken at Eternit. You've always maintained in interviews until now there was no danger for people who lived next door. What's correct?

These instances concern people who worked at Eternit or lived in Niederurnen before my time. I personally don't know about the case of the bookkeeper who died. But I do hope that his family filed with SUVA. As for the person who lived next door that was Herr Marcel Jann, who lived near our factory when he was a child. I visited Herr Jann after he was diagnosed. This is a very tragic case. His illness isn't insured with SUVA because his illness isn't a work-related one. Even though we didn't have a foundation at the time for victims, we've tried to help Herr Jann financially.

And what's your position on the cleaning woman who died?

Most of the cleaning women also worked on the factory floor even if they didn't work in production. This does not contradict the safety measures at Eternit. Even here what's important to ask is this: When was the person exposed, what was the state of knowledge, and which safety measures could be implemented at the time? There will always be unexpected cases of illness – not just at Eternit.

Former workers from your company complain that although they were screened, they never saw the results of the screening. Only management was informed about the workers' health condition. Eternit didn't pass on the information to those affected but took direct measures. Not having told them about the early stages of the disease, they just transferred the affected workers to another workplace. Was that the practice in your company?

You know that I took over the general management of Eternit Switzerland only in 1990. So I can't speak about the 1960s and 1970s. It is, however, generally known that SUVA carried out screenings since the 1960s. Thus it seems clear to me that a diagnosis was always discussed by the physician and the patient. As a company we never had access to patient files. That kind of information is protected by medical confidentiality. The company was only told whether the person was fit to work when exposed to dust.

That means that SUVA certified that a person was fit for work with asbestos? That's what it said in the physician's certificate?

Not asbestos, but with fine dust. The notice literally said that the person can be employed without limitation or the person cannot be employed in a workplace exposed to dust. But we never got patient files with a diagnosis.

You or your predecessors decided on the basis of this statement from SUVA whether someone had to be transferred from his workplace?

Yes, we followed the recommendations of the doctor or rather SUVA. Just the same as when someone has back pain, for example, and he isn't permitted to lift any sacks. The company has to do that. It's a normal procedure in a company. The demands of a workplace and the worker's ability to do the work must be matched. And I would again like to emphasise at this point that we always had dust exposure under control and performed regular measurements. There have been, after all, maximum limits to comply with since the 1950s.

Nevertheless there are a number of lawsuits pending against Eternit. The past has caught up with the company a good seventeen years after the asbestos ban went into effect in Switzerland. Did you see this coming?

We knew we would have to deal with this after we ceased making asbestos products. That was clear just from the fact that the dreadful disease of mesothelioma has a long latency period. We therefore knew that we would always have our past with us. But I didn't anticipate lawsuits. Primarily because I was convinced that Eternit, even before my time, had always done whatever was possible at that time to protect workers' health. To tell the truth, the lawsuits surprised me, and I don't believe this is the right way. But we've always taken responsibility for our past. I want to emphasise here: There aren't any lawsuits pending against Eternit itself. In Italy there are two lawsuits pending against individuals, that is, former managers and executive personnel of Eternit, and not against the company itself. In this investigation the only question is whether there's been a criminal act.

But your company is facing difficulties here in Switzerland, too. Here the daughter of a deceased Eternit worker has filed a criminal action and three more victims have joined the complaint.

The Glarus courts have already dismissed the suit. In the first place on account of the statute of limitations period, and in the second place because there were insufficient grounds for suspicion of wrongdoing.

But the proceedings haven't been concluded yet because the victims filed an appeal.

That's true and was anticipated.

One of the proceedings in Italy, which has been ongoing since 2001, concerns former Italian Eternit workers in Niederurnen and Payerne. They died of lung cancer or mesothelioma after they returned home. The Turin state prosecutor, Raffaele Guariniello, is investigating 'multiple negligent homicides'. In several letters rogatory he has requested underlying documents. But your company has objected to handing over these files in a number of motions and thus delayed the proceedings by years. What do you think of this Italian proceeding?

I cannot evaluate the proceeding in Italy very well. It is true, however, that Eternit Switzerland has objected to handing over certain files because we were of the opinion that this wasn't proper. The first letter rogatory demanded, for example, handing over the list of names of all Italian Eternit workers who had ever worked for us. That would be over two thousand Italian workers. The second letter rogatory requested our workers' medical files at SUVA. We would have had to send to Italy medical findings for workers, some of whom are still working for us today, who have absolutely nothing to do with asbestos. So in the name of these workers we objected to handing over these medical files. We aren't, however, a party in the complaint that is the subject of this letter rogatory. These are SUVA files; it's SUVA that has now raised an objection before the Swiss Federal Council.

I would again like to emphasise here: I consider the path through the courts to be cumbersome for those affected. Handing over the files doesn't help the former workers. It would be for more important for sick workers to file their claims with SUVA in order to receive the payments for damages that the law provides.

After the ban on asbestos became effective, Eternit obtained two waivers to import asbestos products. The waivers were good until 2001 and 2004 respectively. Your company always claimed, until the media made the waivers public knowledge, that the fabrication of construction materials was gradually being adjusted between 1980 and 1990 to become asbestos-free and the same for pipe production by 1994. And even in the Eternit distribution centres, according to claims of former workers, even after the ban went into effect, construction materials containing asbestos were being sold. How do you explain this?

We sold or closed all our distribution centres in 1990. If products containing asbestos were sold after the ban went into effect, that didn't happen on our watch. It is absolutely the case that we at Eternit stopped using asbestos in 1990 and in 1994, respectively. I still stand by that today. We never made a secret of applying for two waivers from BUWAL to use for warranted work and remainder deliveries. We had a contract at the time for large-gauge corrugated roof panels. The customer demanded that we deliver this product even after the ban went into effect. We imported the panels and had them cut in our factory under stringent safety measures. The fabrication was done outside with very low-speed machines, so that as little fine dust as possible would be produced; the workers wore protective clothing and masks. Moreover we used a vacuum system for protection. We didn't produce asbestos cement products ourselves after the asbestos product ban went into effect, we only fabricated. After a certain time we didn't cut the panels ourselves anymore, but only imported them. The second waiver was for pressure pipes. It's possible that a pipe bursts, and that's why these products are warranted. When we have to honour a warranty we have to replace the pipes. It's therefore a question of our obligation to the customer of keeping replacement pipes on hand for several years – even after the ban went into effect. We imported these pipes from France and only cut them here to the desired length. At the same time we were looking for a process so that we could repair the pressure pipes in another way. In 1998 we could finally stop handling the pipes altogether. As of that date in SUVA's eyes we were no longer an asbestos-processing company.

That means only after 1998, eight years after the ban went into effect, no more products containing asbestos were imported or processed by Eternit?

I can't say exactly when we no longer imported panels, but I believe that it was around the same time that we stopped processing pipes, that is, also in 1998. I want to emphasise, to

point out again, that this was a matter of small amounts that weren't processed but were handled by Eternit Switzerland.

How many former Eternit workers in Niederurnen and Payerne have died that you know of?

According to SUVA, nine hundred people have died of an asbestos-related sickness in Switzerland, of which 850 died of mesothelioma. Eternit Switzerland has seventy workers who died of an asbestos-related illness, of which fifty-five died of mesothelioma.

Those are the cases acknowledged by SUVA. But it's well known that SUVA's policy for admitting a claim is very strict. Also it's not possible to tell from these numbers how many people had to die because they handled Eternit products, for example construction workers or roofers.

I see that a different way: The SUVA numbers are very reliable. I don't know of a single case where someone who fell ill on account of asbestos on the job had a claim denied by SUVA.

The asbestos victims have a difficult position in Switzerland. The statute of limitations period is so short that the victims de facto would have to file a criminal complaint even before the cancer is symptomatic. Shouldn't we change that?

That's a legal debate that not so long ago was under discussion in Switzerland and as a result the statute of limitations period was changed to what we have now. It seems to me more important that people who fall ill due to their job have access to insurance. And that everyone can be helped when it isn't a case of an occupational illness. To help these people, Eternit Switzerland AG for example started a foundation. Our foundation wants to help both categories of those affected who have financial need. Since the foundation was set up in the spring of 2006, nine people have applied. At Eternit we have also tried to win over other companies that once handled asbestos for the idea of such a foundation. Unfortunately the other companies have declined.

If one looks more closely at the history of asbestos in Switzerland, one has the impression that Eternit fixed the date Switzerland banned asbestos and that the authorities complied with the industry's needs. How do you view this?

I believe in the strength of democracy. At that time the issue of asbestos was at the centre of public discussion. Newspapers were reporting about proposals in Parliament. I don't believe the authorities and unions would let a date for banning asbestos be dictated by the industry. The real plan for the ban was set in 1986 in Appendix 3.3 to the Ordinance on Hazardous Substances.

Do you consider yourself as Eternit CEO to be morally obligated towards your former – and current – workers who have fallen ill?

At Eternit Switzerland, with two factories in Niederurnen and Payerne, we know practically each worker personally. What happens to other people doesn't pass by without affecting us. One certainly feels morally obligated to those who have fallen ill in these cases and also personally obligated. We try to help where we can.

In most countries in the world outside of Europe mining and processing of asbestos products are still in full swing. If you could give the heads of these companies advice, what would you say to them?

I am convinced there is no longer any reason today to use this raw material for producing fibre cement products. Therefore in all honesty I would advise the heads of these businesses to get out of asbestos production as fast as possible. Today we know that safe handling of asbestos, so-called 'safe-use,' is possible in theory but difficult to put into practice. It's not worth discussing.

Herr Holte, you are engaged in a frank discussion here on an ignominious chapter in your company's history. It isn't an intuitive conclusion that supporters of the former owners of the company, the family Schmidheiny, have ever spoken about this.

I don't like the term 'ignominious' to refer to Eternit Switzerland. The use of asbestos is a part of one of the dark chapters of corporate history and includes all of society, not just a single company. There will always be products whose use brings problems even if at first glance the advantages outweigh the drawbacks; think for example of cell phones, diesel motors, nano technology – who knows what's headed our way here?

Who is responsible for what in Switzerland?

Every country struggling to make policy regarding asbestos must confront a bewildering array of overlapping jurisdictions and administrative fiefdoms. Switzerland, a small country, is no exception.

There are a number of administrative agencies in Switzerland responsible for regulating asbestos issues. On the federal level there is, first of all, the Federal Office for Health (*Bundesamt für Gesundheit*, BAG); the Federal Office for the Environment (*Bundesamt für Umwelt*, BAFU, previously BUWAL); and SUVA. There are also the cantonal work inspectors that implement the occupational safety as well as the governments of cantons and municipalities responsible for abatement in buildings. Also home owners, renters, and employers have a clearly defined responsibility under the construction code, the renter's code, as well as the insurance code.

The **Federal Office for Health (BAG)** is responsible for public health in general and for classifying cancer-causing agents under the Toxic Substances Act. BAG makes information available to the public about indoor limits and has issued a number of publications for this purpose.

The **Federal Office for the Environment (BAFU)** oversees the implementation of the Hazardous Materials Ordinance, which sets forth bans on use, sale, and import of asbestos and products that contain asbestos. With respect to protecting the environment, it also regulates the disposal of asbestos. BAFU receives complaints about violations of the Hazardous Materials Ordinance and can impose criminal penalties.

The legal responsibilities of the **Swiss Accident Insurance Fund (SUVA)** (*Schweizerische Unfallversicherung*) are primarily occupational safety and the corresponding employer obligations.

These can be summarised, according to SUVA's own description, as follows:

- Preventing occupational illnesses related to asbestos in the workplace.
- Screening the workplace (hence the requirement to give notice of any remediation).
- Defining tlv (threshold limit values for substances dangerous to human health), screening measurement, qualified technical practices, medical screenings, and advice during remediation work.
- Reviewing claims of occupational illnesses resulting from exposure.
- Providing insurance benefits for occupational illnesses from asbestos.

Cantons and **municipalities** are also charged with protecting the environment in their jurisdictions and are responsible for asbestos removal in buildings to comply with construction codes.

The **Cantonal Occupational Inspector's Office (KAI)** (*Kantonale Arbeitsinspektorate*) also represents along with SUVA and the State Secretariat for Economic Affairs (*Staatssekretariat für Wirtschaft, SECO*) the authorities that implement occupational health protections.

What is clear is that an outsider can barely determine what authority any one agency has among the many different players when there is such a division of authority. The agencies themselves admit as much. To reduce costs and to encourage and coordinate a less bureaucratic exchange of information they founded the Swiss **Coordination Committee Forum for Asbestos (FACH)** (*Koordinationsgruppe Forum Asbest der Schweiz*) in the fall of 2002. This committee's objectives are: Exchanging information on practices; providing a place to centralise important questions about asbestos; and coordinating control measures.

To prevent occupational illnesses, SUVA can mandate by decree that a factory be placed under the for occupational health regulations.

According to SUVA the first mandates occurred in connection with asbestos in the 1940s. Subsequent systematic examinations became possible, SUVA says, after 1984 when the law for workers' compensation went into effect. The examinations included people who had been working in factories, now no longer in operation, that had fabricated asbestos; these examinations, which were carried out every two years until the person reached the age of seventy-five, can continue without limitation at the request of the person involved. With employees who have recently been exposed to asbestos, the subsequent examinations occur after five, ten, and fifteen years from the date of exposure, and thereafter every two years. SUVA pays for all the examinations.

According to SUVA, the subsequent examinations include a clinical exam, a chest X-ray, and a lung function test. Currently there are approximately five thousand people in Switzerland under medical observation who have been exposed to asbestos. The examinations are not done by SUVA itself but by the company's in-house doctor or the patient's treating physician. Insofar as the people affected can be identified, SUVA asks them to undergo the examinations. For those beyond the influence and control of SUVA, if the address isn't known or if someone is living abroad, it is, says SUVA, the 'responsibility of the individual employee' to be examined.

SUVA first registered an asbestos-related lung cancer as early as 1955 and its first mesothelioma in 1969. Swiss authorities officially included asbestos dust in its list of harmful materials only under the mandate of the Workers' Compensation Law, Art. 9. This was accomplished much earlier in other European countries: Lung cancer related to asbestosis was listed in Germany as early as 1943, for example, and has officially been in the register

of occupational diseases in Austria since 1955; and Denmark officially listed mesothelioma in 1959.⁷⁰

Currently SUVA registers about seventy asbestos-related cases of illness per year. The number has continued to increase since the mid-1970s. Because of the long latency period no decrease in the numbers has yet been noted.

In 2005 the Swiss Accident Insurance Fund registered eighty-six mesothelioma cases. Although experts assume that mesothelioma and asbestos-related lung cancer occur in equal numbers. As of 2003, SUVA has compensated far more mesothelioma cases: Between 1990 and 2003 there were 597 mesothelioma cases in contrast to a mere six asbestos-related cases of lung cancer.⁷¹ It was virtually impossible to get asbestos-related lung cancer of smokers registered.⁷²

Running the Swiss gantlet to qualify as having an occupational illness

Every country follows a different set of laws and guidelines regarding how it defines what qualifies as an occupational disease. Switzerland presents a case study that illustrates the complexity and unintended consequences of statutes and administrative systems ostensibly intended to protect workers' health.

The legal basis for qualifying an illness as an occupational disease is set forth in the Workers' Compensation Law. Article 9.1 of this statute says, 'An illness is deemed to be an occupational disease that has been exclusively or primarily caused by harmful substances or certain types of work during an occupational activity. The Swiss Federal Council shall establish a list of these substances as well as a list of occupational diseases.' This list has included, as has been mentioned, 'asbestos fine dust' since the mid-1980s as well as 'dust lung in those working in the dust of silicates'.

But that's just the beginning of running the gantlet for people who are ill. The policy for accepting claims turns out to be a policy of discouraging people.

In order for a claim of an asbestos-related illness to succeed, the person must submit four kinds of evidence of illness:

- The diagnosis must be more likely probable than not.
- The exposure to asbestos must be the primary cause of the illness.
- The exposure must have occurred during employment covered under SUVA.
- A minimum period of latency – in the rule fifteen years – must lie between the date the exposure started and the date when the illness was diagnosed.

But what does this mean in practice? Martin Rüger, an occupational health physician with SUVA, explained this at a seminar for the media in Zurich: 'To qualify as having **pleural plaques** as an occupational disease, the plaques must have grown to a certain size, they must be on both sides or calcified, and the average diameter must measure at least five millimetres on the X-ray.'

For a diagnosis of asbestosis 'there must be the typical, clinical, functional, and radiological changes, as generally observable in a lung fibrosis and in ambiguous cases there must be proof of asbestos in the pulmonary tissue or in the lung's dialytic fluid.'

70. EUROGIP (2006) *op. cit.*

71. *Ibid.*

72. SUVA's policy on accepting claims for asbestos-related lung cancer has been eased for smokers. Now it is easier for asbestos workers with lung cancer to qualify for benefits if they have smoked.

In order to qualify as having an asbestos-related **lung carcinoma**, the patient ‘must prove asbestosis or proof must be offered that the patient was exposed to a cumulative asbestos dose of at least twenty-five fibre-years.’ The asbestos dose plays an important role in determining a possible cancer risk. A ‘fibre-year’ means the total amount of fibre during a working year of forty-eight weeks of five eight-hour days each and an asbestos concentration of 1 WHO-fibre/ml (i.e., one fibre absorbable by the lung per millilitre of air). Even a dose less than twenty-five fibre-years favours the formation of lung cancer. But in this case, the lung cancer will not qualify. The occupational health physician from SUVA sticks to what is in the documentation. ‘One cannot consider the requirements to have been met in these cases because the working share in the entire spectrum of causes is less than half, so it cannot count as more likely probable than not, which is what the legal definition requires.’⁷³

Malignant **mesothelioma** is primarily diagnosed by a lung biopsy and immunological histological tests along with the ‘typical clinical and radiological changes. Moreover, that the pleural cancer is not spreading from another cancer disease must be ruled out. Since around eighty percent of all malignant mesothelioma is related to asbestos, the patient generally does not have to prove that he had been exposed to a high dose of asbestos. He must, however, show evidence that he was exposed to asbestos for at least a few weeks while working in a job covered under SUVA.’

All these requirements are what discourage many ill patients from even trying to qualify. Understandably, people ill with cancer, with only a few months or years to live, are not as a rule psychologically or physically in the position to struggle with technical insurance questions.

This is also reflected in SUVA’s numbers of patients qualifying as having an occupational disease. Since 1939 the Swiss Accident Insurance Fund has registered only 1,456 cases of an occupational disease due to asbestos exposure according to SUVA’s own figures (as of 2005). Of these, 672 are mesothelioma cases. SUVA denied the claims in 490 cases. In other words, SUVA denied about twenty-five percent of dossiers submitted. Since 1939 SUVA has paid approximately 350 million francs for medical treatments, wage replacement, disability and survivors’ benefits as well as integrity payments. The Swiss Accident Insurance Fund’s expenses run on the average about 240,384 francs per qualifying case. It is thus self-evident that SUVA, in its own interest, follows an extremely restrictive policy for qualifying an ill patient.

73. Media seminar by SUVA on asbestos, 5 November 2005, in Zurich, presentation by Martin Rügger, Occupational Health Physician at SUVA.

Interview**with Franz Steinegger**

President of the Administrative Council of SUVA

'No need to change course'

Herr Steinegger, you've been the president of SUVA's Administrative Council since 1991. SUVA has frequently come under fire in recent years on account of asbestos issues. The Swiss Accident Insurance Fund is accused in particular of reacting way too little and too late to the danger of asbestos. How do you see this?

F.S. – I'm alarmed by the criticism and I've researched this thoroughly – and not just through our own experts. I've come to the conclusion that these criticisms are unreasonable and in part even somewhat malicious. I say this because people are using the current standard of knowledge to judge SUVA's actions in the 1960s and 1970s. It's logical: If the threshold amount today is lower by a factor of two

hundred than it was in 1978, then the former threshold amount was probably too high. The question however is what did we know in 1978? On balance SUVA reacted very carefully and generally in concert with other European countries. It's regrettable that we didn't know back then more about the dangers of this raw material. The typical asbestos-related disease was compared with the dust lung of miners. Only beginning in the 1960s was there any discussion of pleural cancer. But due to the long latency period this cancer was much harder to assess. Again, these blanket criticisms are without merit in my opinion.

The criticism of having reacted too late is also made about the requirement to report asbestos. The authorities only introduced the obligation to report asbestos in remediation projects in 1988. SUVA considered this unnecessary over the years. But SUVA requires from the insureds, in order for a claim to be accepted as an occupational asbestos-related disease, that they show proof of exposure to a certain amount of asbestos. But if the projects don't have to be registered, there are also no measurements taken. Isn't that contradictory?

No, absolutely not. I believe it's normal that a worker must prove he worked on a jobsite where he was exposed to asbestos. Let's take for example occupational cancer cases. There are about one hundred of these per year, of which about eighty are related to asbestos; but there are cases of mesothelioma where no connection to asbestos can be determined. SUVA is an insurance agency. To receive payments, you must have come into contact with the substance during work. When I look at SUVA's practices and see for example how early asbestosis and later mesothelioma were recognised as occupational diseases, no one can claim that SUVA has been particularly restrictive.

Many former asbestos workers, many workers from Eternit, for example, find it objectionable that they were not informed about their health status after a screening exam by SUVA. They

mostly noticed that something wasn't right because they were transferred to a workplace with less dust. What was the reason for this lack of transparency?

The employers are responsible for occupational safety and health. Ergo, they must receive the relevant notices so that they can take measures. I don't know if it's true that a worker who asked about his health status really received no response. But I believe the information certainly was passed on correctly. The SUVA offices certainly aren't the only ones to assist in this: Our administrative council consists of an equal number of representatives of employers and employees. There are sixteen employee representatives in this council, practically all of them from the trade unions. I am convinced: If there had been any irregularities anywhere the trade union people would have certainly intervened.

The fact is SUVA issued the certificates to the workers, which attested that the workers were employable without limitation or not suitable for a workplace with dust. In other words, SUVA attested to them that they were suitable for working with asbestos.

The controlling factor for SUVA is the Workers' Compensation Law, specifically the Regulation for Preventing Accidents and Occupational Diseases. SUVA issues the relevant rules. But what is decisive is that SUVA worksites where the permitted threshold limits have been exceeded are not tolerated. There were no exceptions made even for Eternit. The problem is more that the threshold limits were too high considering what we know today.

And what is the policy of SUVA today in the battle against the dangerous fibre? Cases come up again and again in which workers stumble on asbestos during remediation work. Do you see a need to act?

First of all let me say: We have the lowest threshold limit in Switzerland today of all European countries, 0.01 fibres per millilitre. This limit must be met. Of course SUVA doesn't know all the operations, machines, and factories and doesn't know every place where asbestos may be. I believe that things are currently going quite well. But this also must be noted: SUVA does not have a list of all the buildings where there is asbestos. Insofar as buildings are concerned, it is the responsibility of the cantons to maintain such lists.

SUVA can signal where there might be problems on certain jobs on the basis of its experience. But it is the employer's responsibility to bring in SUVA so that measurements and the necessary precautions can be taken.

SUVA invites former asbestos workers living in Switzerland to come in for screenings. It's different for those who returned to their native land after working in Switzerland. It's known, for example, that many Italians insured by SUVA are no longer told to come in for periodic diagnostic screenings. Although they might possibly be eligible for pensions or other payments from insurance, they aren't told of their rights. What does SUVA do to help these people who were insured?

The problem of diagnostic screenings for people in foreign countries turns out in reality not to be one. Today there is broad consensus that these diagnostic screenings don't promise any success in asbestos-related cancer cases. With the methods used today an illness apparently cannot be diagnosed in time. That means we can ask people to come in and screen them when it's too late. The demand to ask people to come in for follow-up exams therefore doesn't solve this problem.

As far as the insurance payments are concerned, let's assume that even the physicians abroad must be able to diagnose asbestos-related illnesses. If a physician therefore determines that he is looking at an asbestos-related disease, he will ask the patient whether he was ever employed in a workplace that fabricates asbestos and he must explain to him that he has a right to insurance payments.

But apparently that is not working now. How is a physician in Italy supposed to know that there's a SUVA in Switzerland and that his patient's employer actually had insurance coverage?

We are aware of this issue and wanted to make all physicians in Italy and the relevant organisations aware of this through the Italian accident insurance fund. We wanted to inform them that SUVA would continue to pay for workers who had once worked in Switzerland and who were diagnosed with asbestos-related diseases. Our efforts got little enthusiastic response from Italian officials. Our request wasn't exactly denied but the Italians take their time. Why they take so long beats me.

Are you playing the blame game with the Italians?

No, of course not. We didn't want to write directly to the people who are covered, asking them to undergo screenings and cause a panic. That's why we wanted to inform them through their Italian physicians. But that was so difficult that we finally decided to hold an informational meeting in Switzerland. For the meeting in Lugano we invited all the Italian authorities who were interested in these issues. Again: Whenever cases of occupational diseases caused by asbestos are reported we pay them. The financial issue is not a primary one for SUVA.

SUVA has a very strict policy about accepting a claim for an asbestos illness. Acceptance of a claim for a lung carcinoma is particularly strict; asbestosis must be proven or proof offered that the person affected was exposed to at least twenty-five fibre-years. But that's something that's just about impossible. Why does SUVA insist on using this policy?

SUVA accepts a claim for an asbestos-related bronchial carcinoma if there is an asbestosis – even with the most minimal manifestation – or extensive pleural changes or an asbestos exposure of at least twenty-five fibre-years. One doesn't have to meet all the criteria. These criteria, which are called the Helsinki criteria, are commonly used in the majority of Northern and Middle European countries to determine whether a lung cancer has been affected by asbestos. In this connection it is important if the Helsinki criteria are met that the claim for an occupational disease follows independently of whether the insured person has smoked or not.

When did SUVA first accept the claim for a case of bronchial carcinoma or a case of mesothelioma?

The first claim for a case of asbestos-related lung cancer was approved in 1955. The first case of a successful claim for mesothelioma, on the other hand, goes back to 1967. But let me mention that only with the workers' compensation statute of 1981, which went into effect in 1984, was asbestos put on the lists for harmful substances and occupational diseases under Article 14 of the Ordinance for Workers' Compensation. But there were already a number of accepted claims for asbestos-related lung cancers before 1984.

SUVA states that fifty to seventy people die annually in Switzerland of an asbestos-related disease. But those are just the people whose claims have been accepted. Victims, whose claims are denied, who no longer live in Switzerland, whose workplaces weren't registered with SUVA, or people who lived on property next to the asbestos factories, are not counted in Switzerland. All these factors point to a large number of unknown cases. How do you see this?

We don't share that opinion, otherwise we would have to make completely different provisions.

A whole chapter in itself is the right to what is called an integrity payment. Asbestos victims find SUVA's policy to be glaringly unfair. Even though a mesothelioma patient generally survives only a few months after a diagnosis, SUVA accepts the claim to a full integrity payment only if the patient is still alive eighteen months after the disease appears. If he survives for six months, he only receives forty percent. Why such a strict rule?

This rule isn't from SUVA but is set by statute. Moreover, Swiss insurance law clearly has a precedent in a court opinion that the integrity payment is definitely not a payment for the heirs. Also, the integrity payment is under political pressure from employers. They are demanding that the payment be completely done away with. They say it isn't justified in our social welfare system.

Another chapter in itself is the investigation that has been underway since 2001 by the Turin state prosecutor against Eternit. In connection with this investigation, the state prosecutor filed a letter rogatory in the summer of 2004, in which he requests the medical dossiers for Eternit workers be handed over. SUVA went to the Swiss Supreme Court to prevent having to hand over these files. Now that the Court has ruled against SUVA, SUVA has moved that the Federal Supreme Court prevent even making this decision public. Why?

That's not true. The Court always asks you if a ruling can be published. But ultimately it is the sovereign decision of the Court.

To stop these dossiers for the Eternit workers from being handed over, SUVA filed a request for relief with the Federal Office of Justice under Article 1a of the Judicial Assistance Act. Now the Federal Office of Justice and Police (EJPD) or the Senate will decide. Why are these dossiers so important for SUVA?

That is a complicated matter: In connection with the letter rogatory from the Turin state prosecutor, it first must be clarified what standing Italy has. We do live in a country under the rule of law. The Turin state prosecutor is legally competent for Italian citizens who live in Italy. The Turin state prosecutor has received the files for these cases. Their contents are the medical records of twelve former Eternit workers. In a second letter rogatory the Turin state prosecutor demanded almost two hundred dossiers more. For these cases he has no standing because these people are still living in Switzerland. SUVA may not hand over patient dossiers to someone with no standing without patient consent. It's an issue of data privacy here. The state prosecutor also demanded other documents, which SUVA, in its role as an agency for occupational safety, had created. But SUVA has sovereign authority in this function. We also are objecting to handing over these files because it isn't customary that state files are made available to another state without a political authority deciding about their release. An Italian state prosecutor could demand the release of files

from the federal bank commission one day. So we decided to turn to the Office of Justice and, if necessary, to the Federal Council.

The Federal Supreme Court is certainly of a different opinion and ruled that SUVA must send the files to Turin.

Yes. But we are of the opinion that we need a political decision. If the Federal Council concurs that we should hand over the files, we will do so of course.

Could you be more specific? What kinds of files are these exactly?

When SUVA takes occupational safety measures, executes its oversight function, then it is performing a state function, a so-called sovereign function. The targets are SUVA's screening protocols during factory visits at the Eternit factory.

Specifically, it's the asbestos emission values taken at Eternit for example?

Yes, but not only that. So that you don't get the wrong idea: We don't object to handing over files because we want to protect anyone. I could well imagine that these files won't come up to the expectations of the Turin state prosecutor at all.

Institutionally, SUVA plays a double role: On the one hand, it is an insurance agency that must pay for damages. On the other hand, it also determines the necessary safety measures and carries out the screenings in the factories. Isn't there, as a result, a conflict of interest?

No, on the contrary. That was the basic idea in creating the German and Swiss workers' compensation system: People see it as efficient if prevention and insurance are tied together. No insurance company wants to pay out claim damages. That is, the tie between these two functions is a motivation for being strict in the matter of occupational safety. The experience up until now certainly validates this system. I also see no reason to doubt the efficacy of this model.

Herr Steinegger, a good ship captain excels not only by remaining on board during stormy times but also by steering in another direction at the right moment. Do you see a possibility for a change of course in the matter of asbestos?

I see no need to change course. Now, I thoroughly reviewed this. I even believe that what we have learned in the past few years confirms that our course is the correct one.

Table 6 Claims accepted for asbestos-related lung cancer 1980-2003

Year	Germany	Belgium	France	Italy	Switzerland
1980	20	3	13	-	-
1985	43	2	0	-	-
1990	132	7	13	0	0
1995	796	13	93	21	0
2000	681	27	557	66	1
2003	739	40	1,018	189	1

Source: EUROGIP, March 2006

Table 7 Claims accepted for mesothelioma 1980-2003

Year	Germany	Belgium	France	Italy	Switzerland
1980	36	0	20	-	0
1985	135	12	25	-	11
1990	291	25	65	1	29
1995	498	35	154	40	37
2000	652	65	279	227	63
2003	788	92	421	389	54

Source: EUROGIP, March 2006

Targeted by the Italian courts

The wheels of justice grind slowly

'Palazzo di Giustizia' is displayed in thick letters on the entrance of the court in Turin. Also here on the top floor of the north wing is the state prosecutor's office. Metal detectors are set up in the entrance hall and bar entry to the palazzo. Uniformed, armed security guards question every single visitor, view identification, and place every bag on the security conveyor belt. Those who pass inspection are escorted to their destination. An almost endless corridor leads past an endless number of offices into the reception area of Raffaele Guariniello. The sixty-five-year-old state prosecutor, who has been investigating former Eternit executives for years, is wearing a black suit and black T-shirt and is sitting in a large chair behind his desk. Files tower over him erecting a fortification wall around the man of justice.

The state prosecutor, probably the most famous in Italy, has little time for journalists, even if they come all the way from Switzerland. Right at the beginning of the interview, he points out that the investigation into Eternit is subject to legal professional privilege. 'Mi dispiace,' he adds with a charming smile. This is what the Turin state prosecutor, Raffaele Guariniello, is like: both difficult and successful. That's the impression the former owners of the Swiss fibre cement imperium also got. For six years Guariniello has been meticulously investigating, despite delays due to objections from the company. He collects file after file, is always opening a new file, expanding the scope of the investigation further and further. In

2001, the state prosecutor opened an investigation into possible charges of multiple manslaughter when twelve former Eternit workers died of mesothelioma after they returned to Italy from Niederurnen. Since then the number of dossiers collected for the dead and ill Eternit workers has risen to at least 2,800 and the investigation has long since grown beyond the former asbestos cement factories in Niederurnen and Payerne. It now covers all the Eternit factories in Italy that once belonged to the corporate conglomerate of the Schmidheyns and the Emsens: from Syracuse in Sicily to Bagnoli near Naples and from smaller factories in central Italy to the biggest Italian Eternit factory in Casale Monferrato near Turin. The state prosecutor wants to find out whether the former owners complied with the mandated safety rules to protect the workers. Italian prosecutors have already tried several suits against the managers of the Italian Eternit factories, and the courts have handed down judgments on several occasions. In each case Raffaele Guariniello not only targeted the local managers in Switzerland and in Italy but has also been gathering evidence against the Belgian and Swiss family members of the erstwhile owners.



Italian State prosecutor Raffaele Guariniello in his office, spring 2007

Guariniello has initiated dozens of similarly based trials dealing with occupational health and has successfully prosecuted them, winning judgments against the defendants. Right at the beginning of his career Guariniello crossed swords with Italy's most powerful employer, the Fiat conglomerate: A search through Fiat headquarters brought to light around 300,000 computer files on Fiat workers. Everything from political party registration and other preferences to personal relationships – everything had been unlawfully placed in the personnel files of the automobile giant. The state prosecutor quickly removed Guariniello from the politically explosive case but that was just the beginning of a precipitously successful career: The last Fiat patriarch, Gianni Agnelli, who died in January 2003, sat across from a state prosecutor only once and that was Raffaele Guariniello in his proceedings against the auto magnate when he was investigating the health of Fiat workers.

On December 14, 2001, Guariniello filed the first letter rogatory with the Swiss Federal Office of Justice in the Eternit case. He requested the medical dossiers and the addresses of former Italian Eternit workers. So began a dogged contest over the dossiers of the Italian Eternit workers in the factories in Niederurnen and Payerne, which is still going on today. The fibre cement giant immediately objected and exercised every legal manoeuvre it could. The Italian proceeding was a 'fishing expedition without merit', Eternit wrote in a press release and filed a complaint first with the president of the Glarus cantonal court and finally with the Federal Supreme Court.

The response to the letter rogatory was successfully delayed for almost two years until the Federal Supreme Court ordered in September 2003 that the files be handed over. Then a second letter rogatory from Turin followed in the summer of 2004, or what's called a supplemental request. Guariniello demanded another 196 dossiers for Italian Eternit workers and 396 other files from SUVA, specifically the inspection logs of the SUVA factory

inspectors. Among other data, these logs noted the asbestos emission data in the Eternit factories in Niederurnen and Payerne. It is possible to see if threshold levels were measured in both factories and if the limits were complied with. But the Swiss Accident Insurance Fund objected to this second letter rogatory and filed a complaint not only with the Federal Supreme Court but also indirectly sought protection through the Federal Council. On January 14, 2005, even before the Court had issued an opinion, SUVA hurried to file a petition with the Swiss Federal Office of Justice and Police (EJPD) under Article 1a of the Judicial Assistance Act.⁷⁴ It is beyond extraordinary to use this provision. This tactic has been used only about four or five times since it entered the legal code and then only in the case of letters rogatory affecting national security. But what do the SUVA dossiers on the Eternit workers and the inspection logs have to do with national security?

When asked about this by the Swiss media, the Swiss Accident Insurance Fund justified its unusual course of action as follows: To comply with the request of the letter rogatory, SUVA wrote in a press release, would in its opinion seriously compromise interests essential to Switzerland. The Turin state prosecutor was demanding thousands of dossiers be turned over with medical data of all Eternit workers. For SUVA it was a question of setting a precedent, especially because it was a matter of medical data particularly deserving protection of privacy of health information handed over to foreign authorities without authorisation from the individual. Besides preserving data privacy, the question arises 'whether SUVA in its function as a federal authority may even be subject to review by a foreign authority', and this is ultimately a political question that the Swiss Federal Council must decide.

The Federal Supreme Court of Switzerland is of a different opinion in this case: The highest court handed down its opinion, ruling against SUVA in December 2006, ordering the agency to turn over the files requested by Guariniello. Despite the court order, however, the files are still archived in the bowels of the Commission, and whether they will ever be turned over given the current political composition of the Federal Council only heaven knows. The ball now lies with the Federal Office of Justice and, in all probability, ultimately with the Federal Council.

Although two proposals in this matter have been put forward in Parliament by the National Councillors André Daguët (Social Democrat) and Marianne Huguenin (Labour) in December 2006, the final decision could still take months if not years. 'Due to the complexity of the matters at hand no precise prediction on how long the proceedings will take can be made at this time,' the Federal Council says in its written response to the questions posed to the legislative body by Marianne Huguenin. The Federal Council seems unaware of the urgency in this matter. But it is clear that the longer the delay in turning over the documents, the weaker the position of the victims becomes because even in Italy the statute of limitations period doesn't last forever. At least Finance Minister Hans-Rudolf Merz seems to be aware of the issues because after all as an outside consultant to Eternit and president of Anova Holding he represented the Schmidheiny's interests for a long time. And he was informed about the ongoing proceedings in Italy just at that time.

Meanwhile, state prosecutor Raffaele Guariniello doesn't want to let the defence strategies of Eternit's top executives hold up his work and he doggedly continues to pursue his investigation. But he's a little bit dumbfounded, he says, that SUVA appealed to the Federal Council. And he's astonished at how many avenues of legal recourse there are in Switzerland, but he's not letting that divert him. In the next few weeks he wants to conclude

74. This article of the Judicial Assistance Act sets forth the limits of cooperation: The application of this statute is to take into account the laws of sovereignty, safety, public order, or other essential interests of Switzerland.

his investigation and hand it over to the judge in charge. 'If I have to, then even without the dossiers requested from SUVA.'

Under Italian law, the judge in charge must then decide whether there are sufficient elements for filing a charge and initiating a trial.

At the end of the interview Raffaele Guariniello heartily shakes hands with the journalist who came from Switzerland and accompanies her to the door. The man is confident. How does the old saying go? The wheels of justice grind slowly, but they grind.

And it comes to pass: On August 1, 2007, two months after the interview with the Swiss journalist, the state prosecutor concludes his investigations after six long years. After the legal deadlines run out he will most likely file a motion with the judge in charge to file a complaint against the former owners of the Italian Eternit factories, namely Stephan Schmidheiny and Baron Jean-Louis de Cartier de Marchienne of Belgium. According to press releases Guariniello first wants to have the criminally relevant facts of the case that apply only to the Italian Eternit factory judged by the presiding court because he still doesn't have the SUVA dossiers from the Swiss authorities. In a possible second action his aim is to establish accountability with respect to the Eternit factories in Switzerland.

Casale Monferrato: The deadly legacy of Eternit

Via 20 Settembre is only a few minutes away from the Piazza Castello by foot. Here, until recently where the main building of Eternit stood, a huge hole gapes in the landscape. All around lies industrial wasteland, which once belonged to the asbestos cement conglomerate. Here too stood the 'fabbrica della morte', as the residents of Casale Monferrato called Eternit. Securely in the hands of the Belgian asbestos magnate Emsens until the early 1970s, the factory switched to Swiss ownership in 1973, belonging to the asbestos cement empire of Stephan Schmidheiny until it went bankrupt in 1986.

Today a rusty metal gate stands where once, back in the 1960s, almost three thousand workers busily came and went on their bicycles, and now every five metres a yellow sign warns: 'Zona pericolosa, vietato l'ingresso!'

About five hundred people have already died in Casale Monferrato of asbestos cancer, and the number of victims continues to increase dramatically more than twenty-one years after the fibre cement factory shut down.

In this city of thirty-seven thousand souls, twenty-five people die each year of breast and peritoneal cancer (mesothelioma) alone, and by 2020 this number will even double because of the long latency period.

The factory work halls of the main building, in which a variety of different construction materials was once made, from fibre cement pipes to the classic Eternit corrugated roofs, have been torn down in the last few years under the most stringent safety measures. Four times a day during the demolition stage, workers in hazmat suits measured the level of asbestos in the air. It took a specialised company seven years just to demolish the main building; and now the money has run out. No one can say how long the remaining industrial buildings will remain in this decrepit, bleak condition.

There's still some production today in one of the side buildings: Refrigerator parts. The workers are almost all Albanians or other migrants. No one knows whether the space is contaminated with asbestos. The factory itself was sold after Eternit went bankrupt. A park is supposed to be built where the main building of Eternit once stood. Of course there's nothing to be seen of any park. A cement slab was poured over the contaminated earth wall – a cement coffin. The residents of the small industrial city in Piedmont

are enraged at the former owners but also at the authorities, who for the lack of money dragged their feet in cleaning up. Someone wrote in big letters on the wall surrounding the industrial wasteland: 'Sindaco ci fai morire' ('Mayor, you are killing us').

The asbestos problems of Casale Monferrato were not resolved by a long shot with the physical removal of the factory as the delegate responsible for the environment from the city council explains. In Casale practically everything is made from Eternit. From the roofs to the water lines. Remediation of public buildings is admittedly almost finished, but the real problem is cleaning up private homes. 'The dangerous asbestos coating and production waste were given to Eternit workers to take home because these were good for insulation,' explained a former union member and founder of the asbestos victims association of Casale Monferrato, Bruno Pesce. This, he said, has had catastrophic consequences for the entire region.

Eternit corrugated roofs are all over the city, from the industrial zone to the narrow alleyways in the centre of town. Some are in relatively good condition, others have damage visible to the naked eye, a continuing danger for those living nearby. There must be a million square metres of Eternit corrugated roofs in the city alone that has to be disposed of, and in the neighbouring towns there are another 700,000 square metres.

In order to press on with the disposal that is urgently required, the Italian Environmental Ministry promised twenty-two billion lire (around eleven million euros) years ago. 'A drop in the bucket,' Pesce says. According to his calculations remediation of all buildings and demolishing the factories will cost eighty million euros.

Camera del Lavoro, the home of the Italian union CGIL, is only a few minutes away from Anna Maria Giovanola's former work place. The former Eternit worker, mother of two children, speaks slowly, constantly interrupted by a dry cough. She's had dust lung since 1975. When as a young woman she was employed at Eternit in 1955, she was very happy, she says. 'The pay was really good, 37,000 lire a month. You couldn't make that anywhere else.' The doctor, who examined her before she began work, also assured her that a job for a worker at Eternit was a job for life. Like a bank employee's job. But seven years later the doctor himself died of asbestos cancer.

Anna Maria Giovanola worked with hundreds of other women in the manufacturing section. There the women cut Eternit panels to plans with a hammer and chisel and later with a pneumatic hammer. 'We used a head scarf so we wouldn't have white hair from all the dust. But none of us knew how dangerous this asbestos dust was,' she recounts. Only after the first women from her department and other co-workers began to fall sick and die did she realise where she was working.

Anna Maria Giovanola is furious with those responsible in the company. 'They should have told us how dangerous asbestos is. The company doctor did tell us not to smoke, but he never explained why. And even when we were all coughing he never certified we were sick.' She and the other women in her department never knew about personal safety measures such as a respirator mask. Only at the end of the 1970s were dust filters installed. But these probably harmed more than they helped the people in Casale because the filters were opened to the outside at night and the wind blew the dust all over town.

Today Anna Maria Giovanola is worried about her children's health. When they were still small, she would go home during working hours to nurse them, holding the baby boy and girl on her dust-covered lap. A justified fear, according to the oncologist Daniela Degiovanni. 'Today younger people, who never worked at Eternit, are dying more often of asbestos cancer. They are thirty to forty years old and many of them are children of women who once worked at Eternit.' Daniela Degiovanni is a key figure in understanding what happened at Eternit. The oncologist and politically active union member worked earlier in the counselling section of the CGIL, registering with meticulous care all the data about illnesses

among Eternit workers: Between 1978 and 1990 alone 750 sick workers filed with the Italian insurance company Inail. Most of them had asbestosis, mesothelioma, or lung cancer.



The administrative building of Eternit in Casale Monferrato, spring 2007

Today Daniela Degiovanni works in the oncology department of the Ospedale Santo Spirito; she is confronted on a daily basis with an asbestos drama. ‘In Casale sixteen times more people become ill with mesothelioma than in other Italian cities,’ the doctor explains. The bleak legacy of Eternit is an enormous psychological burden for patients, but also for physicians, who themselves are afraid.

Former Eternit workers, who are now falling sick and dying, have bitter consolation. At least their illness is recognised as a work-related one by the Swiss Accident Insurance Fund, allowing them or members of their families to get a pension. But this wasn’t always the case. In the 1970s Daniela Degiovanni and the union members of the CGIL had to fight for almost every pension because at first the claims were simply rejected. Only after several test cases in court did it become somewhat easier to get claims accepted for an occupational disease.

One of the twice-cheated workers was Mario Buso. For thirty-five years, he carried sacks of asbestos from lorries to the work floor. His son-in-law Italo Formica says, ‘When he died the doctors told us he had suffocated. That was it. Without an accurate diagnosis his wife couldn’t file a claim to a pension. Sometime later they told us that we had to exhume Mario for an autopsy. But we didn’t want that at all. So my mother-in-law waived her pension.’

The residents of Casale Monferrato also don’t have a claim to a pension if they fell sick without ever having worked at Eternit. And that’s a lot of people because for years asbestos was transported in open lorries from the depot behind the railway station all across town to the factory on the banks of the Po River. Another bleak fact is that waste water from Eternit emptied directly into the Po. Only in 2001 did the city clean up the asbestos beach that had formed over many years by covering it with a layer of cement and stone.



Nicola Pondrano,
former union member of the CGIL

Nicola Pondrano, the union secretary of the CGIL and himself a former Eternit worker, knows the history of the factory better than almost anyone. In the 1970s, he organised the first strikes to demand improved safety precautions and, over the last twenty years, accompanied the workers through a number of trials.

‘The safety precautions to protect against asbestos dust in the factory were totally useless. But the company claimed that production was dust-free and safe. That was utter nonsense. There is no risk-free asbestos fabrication,’ Pondrano says. The court affirmed that fact in 1983, and Eternit management was found guilty at the time on multiple counts of negligent manslaughter. But the guilty verdict didn’t get anything for the 1,700 Eternit victims other than a small moral victory.

In 1986, Stephan Schmidheiny’s Eternit filed for bankruptcy after years of a tug of war with the unions and workers over improving safety measures. The former workers and members of the victims’ families established themselves as a civil litigant in order to pursue their claims for damages in the bankruptcy proceedings. In 1993, the amount of seven billion lire (about 3.5 million euros) was awarded from the bankrupt’s estate for 1,700 victims. Most of the victims’ heirs are still fighting today for payment and have banded together in a victims’ association.

Eternit’s legacy has not only been devastating for the former workers and the residents in Casale. One can count victims from every former Eternit site in Italy. The situation in Syracuse is particularly tragic. In the Sicilian harbour city at least a hundred people have died as a result of exposure to asbestos and another 190 have fallen ill with asbestosis.

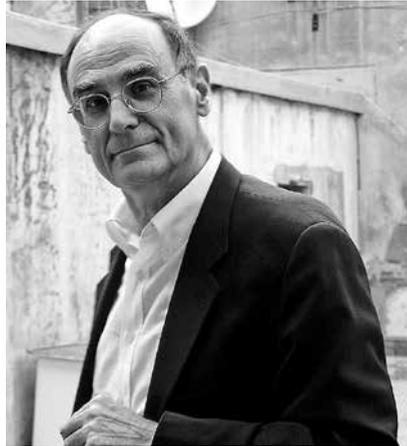
The managers in charge of the Swiss Group back then certainly view the history of Eternit in Italy quite differently. They continue to claim Stephan Schmidheiny introduced new safety measures when he took over the factories. Leo Mittelholzer from the Swiss region of Appenzell, who was the delegate to the board of Eternit Italia at the time, even testified in the Syracuse court that there were considerable improvements made under his leadership to protect the workers despite the worsening financial situation. He even called the factory in Syracuse a ‘little jewel’.

Casale Monferrato’s city theatre is brightly lit tonight. A crowd is gathering in front of the entrance. Directly in front of the door stands Bruno Pesce accompanied by Romana Blasotti, president of the local asbestos victims’ association. The premier of *La nuvola bianca* (*The White Cloud*) by Alessandro Cappai is to be performed tonight to celebrate International Asbestos Victims’ Day, which is held every year on April 28. The one-act play tells the tragic history of the Eternit workers of Casale Monferrato. Romana Blasotti is excited about the piece; the factory’s history doesn’t affect anyone more than her. The seventy-five-year-old widow has been an advocate for asbestos victims for over twenty years. She’s lost five relatives to asbestos. The first to die was her husband Mario Pavesi, barely sixty years old, in 1983; then her sister and sister’s son; after that her cousin; and finally even her daughter Maria Rosa Pavesi, just fifty years old, in the autumn of 2004. All of them died of pleural mesothelioma although only Romana’s husband Mario had worked in the factory. ‘When I learned that even my daughter was going to die because of asbestos, I couldn’t even cry anymore,’ the woman says in a steady voice.

She will cry only when asbestos is banned everywhere; then tears of joy, she says, will flow.



Romana Blasotti



Bruno Pesce

Safety guidelines from Niederurnen

Stephan Schmidheiny says he has nothing to do with the criminal charges brought by the former asbestos workers in Italy. They are ‘completely without merit’, he had his press spokesman declare several times over the past few years, because local management was responsible for protecting health in foreign Eternit factories. However explosive correspondence that became public in connection with the ongoing investigations in Italy provides evidence that the instructions for safety procedures came from headquarters in Niederurnen. The boss in Switzerland was in charge.

The bulk of the reports in the correspondence comes from Luigi Giannitrapani, the delegate at the time to the board of the Italian Eternit SpA in Genoa: Stephan Schmidheiny had reports about the situation in the Italian factories sent to him several times each month and he made the important decisions himself.

Everything was important for the boss and everything was scrupulously reported to the boss: The production schedules for the various factories, the increasing number of workers falling ill with asbestosis, the working conditions, the problems with the factory representatives over insufficient health safety protections, the eternal struggle with the unions, and even the organisation of an international asbestos conference at the Technical University in Turin.

The correspondence also shows that decisions about working conditions and protective measures in the Italian Eternit factories were made in Switzerland. Local managers had limited authority. Amiantus AG (today Anova Holding AG), with its headquarters in Niederurnen, which had been founded in the 1920s by the family to operate the foreign asbestos cement works, sold technical services to the foreign affiliates. Thus fabrication procedures and thus a large part of the protective measures were directly determined by Amiantus AG.

Stephan Schmidheiny even knew about the asbestos cases in the factories. The Eternit factory council in Casale Monferrato sounded the alarm, for example, in the mid-1970s. The workers were worried about their health, resulting in several strikes. In July 1976 Stephan Schmidheiny received a report from Giannitrapani: The Italian boss informed him that the factory council was now demanding a report on health safety protections in the factory. In January 1977 Giannitrapani then met with the Italian unions, reporting this to his

boss in Switzerland once again: Giannitrapani wrote, 'Dark clouds still hang over asbestos production in Italy. All the more so as the percentage of asbestos cases in the factories is still very high.'

When this smoking gun in the correspondence appeared in the Swiss union newspaper, *work*, in April 2005, Stephan Schmidheiny reacted laconically that local management probably had some influence: 'The Eternit Group was an industrial conglomerate that was decentralised in its operations with almost exclusively minority interests, whose management responsibilities were delegated to local management,' his press spokesman Peter Schürmann wrote in response. That Schmidheiny had been informed directly by management was after all 'as non-controversial as it was normal'.

With the number of asbestos-related illnesses on the rise another field for action and observation became important for Schmidheiny: The unions. The international network of Eternit workers had become a particular thorn in his side. Schmidheiny made sure he was regularly informed about union activity. This too is documented in a number of letters. He was particularly interested in the work of Charles Levinson, then the general secretary of the International Federation of Chemical, Energy and General Workers (ICEF), headquartered in Geneva. He contacted Schmidheiny in the winter of 1977 to make demands regarding measures to protect health. The head of the conglomerate became very alarmed and warned Giannitrapani about Levinson's activity in a letter, 'Keep me posted about your contacts with the Italian unions. I believe we must gird ourselves against coordinated action by the unions in various countries because we certainly can't meet the demands of Monsieur Levinson.'

Charles Levinson, who was born in Canada in 1920, was one of the first to call attention to the dangers of asbestos, especially for workers. He was the general secretary of ICEF from 1964 to 1983. He demanded measures to protect against asbestos in his official capacity, even at Eternit. The unionist died in Geneva in 1997.

In ICEF, Levinson worked with Karl Hauenschild, a German, who was a vice president and then president of the organisation from 1970 to 1982. During the same time, Hauenschild was also the president of the German Chemical Industrial Union. Apparently, Eternit cultivated indirect contact with Hauenschild because Hans Stoffel, a colleague of Schmidheiny, suggests in a letter to Stephan Schmidheiny that one could 'inform Herr K. so that he could talk with his good friend Herr Hauenschild' whether Levinson was planning to go to a conference for Eternit workers. In other words, the president of ICEF, Karl Hauenschild, was passing information on to Eternit what Secretary General Levinson was doing. Whether he did this intentionally or wasn't aware of this is impossible to tell from the correspondence. That the ICEF president and the ICEF general secretary were taking such widely diverging positions on Eternit probably has its basis in their different views about union work. While Levinson was most concerned with workers' health, Hauenschild probably gave highest priority to the struggle to keep jobs, thus playing into the hands of the asbestos industry.

Hans Stoffel, who was concerned among other things about Eternit's interests in Turkey, reported in connection with job cuts there at the end of 1977, 'Dear Stephan, [...] Our good friend Herr Levinson is organising a conference for Eternit workers worldwide.' Stoffel indirectly suggested to his boss to intervene: 'I must leave it to you [...]. The effort to subvert these plans will possibly pay off, whereby I certainly don't have any advice on how that could happen.' Schmidheiny reacted to Stoffel's letter and warned Giannitrapani a week later that if Levinson took part in the conference, 'We will have to face negative headlines. I'm therefore asking you to keep a close eye on the development of these matters and to keep me posted if you hear of anything new.'

The correspondence is unambiguous. But to the Swiss media Schmidheiny's press spokesman, Peter Schürmann, played down how explosive this correspondence was. He claimed there couldn't possibly be any talk of targeted action against the unions: 'Stephan Schmidheiny's interest in the unions is entirely normal.' It was 'pure conjecture or allegation that Eternit managers had been making efforts to prevent international union cooperation.'

Viva: Schmidheiny becomes a philanthropist

Today, Stephan Schmidheiny describes his life as a modern nomad wandering between Hurden on Lake Zurich and his 'retirement residence' in Costa Rica. Despite numerous inquiries, the sixty-year-old former entrepreneur and present-day full-time philanthropist, prefers not to discuss his past as the head of Eternit. The man from Switzerland, who designates Costa Rica as his second home, has a fortune estimated to be over five billion francs. Its seed money came from the asbestos business. It should be noted, as his spokesman emphasises, that Stephan Schmidheiny did not earn vast sums from Eternit, but from new investments he made in the early 1980s: The big banking houses sold their interests at that time and he bought a large number of shares in the watch industry, investing in Swatch, in Kiosk AG, in Brown, Boveri & Cie., Landis & Gyr, where he was heavily involved in the development of new industrial strategies. Later various companies merged, shares jumped in value, the stock market went up, Schmidheiny sold, and thus arose a billion-franc fortune.⁷⁵ The Costa Rican by choice invested this money primarily in Latin America, in forestry industries and in the manufacture of water conduits.

Stephan Schmidheiny resigned from his active role as entrepreneur on October 9, 2003. The heir to Eternit founded a trust called Viva (short for *Visiones y Valores*, or Visions and Values). He transferred all his shares in his Grupo Nueva, valued at a billion dollars, to this foundation, which is headquartered in San Jose, the capital city of Costa Rica. A beaming and relaxed Stephan Schmidheiny called a press conference in San Jose to announce the trust: 'After three decades of working as a businessman this is the obvious next step for me. I have been carefully preparing my successor for years, placing everything in the best possible hands as I sought a long-term solution for the Nueva Group with the Viva Trust. Placing my private holdings in the trust is the next step on the path that I have been taking for many years.'⁷⁶

Today, the Grupo Nueva consists of forty companies doing business in seventeen Latin American countries. According to Peter Fuchs,⁷⁷ president of the Viva Trust, these companies are obligated to the 'triple bottom line', which means that they 'operate according to the principles of sustainability, environmental protection, and social responsibility while achieving financial success'. A 'considerable portion of the dividends' from the Trust goes to the Avina Foundation. This organisation, headquartered in Hurden, has as its mission, according to its own statements, promoting social and ecological sustainability at home and abroad. The statement on the home page of the Trust reads, 'It aims to create opportunities to improve conditions for as many people as possible through their own efforts.'

The comments in the Latin American press on the billionaire's remarkable gesture ranged from flabbergasted to enthusiastic: 'Swiss Philanthropist Creates Billion Dollar Foundation' was the headline in *La Nación*, Costa Rica's most important newspaper. In

75. Strehle R. (2004) Gewissensfrage, Das Magazin (Tages-Anzeiger), 23 July 2004.

76. Catrina W. (2004) Stephan Schmidheiny: schöne Bescherung, Bilanz, 17 January 2004.

77. Peter Fuchs's quotations are taken from the home page of the ETH (Centre for Security Studies), <http://www.bpn.ethz.ch/partner/viva.cfm?nav1=4> [no longer accessible, trans.].

Switzerland, the creation of the Trust did not cause such large waves of publicity and the victims of the global asbestos empire took notice of the new trust with a great deal of scepticism. Before the former Eternit owner busied himself with financing sustainable projects, he should finally worry about the survival of his own former workers was the gist of the comments by Fernanda Giannasi, the figurehead of the Brazilian asbestos victims' association when the donation was announced.

And François Iselin from the asbestos victims' association of the French-speaking part of Switzerland, CAOVA, also found no words of praise for the philanthropist: 'At the end of the 1980s he sold his factories and ran off. But he should have stayed to face his responsibility because he had the knowledge and means necessary for helping his former workers.'

Stephan Schmidheiny himself has not spoken anymore about asbestos since June 2004. In his last television interview in the *Sternstunde Philosophie (Great Moments of Philosophy)* on Swiss television, he indicated that his conscience was clear: 'I basically believe it's normal that only someone who does nothing will make no mistakes and will never be criticised. I believe I had great success because I learned from my mistakes and made sure I applied the lessons learned. On the topic of asbestos: When I took over responsibility from my father, I took the problem seriously right from the start. I took measures to eliminate asbestos as quickly and as vigorously as I could. On the one hand, I was criticised by my own colleagues but especially by those in the same industrial sector for proceeding too hastily, too thoughtlessly, too imprudently. On the other hand, I was praised as a pioneer who got out of asbestos on my own initiative and before the law made it mandatory.'

The exit

Bans, class action lawsuits, and public pressure

Even though the deleterious effects of asbestos have been known since the beginning of the last century, it still took years to ban the deadly raw material from the factory workforce in most European countries. Sweden was the first country to take action, putting a partial ban into place as early as the mid-1970s for construction materials. Five years later Denmark followed suit. In Switzerland, however, almost twenty years would pass before the authorities issued a general ban and before it went into effect. And as we've seen, even today thanks to official waivers nine companies in Switzerland remain that are allowed to fabricate unimpeded the deadly material.

But how did Europe achieve its exit from asbestos? Aside from increasing public pressure through the media, three factors were decisive: The discussion of bans in Sweden and Denmark made it quite clear to the asbestos industry in an unambiguous way that the exit at least in Europe was only a matter of time. The first reports on the estimated number of asbestos victims shook public opinion at a time when environmental protection was beginning to become more and more important to people. The industry had to acknowledge that they had little influence on the basic issue of whether there would be a ban. But at least they could try with a coordinated effort to postpone the timing of a ban and, if possible, even determine when a ban in some countries would go into effect.

The second factor has to do with what was happening in the United States: Here asbestos victims were filing their first complaints against the companies involved with asbestos as early as the mid-1960s. The first major trial, against eleven American companies, began on December 10, 1966, in Beaumont, Texas. The defendants included the asbestos giants Johns-Manville, Fiberboard, and Owens Corning Fiberglass. In this first trial the

judges still found the arguments of the industry persuasive; but only three years later workers' rights and health prevailed, and for the first time the victims were awarded payments for damages. In *Borel v. Fiberboard Paper Products Corp.*, the judge awarded \$79,000 to the asbestos worker plaintiff, setting a precedent for thousands of lawsuits. In 1978 five thousand workers at a Southern California shipyard filed a class action lawsuit against fifteen of the largest asbestos producers in the United States. The defendants were accused of 'having unlawfully enriched themselves because they had continued to produce and sell asbestos', even though they 'were aware of the risks to their employees since 1934'.⁷⁸

Interesting too was a judgment in the same year won by the American chemical workers union. Thanks to the lawsuit filed by the Oil, Chemical and Atomic Workers Union (OCAW), 445 asbestos workers received damages. Altogether the plaintiffs were awarded around twenty million dollars. It wasn't just the owners of the companies who were found liable; they only had to pay thirteen of the twenty million dollars. The company doctor was also held liable in the amount of one million dollars and the agencies responsible for oversight in the amount of six million dollars because they had not made the workers aware of the dangers even though they had known about them since 1964. Even the chemical workers union was found liable for \$100,000 because it hadn't informed its members about the risks early enough. Within just two years of this judgment, sixteen thousand asbestos lawsuits were filed, and by 2002 this number rose to 730,000 against 8,400 companies paying out damages awarded in the total amount of seventy billion dollars. Between 1970 and 2004, thirty-seven companies went bankrupt in the United States due to asbestos lawsuits. Asbestos is therefore no longer the number one occupational cause of death; nevertheless, it has become the basis of the largest number of liability cases of all time. Even though such lawsuits are not possible in Europe because the statutes are very different, they did contribute decisively to European companies exiting from asbestos.

The third important factor leading to an asbestos ban was the increasing pressure in the mid-1970s from the unions: In Britain in 1977, relatives of deceased asbestos workers, organised by the unions, stormed into the stockholders' meeting of the asbestos giant, Turner & Newall, and threw fake asbestos dust over the directors. The same year the umbrella organisation of the British unions demanded a program to replace asbestos over the next ten years. In France actions included an occupation of the asbestos company Amisol in Clermont-Ferrand. The workers and the union fought hard for four long years, during which nineteen workers died of asbestos cancer. In 1976 the workers at some of the plants of the American giant Johns-Manville went on strike to demand better protection measures and to protest twelve co-workers dying within fourteen months. In a shipyard in California, the union sent the X-rays of twenty-five asbestos workers to an occupational health physician. His findings were frightening: Seventeen workers had lungs damaged by asbestos. The union immediately had all endangered shipyard workers screened and put together a list of demands. Resistance grew in Southern Europe as well, but the argument in favour of protecting health couldn't win everywhere over the argument in favour of protecting jobs, as this example shows: At the end of 1978, the workers in a Greek asbestos factory in Patras struck for 120 days to protest dangerous working conditions. But the union refused to support the strike and the company threatened to close the factory. After 120 days, the strikers capitulated; they did receive about a twenty percent increase in pay but there were no improvements in working conditions.⁷⁹

78. *Le Monde*, 11 December 1978.

79. Lochhead R. (1983) *op. cit.*

These three factors came together to mark the end of asbestos euphoria in Europe and initiated a new chapter, which put an end to fabrication and sale of the one-time wonder-fibre a quarter of century later, on January 1, 2005. This is the date the asbestos ban went into effect in all the countries of the European Union.

Germany sets the pace

Not by coincidence, the asbestos ban in Switzerland went into effect almost at the same time as in Germany. The Swiss schedule for getting out of asbestos was set *de facto* in the neighbouring country because there was close cooperation and strategic networking of various asbestos companies, especially between the German and Swiss Eternit branches, both of which were influenced by the Swiss industrial dynasty of the Schmidheiny.

But let's start from the beginning: In 1981 alarm bells went off for asbestos importers and asbestos manufacturers in Germany. The reason they sounded was a comprehensive report from the Federal Agency for the Environment on the effect of asbestos and other fibrous fine dust on the environment. The German agency with authority over these matters concluded that manufacture and use of asbestos cement products simply had to be prohibited. However the federal agency recommended that the ban be delayed for five to ten years due to concerns about protecting the asbestos industry, namely to preserve jobs in this industrial sector. This period of delay would allow production to wind down. Immediately the Interior Minister at the time, Gerhard Baum (Free Democratic Party), under his authority to protect the environment, stepped in front of television cameras for a press conference to call for an asbestos ban.⁸⁰ Bans in varying degrees were even immediately put in place in some of the German states. Bremen, Hesse, and Hamburg decreed bans on using products containing asbestos in public construction projects. A number of German municipalities even passed similar recommendations. This was the high point of the crisis in the asbestos manufacturing industry in Germany, which included not only asbestos cement factories but the manufacturers of clutches and friction pads as well as gasket manufacturers.

For the asbestos cement industry three concurrent negative developments came to a head at that time: The inflamed public discussion on asbestos; the rapidly worsening recession in the construction industry; and a different concept of architecture that demanded greater creative freedom.

Delay as long as possible!

For the German asbestos cement industry a life-threatening development loomed because the government, which controlled infrastructure as well as construction projects, was one of its most important customers. Moreover, the fibre cement industry's long-standing boast of 'safe, controlled handling for asbestos' ('controlled use' is the English term) was put into question by the demand for a ban of not only sprayed-on asbestos but also of asbestos cement products.

The asbestos industry reacted swiftly with a two-pronged strategy: First it indicated its readiness for a discussion with the relevant authorities and with the unions; and second, it lobbied against a ban whenever it could. The belated reaction of the authorities is thus

⁸⁰. Albracht G. and Schwerdtfeger O.A. (1991) *op. cit.*

not just the result of the industry's successful influence on key players and the media. The industry's objective was to influence the agencies responsible for oversight to delay the asbestos ban as long as possible, and of course to fend off anything that was a critical threat.

For some years the creation of a purported 'independent scientific committee of the asbestos industry' had been part of this strategy in the fight to win over public opinion. An industry-friendly occupational health physician from the University of Erlangen was named as the committee's president. The industry was counting on hostile physicians to not criticise the talents tapped from the ranks of academe. The 'Asbestos Institute for the Protection of Workers and the Environment' in Neuss, near Düsseldorf, probably had similar aims. Eternit was behind the founding of the Institute. The director was Professor K. Robock, a scientist who wanted to make the one-time wonder fibre 'socially respectable'⁸¹ once again.

The German television news magazine show *Kontraste* (*Contrasts*) did an exposé at the time on a common practice of the German asbestos lobby: The Institute for Clean Water, Soil, and Air, then part of the Federal Agency for Health (*Bundesgesundheitsamt*, BGA), had been receiving money and gifts in kind from the asbestos industry for years. The accountants determined there were, among other things, violations against acquisition rules as well as highly questionable financial practices. There was scarcely a research project of the Institute on the topic of asbestos in which monies didn't ultimately flow from the targeted industries. In other words, the asbestos industry financed and influenced public asbestos research in Germany – just as it did for decades in South Africa.

Eternit provided another example of the questionable practices that were exposed by the German media. In this case it was the company's trying to conceal the number of asbestos victims: In 1980 the company had tried without success to obtain a temporary restraining order against the environmental agency that had given the number of four thousand deaths per year in Germany from asbestos in a statement.

A year later, in contrast to Eternit, the German Asbestos Trade Association was successful: The industry lobbying group for the asbestos industry had successfully demanded that the radio station *Norddeutscher Rundfunk* no longer repeat the statement of an occupational safety expert with the German Confederation of Trade Unions (*Deutscher Gewerkschaftsbund*, DGB). A union member had said that in Germany alone ten thousand people die every year from asbestos-related illnesses.

'Secret diplomacy' and the fight for public opinion

As Gerd Albracht and Oswald A. Schwerdtfeger documented in their book *Herausforderung Asbest* (*The Challenge of Asbestos*), the industry, now on high alert, reacted to the demand for a ban in Germany primarily with 'secret diplomacy.' To preserve its interests, the industry had founded a successful organisation in the 1970s: Asbestos International Association, the AIA. The promoters of asbestos as well as manufacturers and the manufacturing industry were equally represented in this lobbying group. The AIA coordinated the interests of the asbestos companies in thirty-five countries. The main mission of the organisation, according to Albracht and Schwerdtfeger, was to insure that asbestos production would continue. The Simpson Report from the British AIA concluded, for example, that asbestos presented no risk to the general public and therefore no ban was needed. The European agencies with oversight authority certified that the report was fair and balanced. Some experts in the

81. Catrina W. (1985) *op. cit.*

European Community (EC) said at the time that it was the most comprehensive report on asbestos and that it could serve as a basis in formulating asbestos laws in the EC and in its individual countries. Albracht and Schwerdtfeger say that the AIA's massive influence on the EC resulted in the EC believing the fairy tale of 'safe, controlled handling' ('controlled use') for many years and in its failure to push for alternatives to asbestos early on.

While AIA's lobbying group operated successfully on the international level, the lobbying group of the Trade Association for Asbestos was concerned primarily with internal German policy.

The Trade Association for Asbestos' confidential annual report of 1979 gives a glimpse into how the asbestos lobby in Germany courted the favour of the oversight agencies: 'Since that time the two asbestos associations have worked almost non-stop with their management and the experts responsible for environmental protection to persuade the ministries with oversight authority, trade oversight agencies or Employers Liability Insurance Associations that bans or mandates for substitutions in certain categories are not necessary according to the epidemiological experience in Germany in complying with TRK (*Technische Richtkonzentration* or Technical Guide Concentration) values, and are harmful to our economy and threaten the existence of the asbestos industry. [...] In frank discussions about a sustainable compromise, we have succeeded in limiting packaging and labelling rules and avoided requirements to place hazard symbols on unprocessed asbestos in the legislation proposed concerning hazardous substance protection!'

The asbestos lobby was particularly proud of keeping the deadly material out of the category of the top risk group in the Ordinance for Hazardous Materials and the working hours for employees exposed to asbestos were not cut. The asbestos lobby wrote in one of its annual reports, 'Particularly difficult negotiations were triggered by the proposed bill's new ordinance for hazardous substances. [...] This [the classification in the highest risk group] could be prevented as could a restriction of working hours for employees exposed to asbestos to thirty-five hours a week and the labelling of asbestos in products with the negative warning 'causes cancer'.⁸²

The confidential Hayek report of 1981

The German asbestos cement producer received a bad grade in an outside study. In June 1981, Eternit management had asked Hayek Engineering AG in Zurich for a report with a view to further action. The confidential study concluded that the money the company had budgeted for research and development in the amount of 6.1 million D-marks – about 1.1 percent of sales volume in 1980 – was completely insufficient. And not only that: The report accused the company of having no 'overall plan for a highly detailed defence strategy' and having held on too long to the objective of 'preventing an asbestos ban without pursuing an alternative strategy in the event of a ban'.⁸³ If Eternit wanted to save what could be saved, a new strategy was desperately needed, which would be based on the existence of an asbestos ban. It would be, after all, only a matter of time. But the strategy that Eternit AG chose would also determine when this ban would go into effect.

⁸². Both quotations of the Trade Association are from Albrecht G. and Schwerdtfeger O.A (1991).

⁸³. Albrecht G. and Schwerdtfeger O.A (1991) *op. cit.*

Hayek Engineering's study recommended to Eternit management a package of clever measures:

- Measure 1: Creating a strong defensive position and strategic action in the asbestos and environmental discussion to win as much time as possible in view of a possible asbestos ban;
- Measure 2: Systematically researching and exploiting weaknesses in opponents' arguments;
- Measure 3: Bringing objectivity to the asbestos and environmental discussion by using qualified and respected institutes and experts; and
- Measure 4: Reviewing the dependability and usefulness of allies.⁸⁴

The company seems to have conscientiously put these measures into effect. In any case it was the German asbestos cement industry that determined the date it would get out of asbestos after arrangements were made with the federal government. This was possible when it concluded a 'voluntary' agreement with the industry.

A 'voluntary' industry agreement

As is fitting for a model communications strategy, the German asbestos industry signalled its readiness to talk shortly after the Minister of the Interior Gerhard Baum demanded a ban. As early as July of 1981 there was a meeting on the question of asbestos cement production and reorientation of the industry in Munich. Representatives from the German Confederation of Trade Unions (*Deutscher Gewerkschaftsbund*, DGB); the German Chemical Industries Union (*IG-Chemie*); and the German Construction, Engineering, and Building Materials Union (*IG-Bau-Steine-Erden*) sat down at the table with the leading executives of the Trade Association Asbestos Cement, Eternit AG, the Organisation of German Employers Associations, and the Employers Liability Insurance Associations. It is reported that there was a hailstorm of criticism from the unions. The industry, they said, had failed to pursue finding substitutes for the carcinogenic material with sufficient 'vigour and intensity'. The DGB had published a seventeen-point program against asbestos cancer in February of the same year, which had included the demand for a phased-in ban and the use of substitutes. The unions had finally understood that carcinogenic jobs did not deserve to be protected. This hadn't always been the case: It should be remembered that health and job protection had achieved widespread public support only in the 1970s. Up until then the opinion of unions was that employees working with hazardous materials were better compensated with wage increases rather than with threshold limits or a ban.

Almost at the same time the German media also started to pay attention to the topic of asbestos. Almost daily, they reported evidence of hazardous asbestos in public buildings, especially in schools and universities. The announcements about decontaminating buildings with sprayed-on asbestos insulation, where chunks of insulating material had fallen off over the years, releasing fine dust into the rooms, kept the public mesmerised. Public buildings, in particular kindergartens, sport halls, and schools, often could be decontaminated only at the cost of billions. Within a few days several educational sites and sport halls had to be closed in Berlin. In discussions tinged with bitterness, parents, students, and teachers stated they would not stay in buildings where there was asbestos.

⁸⁴. Albracht G. and Schwerdtfeger O.A. (1991) *op. cit.*

In this setting the asbestos industry – which had maintained for decades that no suitable substitute material existed – had run out of room to manoeuvre: A year after Federal Minister Baum’s television announcement, the Association of the Fibre Cement Industry, at the behest of the German Eternit AG, and the federal government concluded a ‘voluntary’ agreement, which was amended in 1984. The key provisions of the agreement were a staggered exit from manufacture of construction materials by 1990 and the exit from infrastructure products by the end of 1993.

With this, Eternit was off the hook and could even sing its own praises in newspaper ads as an employer with an environmental conscience who had voluntarily forsworn the dangerous material. A first-rate public relations spin, which testifies to a detailed communications strategy that had been thoroughly thought out and flawlessly executed. In fact, however, the agreement guaranteed the fibre cement industry that it could continue its business for almost another ten years. Today it cannot be viewed in any other way: The industry agreement was a clever chess move on the part of the industry, to which the federal government and unions, in their perpetual fear of losing jobs, offered no resistance. The exit from asbestos therefore took way too long, the slow exit causing more human misery. What was required at the time was not a gentle transition but slamming on the emergency brake: Immediate legislation to ban asbestos production and use. The unions as well as the government utterly failed to understand this.

The ‘Secret Club’ of the Swiss asbestos industry

It wasn’t just in Germany that the asbestos industry had an association to protect its interests. The organisation analogous to the Trade Association Asbestos in Switzerland was the Working Committee for Asbestos. This association was founded in good Swiss style in the buffet of the railway station in Zurich. At 3 p.m. on Valentine’s Day in 1978. Five representatives from the largest asbestos companies were already at their tryst in the morning. At 10 o’clock sharp they met in the chambers of a well known law firm, a few minutes away by foot from the Bellevue Hotel on Dufourstraße. The gentlemen’s purpose for this get-together was to prepare for the general meeting to establish the Working Committee for Asbestos; they wanted to be sure that everyone representing their companies would be elected onto the board of the association, and they wanted to establish how they would respond ‘to any questions and criticism’ from other company representatives. The gentlemen were so confident about their actions that they decided just to count their morning get-together as their first board meeting. The board of the Working Committee for Asbestos thus held its meeting before a general meeting had even formed the Committee. A rather unusual sequence. In the minutes of the first board meeting, which were written only after the general meeting that established the Committee, the gentlemen even praised themselves for their clever manoeuvre: Memorialised in writing by the scribe taking the minutes was, ‘The course of the general meeting showed that careful preparation paid off; everything has gone well.’

When the five gentlemen left the chambers of the well-known Zurich law firm shortly before noon to dine before the general meeting, one of them had a letter addressed to the Swiss Federal Office of Health in his briefcase. The lawyer had meticulously prepared the letter and had proposed it to the gentlemen in the board meeting as the very first agenda item. Now all that was left to do was have the general meeting smoothly stage the formation of the Working Committee for Asbestos.

When the five gentlemen meet at the Zurich railway station buffet that afternoon, they shake hands briskly. A word here, a smile there ... Then things turn serious.

Herr B. M.⁸⁵ from Eternit AG takes the floor. He greets those present and quickly summarises the purpose and the reasons for the meeting. Then he describes the ‘current status of the asbestos controversy’. First up for discussion come minor agenda items: Boxer Asbestos SA still has no factory permit for its newly built plant in Balerna. The parliamentary delegate from the Canton of Ticino gave an extensive questionnaire to the company, which the company ‘could not respond to’ in the form presented ‘for proprietary reasons’.⁸⁶ Even Forbo SA in Ticino had problems. They had ‘come under attack’ on account of asbestos manufacture. But ‘the company management, factory council, and unions’ had together put out ‘a very objective communiqué’ and thus ‘the matter seems to have calmed down’. The meeting becomes interesting only with item three of the agenda. Now it’s going for the brass ring: [Gentlemen,] the Swiss Federal Office of Health is proposing to put asbestos as respirable fine dust into the category of Toxic Substances Schedule I. This is a complete absurdity. For asbestos as respirable fine dust is industrially worthless, a waste product.’ Whether Herr B. M. received a round of applause for his presentation the minutes do not say. But it is clear that the gentlemen in the room agreed with him. The classification into the most dangerous class of toxic material had to be stopped. They voted that the board of directors to be constituted should immediately address this issue. The author of the minutes then memorialised under ‘Special Tasks for the Board of Directors’ as item number one: Swiss Federal Office of Health: Prevention of classification of asbestos on Toxic Substances Schedule I, if possible also not in the proposed form as respirable fine dust.’

Categorising a material on Toxic Substances Schedule I would result in asbestos products no longer available to private persons as a safe product, but only permitted to industry. Moreover, the product would have to be labelled with a skull and crossbones as carcinogenic.

The gentlemen at the railway buffet decided that preventing the classification as a carcinogenic substance on the corresponding toxic substance schedule was not the only special task for the board. They had additional concerns in mind to be acted on such as ‘establishing more extensive contacts at agencies and technical bodies’, ‘setting up documentation’, ‘reviewing the possibility for measurements in the factories’, and in general ‘fostering the image of the Working Committee for Asbestos’.

To effectively encourage the objectives of the association the businessmen who were present also decided to establish an office and memorialised its duties in the association’s bylaws: ‘Acquiring and communicating all important information’; ‘preparing measures internally for the purpose of active work protection, externally for the purpose of making our efforts credible.’

When the five gentlemen left the room on the second floor of the railway buffet at 4:50 p.m., they had every reason to be pleased with themselves.

The meeting had gone according to plan and the choice of directors was completed without a hitch: The representatives from Eternit AG in Niederurnen, Imago AG in Münchenstein, Filtrox-Werke in Sankt Gallen, the Swiss Isola-Werke in Breitenbach, and the Asbest + Packungs AG in Glattbrugg were all elected without opposition to the Committee’s board of directors. The twelve members present entitled to vote elected the Eternit representative, Herr B. M., to be the chairman of the board. And the election of the board wasn’t the only thing that went entirely according to their satisfaction. The five gentlemen

85. Maria Roselli knows the names of the directors on the first board of the Working Committee for Asbestos.

86. All quotations come from the minutes of three sessions of the Working Committee for Asbestos: The minutes to the first board meeting, the general meeting to establish the Committee; and the fourteenth general meeting of April 10, 1994, which dissolved the association.

even succeeded in making it a priority at the very first meeting of the Committee to prevent the classification of asbestos on Toxic Substances Schedule I. Now the letter to the Swiss Federal Department of Health could be mailed. The support of the entire industrial sector had been secured.

The five gentlemen could be truly proud of what they had accomplished! It is indeed a fact: Asbestos was only included on Toxic Substances Schedule I nine years later in Switzerland, in 1987. Only two years previously the wording ‘respirable asbestos material is carcinogenic’ had been approved but the actual classification only happened in 1987.

On May 29, 1978, the formation document for the Working Committee for Asbestos was filed in the business register of the Canton of Zurich. The purpose of the association was officially, ‘Sharing experience, documentation, and the general advancement of knowledge of asbestos and health; mutual counsel, and coordinated action in all matters of job protection, public information, and encouraging relationships with important associates; unified external representation of the industry.’

Sixteen years later, on April 20, 1994, a few days after the final date the asbestos ban became effective, the gentlemen from the Working Committee for Asbestos met officially for the last time. It remains unknown what other honourable objectives they pursued in the interim – forever buried in the association’s archives, probably in the basement of the well-known law firm on Dufourstraße. They decided at this fourteenth ordinary general meeting to dissolve the Working Committee for Asbestos. As memorialised in the minutes, the gentlemen were more than satisfied with their work; the author of the minutes noted almost euphorically: ‘The aim to bring objectivity to the discussion on asbestos and the exit from asbestos in an orderly fashion has been accomplished! [...] The representative from Eternit has been appointed liquidator. Eternit AG will cover the costs of liquidation with a special contribution.’ And last but not least, the office has been given a not unimportant task: It is to inform BUWAL of the liquidation of the Working Committee for Asbestos and ‘to remind’ the federal agency of the ‘mutual agreement not to publish the inventory of sprayed-on asbestos sites’.

Today, a good thirteen years later, the list of buildings in Switzerland with hazardous sprayed-on asbestos that BUWAL had at one time put together is still under lock and key.

‘No comment’

And what do the gentlemen think today – knowing there are still thousands of people dying of asbestos cancer in Switzerland – about their lobbying efforts by their working committee at the time? Most of the companies that were represented on the board no longer exist and some of the gentlemen who took part have since died. The only ones who have taken a position are Filtrox AG in Sankt Gallen and Eternit. Filtrox, of course, did not want to comment directly on preventing the toxic classification of asbestos. In a laconic communiqué it did confirm its membership in the association; but claimed that as far as it knew the association’s aims were different, namely ‘to obtain a better knowledge of asbestos’ and ‘the search for replacement materials to substitute for asbestos.’

Eternit’s explanation is also quite interesting. The asbestos cement producer from Niederurnen had always officially let it be known that Stephan Schmidheiny had already made the decision in 1978 to leave the asbestos business. What is the explanation then for Eternit having founded an association together with other asbestos companies in 1978 that aimed to prevent the toxic fibre from being classified on Toxic Substances Schedule I? Anders Holte, who is currently the head of Eternit, has not wanted to comment. ‘I only came to Eternit in 1996. At that point the Working Committee for Asbestos had already existed for

a long time.' Moreover, he had seen only the Committee's documents that had information on the danger of this material. With the best will in the world he claims he couldn't possibly comment on what had happened before his time. He certainly had to have known what the association was doing in the 1990s because he was already head of Eternit. Was there an agreement with BUWAL that prevented making public the list of buildings with the hazardous sprayed-on asbestos? Or not? 'I don't know about that. I have nothing to say about this. We never had anything to do with sprayed-on asbestos,' is what Andreas Holte says in response. How is it then possible that Eternit paid all costs in full for an association about whose activities it wasn't informed? But the head of Eternit has no answer to this question. It is of course true that Eternit was one of the few members in the Committee still in business, but he really couldn't say anything more than this.

There are revealingly similar responses from Peter Schürmann, the press spokesman for Stephan Schmidheiny. He had been unable to find any documents for the Working Committee for Asbestos and thus claimed he didn't know what the purpose of this association was. And even if the asbestos lobby had tried to prevent the toxic classification of asbestos, he saw no contradiction in the fact that Stephan Schmidheiny, who was a 'socially conscious and farsighted employer', got out of the asbestos business very early.

Agencies dither

And what is the story with BAG and BAFU (formerly BUWAL)? What do the two agencies in charge think about the lobbying of the asbestos industry? How do they explain how the toxic classification of asbestos could be delayed for nine long years? Georg Karlaganis, the current head of the federal environmental agency's Section for Materials, Soil, and Biotechnology, confirms that there were a number of meetings with representatives from the Working Committee for Asbestos. But holding conversations with the industry was after all one of the duties of an agency. A legal guideline is always negotiated in conversations with the industry because the agencies by themselves don't have the necessary expertise. But there was no pressure from the asbestos industry. 'Lobbying is something entirely normal and legal, no matter whether it comes from the industry, from the WWF organisation, or from Greenpeace. Every interest group tries to influence the process,' commented Karlaganis. There 'never was' an agreement on a list of buildings with sprayed-on asbestos with the Working Committee for Asbestos. The reference probably appeared in the Committee's minutes to show that the lobbyists had done their job well. But how does the expert explain why asbestos was banned only very late in Switzerland and why the list of buildings was never made public? The buildings list was never completed due to a shortage of personnel and thus was handed over to the cantons and to SUVA. But this, he says, has nothing to do with a purported 'secret agreement' with the asbestos lobby. To the question about the late date for the general ban, the expert believes, 'It is always a long, complicated process until a legal ban for a substance is in place. The legal basis for a regulatory ban, namely the environmental protection law, only became effective in 1985. We share the author's opinion that a ban was needed much earlier.'

The Federal Office of Health views this differently. According to Roger Waeber from the section responsible for chemicals, it is quite easy to say from what we now know that the toxic classification and ban should have happened much sooner. We should remember that regulating a substance is always a matter of a long and thorough process. In the case of asbestos, the technical committee for oversight of toxic substances had agreed as early as 1977 that respirable asbestos dust was carcinogenic. But we weren't sure to what degree

this was also true for different products that contained asbestos and if all these products really fell within the scope of the Law on Toxic Substances. 'Classifying asbestos on Toxic Substances Schedule I would have automatically required a label for any product containing asbestos that was a warning for the most toxic poisons, a skull and crossbones. At least some members of the committee considered this inappropriate. Moreover, the Law on Toxic Substances was not intended to regulate asbestos products such as floor tiles or fibre cement panels.' Also, asbestos was allowed at the time as a processing agent in the food industry and was even explicitly noted in the regulations for the food industry.

Over the years asbestos was used in what is known as cellar treatment in the fermentation process and in filtering wine and fruit juices. Before reclassifying asbestos into the most toxic category of poisons, the ministry had to make sure that asbestos was deleted from the Rule for Foodstuffs. And that took a full four years. Only as of November 1, 1980, was the toxic substance removed from the Rule for Foodstuffs. In the interim a number of letters from the Working Committee for Asbestos was delivered to the Federal Office for Health. And there were meetings with representatives from SUVA and the Working Committee for Asbestos. The Committee had emphasised legal concerns about classifying asbestos. The asbestos products in themselves weren't dangerous but respirable fine dust was. This, however, was not a marketable product by any definition; a classification as a toxic substance would therefore not be allowed as legal.

'Our office took these concerns seriously and to that end had the legal department clarify whether the classification would conform to the law. An appeal would have delayed the whole process even longer. All these clarifications took a long time,' Waeber explained. Moreover, there were some on the expert committee who believed that asbestos was more an occupational health issue and less a problem for the Toxic Substances Law. Oversight in that case would no longer lie with BAG. In 1981 the ministry's legal department presented its legal opinion: Its conclusion was unambiguous, the toxic classification of respirable fine dust was permitted.

But BAG still saw no reason to act at last, but decided to continue to wait patiently. 'BAG had great confidence in the work of SUVA and thought that the affected factories would take the necessary occupational health measures on their own. We also didn't know at the time how much asbestos dust it took to trigger mesothelioma,' Roger Waeber said to justify what his ministry did. BAG wasn't inactive but did insist on at least mandating a warning label on the raw material. The representatives from the Working Committee for Asbestos waved that off, saying it wasn't really necessary. Over ninety-eight percent of imported asbestos went to their companies so it wasn't necessary to label asbestos sacks. They already knew that asbestos was hazardous and would ensure the necessary safety measures would be taken in their factories.

An absurd argument! But BAG caved. They agreed with the representatives from the asbestos industry that they would voluntarily and on their own label the raw material. Thus another four years passed until 1985 without the substance on the toxic substances list. And even in 1985 they were still looking for a way to include the toxic material on the toxic substances list but not to classify it as such. 'We wanted to see that the raw material had to be labelled but not the products,' was what BAG was saying. Insight came only in 1987, and classification of respirable asbestos dust on Toxic Substances Schedule I finally happened. It had taken ten years after the members of the expert committee had agreed that respirable asbestos dust was carcinogenic.

Even so, BAG insisted that a period of ten years from the time the substance is recognised as dangerous to health until it is regulated by law is nothing out of the ordinary. People have learned a few things from this history with asbestos. Today it's obvious to the

department that they must work together across specialties with other government departments and institutions early on. And above all: 'Voluntary agreements with the industry didn't do very much.'

The fact is: Only in the tailwind of environmental legislation, which took place under the direction of BUWAL, could the problem be seriously addressed. A broad asbestos ban was anchored in the Ordinance on Substances of June 9, 1986, which was to go into effect on March 1, 1989, with a transition period until March 1, 1990. Exactly at the point when the asbestos cement industry in Germany had announced its voluntary exit.

The Swiss Railroad SBB regrets the deaths

The Swiss Railroad (SBB) admittedly was not represented on the board when the Working Committee for Asbestos was created, but according to the claims of one of the members in the lobbying group, the state enterprise participated in the association for years. But now the state-owned enterprise claims to know nothing of this. The official spokesman, Roland Binz, says the SBB doesn't want to minimise asbestos issues. Of course there's asbestos at the SBB: On the one hand, as sprayed-on asbestos in older passenger cars and in buildings, and on the other hand, as non-friable asbestos in brake pads, rotor windings, and wheel suspension systems. But these materials present no immediate danger to clients and personnel. The press spokesman maintained, 'When handling the material in the SBB workshops, of course, workers came into contact with asbestos fibres in the past because the necessary knowledge about the danger of this material was lacking. As soon as the health risks of asbestos became known, we took the necessary precautions in consultation with SUVA. Even so, SUVA registered a total of seventy-eight cases of pleural mesothelioma in SBB workers in the period between 1978 and 2005. SBB regrets very much that these workers fell sick.'

Currently the SBB, according to its own count, still has seventy-seven older models of passenger cars, out of a total of 3,900, with insulation containing asbestos. But measurements show, SBB says, that the encapsulated insulation presents no danger to passengers. Binz promises, 'The last of these old passenger cars will be replaced by 2008.' A specialised firm has been contracted to dispose of these cars. The rolling stock in use for passenger service will thus be free of sprayed-on asbestos after January 1, 2009. But it's quite a different story for older locomotives and special cars; there could still be, just as before, according to Binz, materials with asbestos. But there is no danger to passengers or personnel. In the few cases, where there is possible contact with parts that contain asbestos, stringent safety measures have been instituted to exclude the danger of possible contact by personnel with asbestos-containing materials.

The long journey to the exit

What happened in Switzerland beyond the cubicles in agency offices, with the public, political parties, and unions? At the end of the 1970s and at the beginning of the 1980s resistance began to form even here against the deadly material. Unlike that of its northern neighbour, neither the agencies in charge nor the Federal Council were the driving force for the ban.

One of the first rallying points against asbestos came from the Canton of Ticino: In the mid-1970s the asbestos company Boxer Asbestos in Balerna (Mendrisiotto) wanted to build a factory to make asbestos products that would create fifty jobs. But the residents protested. Apprehensive after the 1976 dioxin catastrophe in Seveso, people put up active

resistance for weeks, submitting two petitions. And even the government council had concerns at the beginning. In the end, company interests prevailed and the asbestos factory was built. It remains an open question whether intervention by the Working Committee for Asbestos, which had undertaken to address this problem in its very first meeting, had been crucial here.

One of the leading figures in the struggle to get a ban on asbestos in Switzerland was François Iselin, former researcher at the Ecole Polytechnique Fédérale de Lausanne (EPFL). Iselin was an expert for structural damage when he was asked by the newspaper *24 heures* to apply his expertise. The journalists from this well respected paper were worried about their health because the editorial offices were thought to be contaminated with sprayed-on asbestos. Iselin's activism began with this first request for guidance. Today, with his wife Pierrette Iselin, he is active in a world-wide campaign against this hazardous substance. They are also the driving force for the West Switzerland asbestos victims' association, the Comité d'Aide et d'Orientation des Victimes de l'Amiante (CAOVA).

Iselin became familiar with this topic through events in Paris. At the time, a fight over asbestos abatement at the Jussieu University was raging in the French capital. The university building was insulated with sprayed-on asbestos from basement to attic, which had degraded over time and was contaminating the air in the lecture halls. Students went on strike for months, demanding that the building be cleaned up. The student protest was quite controversial, also mobilising an entire generation of engineers and architects to fight asbestos abroad thanks to many articles and books.

Movement on the political level occurred in Eternit territory of Switzerland only after seventeen sports facilities insulated with sprayed-on asbestos had to be closed in Germany: In 1982 the SP (Social Democrat) National Council Member Fritz Ganz filed what is known in Swiss parliamentary procedure as a Simple Question titled 'Asbestos in Sports Facilities, Cancer Hazard'. There were eight more formal parliamentary questions⁸⁷ from different political parties over the next few years. Fritz Ganz demanded measures 'to protect our pupils and our athletes against the danger of cancer' in his written text. A short time later a working group representing the entire country was given the task of analysing the asbestos situation in Swiss sports halls. At the same time the Office of the Environment put together a list of buildings where sprayed-on asbestos had been used. The worrisome list included four thousand buildings all over Switzerland, approximately one thousand of which were located in the Canton of Zurich. In 1986 BUWAL handed the list over to the cantons for them to start the needed abatement. But in many places officials simply filed the inventory list away in a drawer. In 2004, the list still contained 2,750 buildings with sprayed-on asbestos in some form according to the Office of Health.

The politically active François Iselin introduced the topic of asbestos within the SAP (*Sozialistische Arbeiter Partei*, Socialist Workers' Party) at the end of the 1970s. An authors' collective soon set to work, quickly producing a book on the topic: *Eternit: Asbest und Profit. Ein Konzern verseucht die Umwelt (Eternit: Asbestos and Profit. A Business Poisons the Environment)*. This book not only passed harsh judgment on Eternit, it also pilloried the lackadaisical methods of SUVA and the oversight agencies; moreover, it criticised the

87. After Fritz Ganz' Simple Question there were eight more formal parliamentary questions in the Swiss federal councils by 1989: Interpellation Longet, 7 June 1983, regarding Seveso and chemical hazards; Postulat Longet, 23 June 1983, regarding air pollution and oversight; Simple Question Mascarin, 20 March 1984, regarding asbestos in highrises and ban; Simple Question Clivaz, 11 June 1985, regarding abatement of asbestos-contaminated highrises and training seminar; Interpellation Ziegler, 20 June 1985, regarding asbestos contaminated buildings and inventory; Interpellation the Green Party, 3 March 1988, regarding asbestos contamination from brake pads; Interpellation Béguelin, 15 March 1989, Ratification of the Agreement of the International Work Conference for the Use of Asbestos.

unions, which favoured a staggered exit instead of an immediate ban – pleading the need to ‘retain jobs’. Many of the criticisms made by the SAP authors are no less valid today.

Particularly harsh was SAP’s criticism of the Swiss Accident Insurance Fund. SUVA has a double role, they wrote. On the one hand, they provide insurance paid for by employers’ premiums and compensate victims of accidents and illnesses. On the other, they are most certainly a government agency with regulatory authority; it published, for example, the Threshold Limit Values (TLV) for toxic substances. Further, SUVA has earned a ‘reputation as a watchdog guarding the interests of employers’ in its strict policy in accepting claims. And even far more important: Although SUVA had to pay out compensation claims for asbestos cases as early as the 1930s, it waited until 1978 before taking measures to mitigate asbestos contamination on the jobsite.

The authors’ collective also sharply criticised SUVA’s medical screenings in factories. For example, SUVA looked at only 732 workers in thirty-four factories after 1975 when in fact Eternit alone had approximately one thousand workers. SUVA missed the chance to mandate notification for asbestos factories even though it could have done so under the law. Workers in the factories that didn’t fabricate products containing asbestos but only handled them were not subject to SUVA’s supervision for the industry. The authors’ collective wrote that they went without medical oversight as did the countless craftsmen who worked with asbestos cement, handling it on the jobsite. It gets worse: SUVA did indeed carry out screenings and measurements in the asbestos factories known to them, but it told the factories ahead of time and shared the results only with the employers, not with the workers. The employees weren’t even told about the medical screenings. So the employees had no way of learning whether they were exposed to high levels of asbestos in their work places and what their health status was.

The criticism didn’t spare union representatives on SUVA’s management board. These union delegates had failed to pursue ‘an independent policy’ in asbestos matters. They protected ‘the confidentiality of the discussions, thus missing the opportunity’ to educate workers on these matters and to exert pressure on SUVA.

The SAP book and the discussion that followed on issues of protecting workers and ecology did not lack for reactions on different fronts: Barely two years later Werner Catrina’s *Eternit-Report* appeared with a different point of view from that of the SAP collective. In lengthy and to some degree critical passages and interviews it was primarily the various supporters of the Schmidheiny family that were included. The author devoted a lot of space to the young Stephan Schmidheiny, whom he presents as a pioneer in the industry’s exit from asbestos. The young entrepreneur, we are told, noted after a trip to Sweden, where a ban was already under discussion, that there was nothing to be done to avoid getting out of asbestos. He had already decided on leaving the industry as early as 1978 after he was elected to the head of the internationally active family business and had promoted getting out of asbestos against his father’s wishes and that of many others in the asbestos industry. Catrina quotes the young Schmidheiny as saying, ‘To be frank, the very worst part was the struggle within my own family and business, beginning with my father and then with the managers in factories abroad. My father never put obstacles in my way. He just couldn’t believe it; he just had a fundamentally different point of view. He was convinced that people exaggerated the asbestos issue as they do with other things and that the issue would go away. Let sleeping dogs lie was the slogan of the opponents among my colleagues for years. I always said: Don’t you hear them barking? They aren’t going to sleep much longer.’

But the unions were also eager to reply to criticism of the SAP authors’ collective. They formed a work group under the leadership of the Swiss Trade Union Association (SGB), which pursued, along with other matters, an anti-asbestos campaign and they planned to

produce a brochure. The work group of the committee ‘Health and Humanising Work’ was led by Vasco Pedrina, later co-president of the Trade Union Association and of Unia. The campaign was the very first salvo of activism by the Ticino native in the unions.

Represented in the Work Group was one member each from the PTT Union; the Federation of Building and Wood Workers (GBH); the Federation for Textiles, Chemicals, and Paper (GTCP); the Swiss Railway Union (SEV); and the Swiss Metal and Clock Workers Union (SMUV) as well as the Swiss Trade Union (SGB). Moreover, the working group got opinions from various ‘experts’. This included some cantonal occupational health inspectors and one representative each from SUVA and the Working Committee for Asbestos, the worrisome asbestos lobby, as well as François Iselin and Professor M. Guillemin from the Institute for Occupational Health at the University of Lausanne. Apparently the Working Committee for Asbestos had been able to sell itself so well that it was able to present its arguments even to the union Work Group.

The Work Group came out with its brochure entitled *Asbest und Gesundheit am Arbeitsplatz. Vorschläge des Gewerkschaftsbundes (Asbestos and Health on the Job. Suggestions from the Federation of Trade Union Association)*. For the first time mention was made of estimates for the number of anticipated victims in Switzerland, calculated on the basis of the amount of asbestos that had been fabricated: According to the estimates, ‘one hundred to 250 new asbestos-related cancer cases could occur annually between 1980 and 2000’. And, the experts for the unions wrote that cancer cases would continue to increase until 2030.

This estimate, which is probably quite realistic, exceeded the number of victims acknowledged at the time by SUVA by a huge margin. The agency had only acknowledged eighty-one asbestos-related cancer cases by 1983. The unions had, however, a plausible explanation: ‘SUVA investigates and acknowledges only individual cases that can be determined with ‘overwhelming probability’ to be caused by occupational exposure to asbestos. Since it acknowledges lung cancer as caused by asbestos only if the patient is suffering another asbestos illness at the same time, many asbestos-related cancer cases can be overlooked even in well-monitored factories.’ Moreover, there are those trades and factories where asbestos is handled only sporadically, which do not undergo SUVA’s preventive screening; and the number of these workers exceeds the number in those factories under SUVA’s oversight by a wide margin. According to the unions’ calculations, approximately 550,000 tonnes of asbestos were handled in production and sold in Switzerland between 1940 and 1985. ‘Tens of thousands of people have been contaminated with at least two to three years of increased asbestos dust concentrations.’ But SUVA has overseen exactly ‘2,860 people exposed to asbestos in eighty-six factories’ in 1983.

The unions concluded their brochure with a long list of demands. The main points were:

- Ban on fabrication, sale, and import of products containing asbestos. Along with the ban, a ‘relatively short transition period’ should be instituted for substituting asbestos-free products for those containing asbestos.
- Demand for SUVA to use a ‘more flexible policy in acknowledging occupational cancer.’
- Labels on asbestos products with the appropriate warnings.
- Implementation and publication of an inventory of all buildings that were built with materials containing asbestos.
- An inventory of all buildings with sprayed-on asbestos and ‘demolition of the most serious cases within a short time. Abatement of all other buildings within a reasonable time.’ This demolition and abatement should be performed only by licensed companies.
- Demand for SUVA to produce guidances for demolition of asbestos cement roofs and façades.

Sad but true: Apart from the ban a good twenty-two years after the brochure appeared many of the unions' demands made then remain unaddressed today.

Shortly after the brochure was published, the unions increased their efforts in their fight against asbestos. Since BUWAL still continued to refuse to publish its list of buildings, they wrote directly to the three main Swiss companies that made sprayed-on asbestos, asking them to release the list for publication. They also made an inquiry to BUWAL about decontamination in buildings with the sprayed-on asbestos. They demanded a licensure requirement for abatement companies and specialised training for the personnel of these companies. They demanded that SUVA start working on introducing a requirement to give notice for all factories using asbestos. Only then could the agency have oversight over these companies everywhere and preventively screen all endangered workers.

SUVA, however, rejected the unions' demands in a letter dated July 9, 1985: It considered this as 'not opportune' and also concluded on the basis of a number of considerations not to request a notice requirement for abatement companies from the Office of the Interior (EDI). The agency replied in a letter to the Federation of Building and Wood Workers, 'Besides abatement work, there are many jobs in buildings with sprayed-on asbestos insulation (e.g., installing water, gas, and steam pipes, lighting fixtures, working with movable walls, etc.), which also can have a deleterious effect on health if they are not done with proper care and the necessary protective measures. They would therefore de facto have to extend the notice requirement for sprayed-on isolation to all tasks that produced dust.' The limits on jobs requiring notice would thus be 'very difficult to draw and not always unambiguous for the subject companies.' Even without the notice requirement, SUVA could cover the asbestos businesses 'through descriptions of the companies and visits or inquiries to the owners or employers'. SUVA was also convinced that it could educate owners and employers best by extensive outreach, without needlessly 'spreading anxiety'.

This tack of SUVA sounds strange: Here the Swiss Accident Insurance Fund is rejecting the introduction of a notice requirement at the time when an asbestos ban has long since gone into effect in other countries. It seems plausible to ask if SUVA really has prioritised employee protection in this context. Even today for an approved claim of an occupational disease, for example an asbestos-related lung cancer (without accompanying asbestosis) the agency requires that the employee must submit evidence that he worked in an asbestos business and was exposed to 'a cumulative asbestos exposure of at least twenty-five fibre years'. This is impossible if no measurements have been taken because the jobs weren't even registered.

The unions also tried to talk with Eternit management. On June 28, 1985, the head of Eternit at the time received a union delegation in the factory at Payerne. This was something completely new as the unions had had no previous access to the company; their own members either did not work in the two company factories or in the distribution centre. As can be seen in the minutes of the meetings, the SGB delegation in particular insisted on two points: Accelerating the deadline for substituting asbestos-free products for asbestos products in construction – the termination date for using asbestos products had been set for 1990 by Eternit – and diversification in infrastructure products, where substituting asbestos-free pipes for asbestos-containing pipes had been set for a later date for technical reasons. If no quick solution for pipe material substitutes could be found, the unions suggested that the company no longer use fibre cement in these products in the future but use other materials. After all, substitute products already existed on the international market.

The unions noted in the meeting's minutes that Eternit didn't take up these suggestions; rather it 'insisted more emphatically on its position'. And that was, 'No legal steps, but instead the promise of a complete substitution by 1990, but exclusively for construction.'

That makes one prick up his ears. Eternit Switzerland presented the same exit plan to these unions according to which the fibre cement industry was already operating under the 'voluntary industry agreement' four years earlier in Germany.

The introduction of the asbestos ban in Switzerland, which then did go into effect in 1990 for construction and in 1994 for infrastructure, thus went exactly according to Eternit's tactical plan, which was the plan of the largest asbestos producer in Switzerland. This largest asbestos producer had already started using substitutions for certain products exactly as in Germany as early as the beginning of the 1980s, according to its own statements. This lets us conclude that the industry's influence on the political process was just as successful in Switzerland as in Germany. Here too the timing of the ban was adjusted to suit the needs of the industry.

Chapter 5

Justice for the victims of asbestos

The catastrophe is not under control by a long shot

Another three thousand deaths in Switzerland

Ever since the beginning of the industrial application of asbestos in Switzerland, hundreds of thousands of people have come into contact with asbestos on the job. According to estimates⁸⁸ of a group of experts in the Swiss Federation of Trade Unions, between 1945 and 1985 in Switzerland alone there are:

- approximately ten thousand workers exposed to high concentrations of asbestos fine dust (daily and over several years); and
- approximately a hundred thousand workers are exposed to asbestos fine dust intermittently but still in substantial amounts (not daily, but repeatedly).

In the 1970s Switzerland processed as much asbestos per person as in the United States: that is, approximately three kilograms per person per year. Switzerland does not break down the amounts of asbestos processed by each industry. According to its own claims, however, Eternit AG used about ninety percent of the asbestos imported to manufacture their products.

88. Working Group of the SGB, Asbest und Gesundheit am Arbeitsplatz, 1985.

In other industrial countries asbestos was used in the 1980s primarily as follows:

- 75% asbestos cement;
- 4% asbestos cardboard;
- 1% sprayed-on asbestos; and
- 20% for around three thousand asbestos products of all kinds.

The names of the companies, where thousands of potential victims worked, are kept under lock and key by the Swiss authorities under the pretext of protecting the confidentiality of data. Essentially, besides the companies already mentioned, these are the companies that sold sprayed-on asbestos; but there are also the SBB and other Swiss railway workshops, countless remediation companies, body shops, auto mechanic shops, roofing companies, construction companies, electricians, and many small to medium-sized companies in all sorts of industries.

Because no complete register is maintained in Switzerland, it's impossible to say exactly how many people have fallen ill and died of asbestos-related illnesses. For this question only SUVA's official numbers are known. Officially around seventy people die every year of asbestos-related diseases, and the authorities estimate that over the next fifteen to twenty years there will be another three thousand deaths. At the present time there are five thousand people who have been exposed to asbestos under medical observation by SUVA. By the middle of 2006, 1,635 people with an asbestos-related occupational disease had been registered in Switzerland, of which 750 were ill with virulently aggressive mesothelioma. In addition to these people, SUVA registers approximately seventy new cases of mesothelioma every year.

Charges were filed against four Swiss companies – Eternit, Lötschbergbahn (BLS), ABB, and the Paul-Scherrer-Institut – and there are a number of investigations. A lawsuit invoking the responsibility of management (*Verantwortlichkeitsklage*) has been filed against SUVA itself. Now the lawyers for the asbestos victims are trying to fight the statute of limitations trap. Even though cancer has a long latency period, the general rule is a statute of limitations period of ten years. But for most victims there is nothing to be done through the courts because the companies that once processed asbestos no longer exist. Moreover, Member of the Federal Council Christoph Blocher has blocked the urgently needed revision of corporate law, which would have at least promised future victims a more equitable legal system. Even so, Swiss asbestos victims have not abandoned their struggle for justice.

Interview**with Massimo Aliotta**

President of the Swiss German Asbestos Victims Association

'Blocher shelved the revised liability statute'

Herr Aliotta, you are the co-founder and president of the Association for Victims of Asbestos and Their Families Switzerland. What are the aims of this association?

M.A. – Our association offers primarily legal and medical information in connection with asbestos-related occupational diseases. We have a network of recommended lawyers who specialise in the field of social assistance and liability law. We also provide our members with names of medical specialists on request. And our legal services can provide members a first consultation with a qualified lawyer at no cost. Our website (<http://www.asbestopfer.ch>) has extensive information on asbestos issues.

What is the mood among asbestos victims in Switzerland?

It varies a lot. Many victims are happy that our association is there. When we founded it five years ago, media attention to asbestos issues wasn't as prominent as it is today. Also thanks to our activities and our qualified lawyers, many asbestos victims have been informed of their legal rights. Victims are especially disappointed that there is currently no political majority in Switzerland in favour of establishing a national fund for asbestos victims. Just recently the National Council rejected proposed legislation again, and the Federal Council too sees no need for this.

Are there countries that have established a fund for asbestos victims?

Primarily France and Holland are the countries in the forefront in Europe for promising compensation to asbestos victims. France now has good case law on these issues. Moreover, France has also established a fund for asbestos victims. So has Holland. There the asbestos victims receive compensation from the state if the companies cannot be held legally liable.

To date, no companies that handled asbestos in Switzerland have been put on trial despite so many victims although there have been trials in neighbouring countries. How do you explain this?

That's not entirely true. A civil lawsuit is currently underway against ABB/Alstom. That this lawsuit is the only civil trial to date has to do with the fact that a very strict policy prevails in Switzerland based on the Code of Obligations (Law of Contracts) and based on the opinion of the Swiss Supreme Court on the statute of limitations. In a precedent-setting opinion, the Swiss Supreme Court said that the absolute ten-year limit under Article 60 of

the Code of Obligations begins at the latest when the employee relationship terminates. Thus many claims of employees against their former employers are already terminated. This Supreme Court opinion has been sharply criticised in law reviews. But the opinion from the highest court still stands to this day since there has been no opinion to reverse. Many employees decide not to begin a lawsuit against their former employers for this reason. Moreover, you generally have to prove that the employer was grossly negligent in failing to comply with work rules. This high legal hurdle derives from Article 44 of the workers' compensation law, which has, however, since been rescinded. It's also just very difficult to prove what happened twenty, thirty, or forty years ago. Many of these companies that handled asbestos back then no longer exist. And this generally means the legal entity that could be sued also doesn't exist. Today only a few of these former asbestos companies still exist. For example ABB/Alstom or Eternit.

Can anything be done to change the statute of limitations period in Switzerland?

Of course the statute of limitations period under Article 60 of the Code of Obligations could be changed by political means under the legislative process. National Council Member Filippo Leutenegger filed a parliamentary initiative on this matter. The National Council Legal Commission took up the suggestion and moved that the Federal Council considerably extend the statute of limitations period. Given the make-up of the parliamentary majority it can be assumed that this political initiative will fail. Therefore there must be an increased effort to change the legal decision of the Supreme Court. What must be accomplished is that the civil statute of limitations period only begins to run when the asbestos-related occupational disease appears, and therefore when financial damages arise for the asbestos victim. Changing the statute of limitations period alone won't help the asbestos victim because many companies against which a civil claim could be asserted simply no longer exist.

And would the legal problem for asbestos victims be solved with a revised corporate liability law?

Comprehensive reports by experts have been published favouring a change in the liability law in Switzerland to benefit people who have suffered damages. Let me emphasise that the Federal Council has made efforts to revise the liability law. The group of experts led by Professor Pierre Widmer even recommended in connection with this revision of the liability law that a thirty-year statute of limitations period be enacted in the Code of Obligations instead of the current ten-year period. Federal Council Member Christoph Blocher shelved the revision to the liability law soon after he took office, probably under pressure from the insurance industry. If the law had been changed in the manner recommended by the experts' group, there would have been a real chance for thousands of asbestos victims to be compensated.

What is the legal situation in other European countries? Can people there proceed against companies that once worked with asbestos?

Definitive opinions have been handed down principally in Holland and France against asbestos companies. In my view these opinions should be accepted by courts in other countries. In Holland, for example, the statute of limitations period has been changed in favour of the asbestos victims. In Holland as in Switzerland, the period was short. Now,

thanks to court rulings, the period has been extended to thirty years. Also until recently there was a very interesting court opinion handed down in which even those asbestos victims are compensated who had not worked directly at a company that processed asbestos, but had become ill because they came into contact with asbestos dust from garbage dumps nearby. In Paris there is a law firm that has specialised in asbestos lawsuits and has had great success. So not only has Eternit AG in France been found liable but also Michelin and Alstom. These are precedent-setting court judgments against the asbestos manufacturing industry. In Great Britain there are also a number of lawsuits against asbestos manufacturers underway. Case law is in flux. But it is easier in these countries than in Switzerland to succeed with a civil claim against employers.

How big are the awards in these countries?

The awards vary a lot in their amounts and can't be directly compared because of the differences in the legal systems. In Holland the victims receive at least 16,000 euros from the state if the victims received nothing from their former employers. In France, if there is a judgment, victims receive between 15,000 and 200,000 euros, depending on their clinical situation, from their former employers. In Italy up to a million euros can be awarded, depending on the clinical situation. In the United States, 'punitive damages', which are intended to penalise the defendant, may be awarded in addition to compensatory damages. American victims therefore receive far higher awards than victims in Europe.

Over a year ago you filed a criminal complaint against the Swiss Eternit. The father of your client died of asbestos cancer. What's happened since in this case?

The law court hearing the case in the Canton of Glarus threw out the criminal complaint because of the statute of limitations period. I've appealed this order of dismissal in the Glarus cantonal Court Presidium. Recently statements of all the parties involved have been filed with the Presidium. Independent of the Presidium's decision, I am assuming that the question of the statute of limitations period must be decided by the highest court before the criminal issue can be decided.

Even at ABB and BLS, those who were held responsible positions are currently being investigated. Will charges be filed?

That's difficult to say. But it is certain that criminal investigations are still pending against those responsible in these companies. As with all criminal investigations the facts, which in part happened years ago, are complicated. The judges investigating the matter are really in an unenviable position. I do hope that they will refer all questions they find in these cases to the courts with jurisdiction for clarification. We need judgments in criminal law to clarify a number of pending questions about the obligations of companies that manufacture asbestos.

Although hundreds of plaintiffs were awarded damages in the United States from ABB, is there any chance at all for Swiss victims? What should victims make of this?

The main problem in Switzerland is, as has been mentioned, the statute of limitations period for these civil claims. I believe of course it would be desirable if the large companies

that once manufactured asbestos in Switzerland would voluntarily create a fund for asbestos victims. Eternit AG in Niederurnen has already taken a first step and has established a foundation. They did this, however, only after our association filed a criminal complaint against their managers. It's a shame that you have to begin these criminal proceedings in Switzerland before the companies still in existence today establish a fund as a gesture towards asbestos victims.

From the asbestos companies that once did business in Switzerland the claim is that there is no further need for services to help asbestos victims because these 'cases' are covered by SUVA. The asbestos victims, on the other hand, complain that asbestos-related diseases, especially lung cancer, are very rarely accepted as an occupational disease. What has been your experience as an lawyer for asbestos victims?

It's true that it's especially difficult in Switzerland to have lung cancer recognised as an asbestos-related disease. Since lung cancer can be caused by something other than asbestos, the criteria required for recognition are stricter than, say, with mesothelioma. This is the reason that people who belong to the same risk group are treated unequally, and it can even go so far that former co-workers who started out the same are treated differently by SUVA according to the type of cancer. The additional criteria required by SUVA for lung cancer such as evidence of a certain amount of asbestos fibre accumulation on the job is frequently impossible to furnish because there were no asbestos fibre measurements taken at the jobsite for example. Therefore, a claim of an occupational disease has often been rejected even when years of exposure to asbestos on the job could be proved. I am in several legal discussions with SUVA at present. It will ultimately be the Supreme Court that will finally have to clarify the admissibility of the required criteria for accepting lung cancer claims. Don't forget too that smoking greatly increases the risk of getting lung cancer if one has been exposed to asbestos. This effect is asbestos-related and shouldn't be held against the claimant. Although most difficulties are in getting lung cancer accepted as an occupational disease, it also should be noted that it's not always easy to get other asbestos-related diseases accepted by SUVA as related to work. In the cases of pleural mesothelioma SUVA's policy certainly proves to be easier. Even here evidence of asbestos exposure on the job doesn't always suffice.

The question of what's called an integrity payment, which SUVA pays, would fill a book. What is this exactly and who is eligible to receive it?

Asbestos victims are eligible to receive an integrity payment if, as a result of an occupational illness, they are seriously and continuously limited in their physical and mental integrity. If the conditions required by the law are met, an integrity payment for a case of pleural mesothelioma is capped at eighty percent of the insured wage. This means that the victim receives a sum for damages of no more than 85,000 francs.

Recently the insurance court of the Canton of Aargau handed down a very satisfying judgment establishing the legal principle that SUVA had to make an integrity payment for diminished mental integrity even with pleural mesothelioma when the asbestos victim develops psychological complaints. With the Aargau victim it could be proven that he also suffered from serious psychological disorders, which moved the court to award an additional integrity payment of twenty percent. The total integrity payment may not be more than one hundred percent of the insured wage. In such a case SUVA pays up to 106,000 francs.

How long must the patient live after initial diagnosis in order to receive the integrity payment?

The Supreme Court recently handed down a new opinion that sets the precedent that at least a one-year strictly palliative treatment, that is, one that only reduces pain, is necessary before an integrity payment can be awarded for a case of pleural mesothelioma so that continuous and serious damage can be established. This opinion is unpersuasive since it has been medically shown that practically all cases of pleural mesothelioma lead to death and there is no sense in differentiating between curative and palliative treatment. Further opinions therefore must be sought from the Supreme Court. Since July 2005 SUVA has had a policy that makes it possible for asbestos victims to receive what amounts to an advance as a portion of their integrity payment after six months. In this way some victims could receive at least a partial amount that they wouldn't otherwise receive based on the Supreme Court opinion.

The Supreme Court is stricter than SUVA's policy?

In this case, yes. Because the Supreme Court is unfortunately differentiating between curative and palliative treatment. That means between a treatment whose purpose is to cure and one that aims only to mitigate pain until the patient dies. The Supreme Court says that a purely palliative treatment must be given for at least a year before death before a claim to an integrity payment can even be made. This opinion of the Court is highly insulting. It means that many victims, in order to assert a claim to an integrity payment, are forced to ask themselves whether they should forgo curative measures right from the beginning and choose a palliative course right from the start. Especially as a curative treatment doesn't guarantee a cure.

Can the members of the victim's family file for an integrity payment even after the person has died?

In principle, the distribution of an integrity payment must go directly to the asbestos victim himself. If the claim to an integrity payment arises before the patient dies, the heirs can assert the claim. SUVA is required to pay the amount to the heirs because an integrity payment is basically inheritable.

What costs does SUVA have to assume for an accepted claim concerning an asbestos-related illness?

In this event, SUVA must assume the legally required insurance payments. That is, of course, the payment of all medical treatment costs, including all medical services and necessary surgery. Also, for people still working, a daily allowance is paid. Unfortunately, SUVA doesn't have to assume the costs of Spitex services (cantonal and municipal home health care and home help); this falls hard on patients with pleural mesothelioma who are particularly in need of help. In many cases Spitex services are taken care of through health insurance for patients needing care, but these costs have recently been assumed by SUVA.

Under what circumstances is there a pension for patients or for their families?

For the patients themselves there is a pension that SUVA pays if no significant improvement can be expected anymore from medical treatment. This is always the case for patients

with pleural mesothelioma after a certain point. That's why SUVA has increasingly begun to award a pension in these cases. In addition there is a disability pension, of course, as well as a pension from the occupation benefits fund. Families also have claims to pension payments from SUVA and from the disability insurance fund. The payments related to asbestos-related occupational diseases distributed to the families constitute the highest expense items for SUVA and the disability insurance fund.

What happens to the victims who didn't work for a company that processed asbestos?

Unfortunately the victim who never worked in a company that processed asbestos has practically no rights in Switzerland. At best they can try to file a lawsuit for liability against a company that still exists based on non-contractual liability under Article 41 of the Administrative Law. Otherwise they have absolutely no basis for a claim with any insurance program. For that very reason it is all the more urgent to establish a national fund for these victims. I hope that the former asbestos companies and the political authorities in Bern will come up with a solution for the victims.

Three Swiss case studies: Three Swiss morality plays

The case of the Paul-Scherrer-Institute: Lukas Klauser's nightmare

Even today, a good seventeen years after asbestos was officially banned in Switzerland, the carcinogenic material continues to present great danger, particularly for employees of abatement companies and garbage dumps, but also for roofers, construction workers, and even for the do-it-yourselfer. Workers unaware of the dangers frequently stumble across the deadly stuff and have to work in contaminated areas for weeks or even months before the necessary measures to remove asbestos safely can be implemented. Ever since workers stumbled across the carcinogenic fibre in the Zurich shopping temple of the Globus Mall some years ago, which was considered to have been decontaminated, it's becoming more and more evident: No one really knows which buildings are still contaminated with asbestos in Switzerland and which have been decontaminated. At first they said that only the entrance area of the posh Migro subsidiary Globus was contaminated with asbestos. But then a few days later it leaked to the public that the whole façade still contained asbestos. The first asbestos abatement program had been stopped in 1993 because Globus hadn't wanted to spoil the Christmas shopping season. What happened at the Sankt Gallen city hall, in the Werd Highrise in Zurich, and in the Sulzer Highrise in Winterthur has also provided negative headlines over the past few years. These buildings represent only the tip of the iceberg. It shows that when it comes to asbestos urgent action is needed today to protect both employees and residents in Switzerland.

Probably the best known case is the story of the decontamination of a reactor at the Paul-Scherrer-Institute (PSI) in Villigen in the Aargau: Not in their worst nightmares did Lukas Klauser and Philip Lechner ever think their work at the famous federal research facility would end in this way. 'We feel we were betrayed twice. Our health is probably down the drain, and we're out of a job,' the two abatement workers told the Swiss press in the spring of 2006.

But let's begin at the beginning. Phillip Lechner was hired as a mechanic in March 2005 at PSI, a federal research institute. His co-worker, Lukas Klauser, was hired only at

the end of September, joining a team of four to rebuild an experimental reactor. The team's work consisted in breaking up the deactivated atomic reactor in PSI's Diorit Reactor Hall 58. For years the reactor had been undergoing renovations with interruptions. Klauser and Lechner had been hired from a temp agency for about a year.

'As we worked we were always coming across pipes and conduits wrapped in insulating strips. We had to cut them with a circular saw and chop them up so they could ultimately be disposed of with the rest of the rubble,' Klauser says. 'And in October when we got a new co-worker on our team, he was suspicious that it might be asbestos insulation.' A suspicion that even Klauser and Lechner shared. Both immediately decided to talk to their supervisor so that the required safety measures could be taken.

On November 2, 2005, Lukas Klauser talked to his immediate supervisor for the first time. 'I told him that when we were stripping the pipes we were very likely dealing with asbestos and that protective measures should be taken right away.' But his boss didn't want to hear anything about protective measures. That wasn't asbestos at all he was told and was sent back to work. So for days Klauser took apart more pipes and conduits that were insulated with asbestos. But his suspicions wouldn't go away. Again he went to his boss and asked him if he could please make sure they weren't working with toxic material. Klauser's boss couldn't be made to change his mind. 'He just told me I'd better get back to work.'

Just two weeks later, on the morning of November 14, 2005, Klauser and Lechner were finally fed up. After they had waited in vain for an answer from the higher ups, Klauser turned to another supervisor. And his nightmare became real because this supervisor confirmed his suspicions. 'He told me, 'You're right, Herr Klauser, it really is asbestos.' He was very calm and reassuring,' Klauser recalls. This asbestos, he was told, wasn't dangerous. Just sprinkle water on the insulation when removing it. Also Klauser could wear those protective masks and gloves that you usually wear when grinding and sharpening things. 'I thought I wasn't hearing right,' the young abatement worker said. He protested vigorously and demanded they take the required protection measures. But the boss threatened him: If SUVA heard about this, the construction site would be shut down. When Klauser wouldn't back down, things got worse: His boss actually told him that if the protection measures didn't suit him, he could leave!

But the workers wouldn't give up. On the very same day Klauser phoned his mother to ask her what to do. She called the Swiss Federal Laboratories for Materials Testing and Research (Empa) and the union Unia to ask about the danger to health. Both advised her to act at once. Klauser's uncle immediately contacted the public relations officer at PSI and demanded that they put the required safety measures into place at once.

Suddenly everything began to happen fast: On the same afternoon of November 14th, the entire staff was called to a meeting to inform them that the construction site for extracting samples was temporarily closed. Further action would depend on the measurement results.

The announcement came as a complete shock to all the employees. They were anxious about their health and their jobs. Klauser himself even had to swallow insults from his boss. 'He said quite seriously it was my fault that we didn't have work anymore. I thought I was in the wrong film,' the twenty-three-year-old said.

The next day the Paul-Scherrer-Institute hired an outside company to measure the asbestos levels. The measurements taken in the work hall, now shut down, showed that the threshold levels hadn't been exceeded. But Marcel Bosonnet, the lawyer for the two decontamination workers, objected to the method of measurement as not being in compliance with SUVA regulations. The measurements had to be taken again.

The very next day on November 15, 2005, Klauser got a phone call from the temp agency that had sent him to PSI. Even it blamed him and his co-worker Lechner for shutting down the construction site. Only a few days later both of them got a pink slip in the mail.

‘Due to these extraordinary circumstances we find ourselves compelled to terminate immediately your employment under your existing contract.’

But the nightmare of the two temp workers wasn’t over yet by a long shot. For the second set of measurements taken revealed that the abatement workers had been temporarily exposed to very high levels of asbestos. As the TV news magazine *10vor10 (Ten Before Ten)* revealed, the second set of measurements showed up to thirty million fibres per cubic metre of air.⁸⁹ The legal limit is ten thousand fibres in the workplace; for the general population the highest allowed threshold is seven hundred fibres per cubic metre of air.⁹⁰

Klauser and Lechner, who now are worried about their health, have filed a criminal complaint against the federal research institute. Their lawyer, Marcel Bosonnet, displays his consternation to the press about how the danger of asbestos is played down in Switzerland even now. For example, Ralph Eichler, the director of PSI at the time, wrote him a letter, saying, ‘The body metabolises asbestos.’ PSI also had contracted out the second round of measurements to determine the asbestos levels that were not in compliance with SUVA regulations. SUVA itself did not object to this measurement technique. Only when the lawyer insisted, were new measurements taken.

When the results of the independent review were presented in April 2006, which documented that the levels had been exceeded, the Swiss research institute took a public position on the matter: ‘In taking apart the experimental reactor Diorit some of the workers were briefly exposed to an elevated level of asbestos [...]. The management of the Paul-Scherrer-Institute very much regrets that the workers rebuilding the reactor were exposed to this risk and they are understandably concerned. Those who were exposed have been informed of the asbestos contamination and offered all occupational medical care. To avoid this happening again measures for our personnel have been taken.’ In the same statement, Institute Director Ralph Eichler expressed his personal regrets: ‘I am sorry. Those affected deserve to be recognised. Their actions prevented greater harm.’

Since Klauser and Lechner exposed the matter, PSI has stated that it ‘has introduced asbestos protection measures’ for the rest of the work on rebuilding the reactor. Also periodic measurements of the air in the room where the work takes place have been introduced. Moreover, a company that specialises in asbestos removal sees that that the material is removed and disposed of safely.

Even SUVA commented on the PSI affair and the criticisms of the victims’ lawyer. In its statement, SUVA referred to the fact that up until now Switzerland lacked a legal basis for regulating a general obligation to check for asbestos before remodelling, updating, or rebuilding projects. Since January 1, 2006, there has been a requirement in the new construction code to provide details just for demolition and rebuilding projects. ‘The way the law is now, incidents involving asbestos at construction sites can happen again, which we most definitely regret,’ the Swiss Accident Insurance Fund proclaimed. Therefore SUVA issued a request to the Federal Council through the Swiss Coordination Commission for Occupational Safety (EKAS) in which, among other things, it requested the authority to investigate for asbestos.

89. News segment, 11 April 2006.

90. Quotation from the report by Basler & Hofmann, Engineers and Planners, Zurich, who were hired to measure the asbestos at PSI: ‘In rebuilding the experimental reactor Diorit, asbestos fibres were unintentionally and uncontrollably released. The resulting asbestos fibre concentration in the air in the room temporarily exceeded the threshold levels set by SUVA for asbestos concentration in the workplace. The estimate of actual contamination of the construction workers takes into account the contact time as well as the levels of concentration. Based on unfavourable assumptions, the resulting contamination is 0.14 fibre years for the most exposed workers, ranging between 0.03 and 0.27 fibre years.’

The story of the two temp workers who had the courage to expose the problems at the Swiss research facility and were kicked out for doing so caused a media uproar in Switzerland: In the fall of 2006 Lukas Klauser and Philip Lechner won the prize 'Prix Courage' awarded by the newspaper, *Beobachter*, worth 25,000 francs for their courage.

The case of the Sulzer highrise: Nobody's fault

In May of 2005, workers from a demolition company stumbled across asbestos when they were remodelling the Sulzer Highrise in Winterthur, but authorities were only called in months later. The demolition workers thought that the partitions they were tearing down were plaster. So they broke them up with a mini power shovel and finally ground the pieces up with a circular saw to transport the debris out of the building using the lift. How many partitions in the building actually contained asbestos and how many weeks the thirteen affected construction workers had to work in the contaminated rooms on the construction site have never been determined. Winterthur's permit inspector initially showed great consternation about the case. Although asbestos must be reported when found, the building's owners only informed the authorities in September – and this only after the Winterthur newspaper *Landbote* had made the scandal public. But when the case continued to be the source of headlines, the permit inspector distanced himself from his earlier statements.

How it even could come to such a pass in the Sulzer Highrise isn't clear. All the parties involved tried to slip away from taking any responsibility. When someone mentioned that the partitions contained asbestos, the job was immediately stopped and a specialist company was hired, so it was said in a statement.

The owner, Wintower AG, pointed the finger at Sulzer, the former owner. When the Winterthur real estate company bought the highrise from Sulzer, the contract warranted that there was no asbestos. But then Sulzer denied any blame at all: The building had been decontaminated at a cost of a seven-figure sum and had been stricken from the list of contaminated sites at the cantonal building authority. In this first abatement work the particularly dangerous sprayed-on asbestos had been removed.

But apparently the decontamination was not finished because during another decontamination project, which was required after the discovery made in May 2005, there were still over another one hundred tonnes of asbestos material found in the building.

The parties involved also said that the affected construction workers had never been exposed to serious danger. Only 1,700 asbestos fibres per cubic metre of air had been measured in the building. No danger? That's still almost double the emission guidelines set by BUWAL: Measures to protect the general population most definitely have to be taken above 1,000 fibres per cubic metre of air. But the authorities played down the case by saying the emission guidelines only applied to the general population; on the job what is called the maximum workplace concentration known as Threshold Limit Values (TLV) for employees is 10,000 fibres per cubic metre of air.

This explanation makes absolutely no sense to the pulmonary physician Karl Klingler at the Hirslanden Clinic in Zurich: 'Asbestos is carcinogenic, every inhaled fibre is one too many, that's why the law imposes the duty to mitigate.' He went on to say that every employer must protect his employees and ensure that, if possible, they are exposed to no asbestos danger at all. Everything else is a macabre game with death.

Even the Winterthur Unia secretary Benno Krüsi was angry about the matter: What the owners did was a text-book example of the lack of seriousness with which construction firms treated health protections for their employees.

The case of Mund: Alarm in the house of God

The saffron-growing village of Mund lies above Brig on a sunny terrace with a marvellous view of the Valais Alps. It is the only place in Switzerland where saffron is still grown today as it has traditionally been for hundreds of years. The church still plays a large role in the life of the small mountain village. But it was just this church that suddenly became a big problem. Analyses carried out in 2003 by the Institute for Occupational Medicine in Lausanne showed that the church had to be 'decontaminated immediately.' The cement corrugated panel roof from the 1960s had begun to leak and the water seeping in was dissolving the layer of sprayed-on asbestos in the roof over the nave. The asbestos fibres released were threatening churchgoers' health. The expense of abating the asbestos: About two million francs. But the parish didn't have that kind of money.

The tragic story of the Sankt-Jakobus Church is well documented. It was built in 1721. This house of God had more or less survived two earthquakes. And now only the original church tower and the Baroque high altar still stand today. The nave damaged by the earthquake was replaced by a cheap new nave in 1962. The dangerous sprayed-on asbestos was chosen at the time for 'acoustical reasons' so that the organ would sound better. After only a few years the first serious water damage appeared. This caused the carcinogenic asbestos to fray over time. 'It can happen, especially when the church is full in the winter, that the number of asbestos fibres in the air is elevated,' said Charly Schnydrig from the church council's construction committee when we visited in February 2005. A lot of people and the special air heating system caused the air to circulate rapidly and that loosened more asbestos particles from the ceiling.

After they heard from Lausanne, the church council immediately set up a committee to obtain the financing needed to decontaminate the building. Without success. The village and the diocese declined to help. The village president Leo Albert launched a campaign for contributions on Christmas in 2004: 'The toxic asbestos threatens everybody who comes to church, from the child to be baptised to the grandmother. Help our little mountain village so we can enter our church again without the threat of danger.'

The call for contributions did in the end bring success. Church authorities had closed the church in the summer of 2006 for reasons of safety. Church services had to be held in the town convention hall. At last enough money was donated to finally begin asbestos abatement in February 2007.

The village of Mund felt abandoned all these years, left all alone with their asbestos problem. But the church here is by no means the only one with this problem. Other churches too were built or renovated with asbestos, not to mention all the other public and private buildings. Advocates for the village are therefore demanding 'a national fund for asbestos abatement and a register to list all the buildings where asbestos was used'. The federal government must finance this as must those companies that nicely lined their pockets until the mid-1990s thanks to the deadly dust.

Over the next few years buildings built during the 1970s building boom will need to be decontaminated. Experts estimate that asbestos abatement in Switzerland will take at least twenty years.

Epilogue

Asbestos ad Infinitum

Unfortunately asbestos is very much not relegated to an historical curiosity. One might actually believe that the horrifying number of victims in industrialised countries would be reason enough to exclude the deadly fibre from global commerce. But just the opposite is the case. Although substitute products have been on the market for years for all asbestos products, asbestos consumption has risen exponentially in many developing, transitional, and emerging countries. There, a sort of competitive advantage is to be had, resulting from asbestos bans in western countries. But it is also the result of cost: Asbestos is much cheaper than the substitutes! And in countries such as China, which has an enormous market for construction materials, considering the danger of this practical and inexpensive material is apparently a side issue or luxury.

Until now only twenty-three percent of the member states in the World Health Organisation (WHO) have an asbestos ban: In seventy-seven percent of the member countries, processing and mining asbestos are still allowed and are still very much active in thirty-six percent of WHO countries.

According to WHO, 125 million people worldwide are still being exposed to asbestos in their workplaces. The price to be paid in human lives is enormous: WHO estimates that even in the future between ninety thousand and a hundred thousand people will die every year of an asbestos-related disease. Today most of these men and women are working in an Asian country or in Russia. Both mining (as we saw in Chapter I) and use of asbestos products are becoming increasingly concentrated in this part of the world. According to the statistics published at the beginning of 2007, ninety percent of the countries in which asbestos use rose the most are in

Asia. In 2003 Asian countries used almost fifty percent of all asbestos mined: The largest customers were China (491,945 tonnes); India (199,033 tonnes); Vietnam (39,382 tonnes); and Indonesia (32,284 tonnes).⁹¹ Japan is the only Asian country that passed an asbestos ban after the deaths of thousands of victims were mourned. Starting in 2009 production will also cease in South Korea.

The blame for the asbestos tragedy in these countries falls not only on the unscrupulous companies that pretended there was safety when there wasn't, even though they knew better, but also on the large international organisations. These organisations let themselves be blinded by the propaganda of the asbestos multinational companies for years long after the first industrial countries had already issued an asbestos ban. The asbestos lobby is still using its old tricks in developing and emerging countries that they used here thirty or forty years ago to interfere in the political process to thwart a solution: There are still the in-house or subsidised studies from 'scientific' institutes close to the industry purporting to substantiate the harmlessness of chrysotile. At scientific symposia organised and controlled by asbestos companies pseudo-experts play down the dangers of white asbestos. Such a scientific symposium took place as recently as the summer of 2007 in Taipei, the capital of Taiwan – organised by the Canadian Chamber of Commerce.

In this way it's possible for national governments to still swallow the lie of 'controlled use' – risk-free use of asbestos. And the fairy tale of supposedly safe asbestos cement – which was spread by Swiss companies in its day – stubbornly continues to be propagated, costing more lives of unsuspecting victims by the hundreds of thousands in the foreseeable future. Asbestos cement, now as then, is the most widely distributed asbestos product.

The local 'unions' of asbestos cement workers play an inexplicable as well as dubious role in this next act of the asbestos tragedy. One example of this: When the World Health Organisation (WHO) and the International Labour Union (ILO) stepped up its support in 2006 for a worldwide campaign for an asbestos ban, the unions of asbestos cement works in Russia, White Russia, Azerbaijan, Kazakhstan, Kyrgyzstan, the Ukraine, and Tajikistan founded an umbrella organisation of asbestos cement workers called the Chrysotile International Alliance of Trade Unions.⁹² This organisation is supposed to protect asbestos cement companies from 'scientifically unfounded attacks' and stop imminent asbestos bans in many places, according to statements by the 'unions.' The umbrella organisation of asbestos cement workers recently wrote in a letter to the general director of WHO, Jacques Dunnigan, that the mounting demonisation of chrysotile is unfair and is based on 'scientific error'. The head office of the ILO received a similar letter. The sender here was the Canadian Chrysotile Institute, the mouthpiece of the Canadian asbestos lobby. The 'White Asbestos Institute' advocated against an asbestos ban as vigorously as 'unionists': In its letter, the Canadian asbestos lobby wrote that nowadays chrysotile is used in a responsible manner with rigorous safety measures.

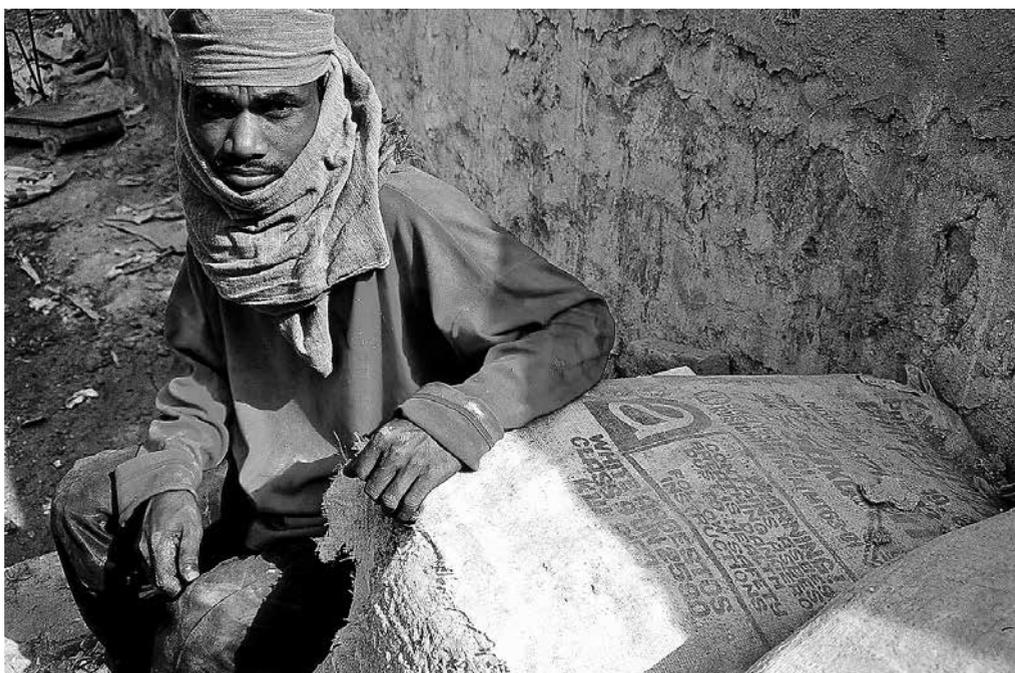
Pocket handkerchiefs as protection from asbestos

Even if 'controlled use' in industrial countries with the best possible occupational health safety measures isn't feasible, how is it supposed to function in a developing country? In many developing countries there are no established threshold limits for dangerous

91. Kazan-Allen L. (2007) Killing the future : asbestos use in Asia, London, IBAS, http://www.ibasecretariat.org/ktf_web_fin.pdf

92. Kazan-Allen L. (2006) Rotterdam Treaty killed by chrysotile, London, IBAS, http://ibasecretariat.org/lka_rott_meet_geneva_oct_06.php

substances, and where they do exist they are many times higher than in developed countries. It is also a fact that the asbestos multinationals, as we well know, influence what the threshold limits are and allow limits to be set that cannot be complied with anyway. Even today people are processing asbestos in most Asian countries without any protection at all: In China people working from home, mostly farmers and their wives, sort asbestos fibres according to length in their living rooms and then take what they've sorted back to the factory to be processed. Workers in the factory in India slit open asbestos sacks by hand with knives and pound the compacted fibres with a wooden mallet to break them up before they are mixed with cement. Also on many jobsites there are fans instead of suction systems; the only protection for hundreds of thousands of asbestos workers in developing counties are pocket handkerchiefs they tie around their mouth and nose to help against swallowing so much 'dust'.



Worker in an asbestos cement factory in India (photo: P. Madhavan)

China is one of the emerging nations whose economic boom in the last few years has made it the most significant consumer of asbestos. Although this country has been one of the five largest producers of raw asbestos for years, domestic asbestos has long been insufficient to meet demand. Today the most populous country in the world imports 150 times more asbestos than it did just a few years ago. According to the umbrella organisation for a worldwide ban on asbestos (IBAS, International Ban Asbestos Secretariat), which is headquartered in London, consumption in China between the years 2000 and 2004 has risen more than forty percent. Approximately twenty-four thousand miners extract a share of the total production in seventeen state-run mines and in 102 mines run as workers' collectives. The lion's share of this fatal material is processed into asbestos cement by over forty-six thousand workers in 1,200 plants. There are few data on Chinese asbestos victims. Statistics

have been kept on mesothelioma and asbestos-related lung cancer only since 1990. The only thing known is that at the end of 2003 approximately 7,900 asbestos cases were registered, 923 of which were fatal.

Table 8 The ten largest asbestos plants in China

Name of company	Location
Hangcheng Friction Materials (Friction materials for brakes, for example)	Hangzhou
Liuhe Asbestos Products	Heilongjiang
Changchun Asbestos Products	Changchun
Beijing Brake & Sealing Materials	Beijing
Nanjing Friction Materials	Nanjing
Hubei Friction & Sealing Materials (Friction Materials and Insulation)	Wuhan
Chongqing Asbestos Products	Chongqing
Qingdao Asbestos Products	Qingdao
Shenyang Friction Materials	Liaoning
Shanghai Asbestos Products	Shanghai

Source: Kazan-Allen, 2007

In economically booming India, with an annual rate of growth of seven to eight percent, asbestos consumption has risen around thirty percent over the last few years. In this emerging nation forty-nine asbestos cement factories have been established, which put 2.4 million tonnes of finished products on the market every year and realise revenues of approximately two hundred million U.S. dollars. Probably one of the best known Indian asbestos cement companies is Visaka Industries Ltd.⁹³ This prosperous company discovered a market strategy worth millions in remote corners of India. The company wants to replace the traditional wooden roofs of country houses with corrugated sheets of asbestos cement. An ecological madness of the highest order, which nonetheless promises unprecedented profit: Viaska Industries, Ltd. showed an increase in profits between sixteen and twenty-two percent just in the last few years.⁹⁴ According to estimates, there are almost one hundred thousand men and women working in the Indian asbestos industry. Working conditions have been called catastrophic.

In Thailand, asbestos production can look back on more than thirty years of history. According to the Thai government, approximately 116,500 tonnes of asbestos on average were imported between 1997 and 2004, and almost ninety percent of that was fabricated into asbestos cement pipes. There are no statistics available from this Asian country for the number of dead and ill workers. In Vietnam as well, the government seems to be torn between the economic advantage of using the material and the harm inflicted on public health. It resolved the dilemma by doing nothing: Although the government announced an asbestos ban on asbestos cement roofs in 2004, the transition period has recently been extended

93. Kazan-Allen L. (2007) *op. cit.*

94. *Ibid.*

again by a year. The same conflict of interests can be seen in the attitude of the Indonesian government. As recently as February 2006 there was a scientific symposium sponsored by the local asbestos cement industry and the Canadian embassy in Jakarta: Once again the industry took the opportunity to quite persuasively make propaganda for the fairy tale of 'controlled use.'

South Korea too can look back on an almost fifty-year-old asbestos tradition. Asbestos companies, mostly German and Japanese, settled here as early as the 1960s until the mid-1980s, especially as they were coming under increasing attack in their home countries. In doing so they moved their harmful production methods to countries with less regulation.

There's an entire book to be written on the most recent act in the asbestos tragedy, namely scrapping old ships, mostly from Europe. While there's scarcely a European shipyard willing to take on this highly dangerous work, for years thousands of ships contaminated with asbestos have been broken up for salvage in Asian ship breaking yards. The public first took note of this phenomenon only in December 2005 when the French aircraft carrier, the *Clemenceau*, built in the mid-1950s, set out for its ship breaking plant in Alang, India. Per official statements, the ship contained forty-five tonnes of asbestos, unofficially one hundred tonnes of asbestos as well as other toxic substances. After weeks of protests by a number of environmental organisations against exporting toxic waste, the ship was ordered back to France from the Indian Ocean.

People in the Bay of Alang have been making their living for years from this deadly business: Just in the years 2001 and 2002 alone about twenty-five to forty thousand workers, mostly juveniles, scrapped 264 ships in this ship breaking yard. Wages – less than two U.S. dollars per day – and working conditions are catastrophic: The workers are barefoot and lack any protection whatsoever except a shawl tied over the mouth; they scratch the sprayed-on asbestos insulation from the walls and conduits. And that isn't all: Often they lay the scraped off material in the sun to dry so they can sell it to make a little extra money to supplement their wages.

While media interest in perfidious toxic waste tourism soon ebbed after the *Clemenceau* returned, the yards of Alang carried on business as usual. As a number of environmental organisations have documented, between November 2006 and January 2007 there were another forty-seven ships delivered for scrapping.

Hope and the Rotterdam Convention

What can be done to stop the insanity of asbestos in the developing countries? Laurie Kazan-Allen, the figurehead in the fight against asbestos and the IBAS Coordinator for many years, is of the opinion that an important step in the fight against the mineral that cannot be destroyed would be listing chrysotile in the Rotterdam Convention adopted in 1998. The Rotterdam Convention regulates the import and export of dangerous chemicals and pesticides. Under the Convention, exporting toxic chemicals on its list requires approval of the importing country. This gives developing countries the opportunity to decide which dangerous materials they are actually willing to have imported. In this way they can bar those products they cannot handle safely. Listing chrysotile (white asbestos) in the Rotterdam Convention, which already includes the five other types of asbestos known to be dangerous, would mean the end of the asbestos industry in Canada. This otherwise very civilised country exports about ninety-seven percent of the mineral that it extracts from its own mines.

Just what Canada is capable of in its desperate effort to hold on to its asbestos mining industry can be seen from what happened in the mid-1990s, when it had a knock-down

fight with France over asbestos. A study sponsored by the French government had brought to light a horrifying picture of health problems for French asbestos workers. Alarmed by the media scandal, French politicians decided to ban asbestos virtually overnight. The Canadians considered the French ban a betrayal because France had been an important customer over the years and Canada's closest ally. With this shift into the camp of asbestos opponents, it wasn't just that the French market was in danger. It turned out that the vehemence with which the French now campaigned against the toxic material could soon affect the entire European Union, possibly leading to a ban across Europe. Canada therefore turned to a measure that was then coming into fashion: The asbestos stronghold of Canada declared that they saw an 'unfair trade advantage' and filed for what is called a dispute settlement procedure with the World Trade Organisation (WTO).

This bold step succeeded at first, creating the desired scare tactics the Canadian asbestos producers wanted: Tony Blair, who had promised an asbestos ban before he took office as British prime minister in 1997, decided after Canada 'declared war' to hold off on a ban until the European Union had one, which didn't happen until 1999. In 2000, the WTO finally decided the case in favour of France. The WTO said in its opinion that the French law did not violate WTO law and was a necessary measure for protecting life and health of people, animals, and plants. But Canada still didn't want to accept the decision of the WTO and filed an appeal. However, without success.

The Canadian asbestos lobby then took advantage of another tactic that would allow them to continue exporting the carcinogenic mineral unimpeded to unsuspecting developing countries: Listing chrysotile in the Rotterdam Convention had to be prevented at all costs. So far Canada has been successful three times. The last time was in the fall of 2006 when approximately 110 member states of the Convention gathered in Geneva for the purpose of putting white asbestos on the list of toxic substances. Laurie Kazan-Allen, who was present at the meeting, recounts, 'With unsurpassed arrogance, the Canadian representative seized the floor right at the start of the meeting and, without any explanation, declared that his country would not accept listing chrysotile, threatening a veto.' The Canadian vote produced shock and rage in the other participants. In the final vote Canada had the support of Iran, Kyrgyzstan, Peru, India, and the Ukraine. Six votes were enough to veto the proposal.

In 2008, the member states of the Rotterdam Convention wanted to try again to finally declare white asbestos to be what it is, namely a toxic substance. But there are storm warnings. For example, apart from the Canadian asbestos lobby, there are also indications from the Indian lobby in the run-up to the next conference, based on a new study about the positions of the countries; again, this study is financed by contributions from the asbestos industry.

The asbestos lie clings stubbornly to life – *in aeternum*, indestructible, everlasting.

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Umbrella organisation for a world-wide ban on asbestos

IBAS – International Ban Asbestos Secretariat

<http://ibasecretariat.org>

Annexes

Four essays on asbestos use today: Worldwide, in the U.S.A., Britain, and Canada

The following four essays, by Laurent Vogel, Barry Castleman, Laurie Kazan-Allen, and Kathleen Ruff, expand the focus of Maria Roselli's *The asbestos lie* to examine asbestos use and its legacy globally and more particularly in the U.S.A., Britain, and Canada. Although the worldwide efforts to ban the production and sale of asbestos continue to bear fruit, even countries with bans, as well as those with partial bans, or no bans at all, continue to bear the burden of the consequences of illness and environmental damage. There are dramatic stories in the efforts to ban asbestos use absolutely; stories of economic interests in conflict; human stories affecting the lives of every person stricken with an asbestos-related disease; and unexpected turns in the legal efforts to ensure safety of workers and both medical care and compensation for the ill.

Essay 1

A global industrial success story – and health disaster



Laurent Vogel¹

There are many ways to tell the story of asbestos, but each paints only a part of the picture. Chemists will look at its natural history as a composite of minerals formed from the earth's magma. Silicates – salts that bind silica and oxygen – combined to form a chain of metallic elements like magnesium and iron. There are two main groups: serpentine, which includes white chrysotile; and the more numerous varieties of amphibole, including crocidolite (blue asbestos), amosite (brown), tremolite, actinolite, etc. The history of technology recounts how humans ever since Neolithic times used a mineral fibre whose properties seemed to combine the smoothness of silk with the resistance of metal. Economic history traces the accumulation of huge fortunes built on asbestos: industrial and commercial interests, integrated into international conglomerates, as they shipped the fibre by sea, road, and rail to different user countries. A medical consequence soon became apparent in this story along with this economic narrative. In the late nineteenth century, the unusually high mortality rates among workers exposed to the fibre was highlighted in both France and England in the early decades of mass use of asbestos. The individual story is a tale of tragedies most certainly played out a million times in the past 150 years: people whose lungs have gradually failed, unable to breathe life-giving oxygen, or who have found their bodies wracked by incurable tumours.

Arguably, social and labour history joins together these disparate narratives. In addition to insight into the study of nature, technology, and people, the history of asbestos above all tells us the tale of our societies, the unequal distribution of property and, first and foremost, the inequality, in relation to death, in the lives of the different social classes. It throws into relief the links between the accumulation of wealth at one end of society, and the ravages wrought by that accumulation among those at the other end of the spectrum.

Unequal in death

I would argue that the unconscionable delay in banning asbestos in some countries and the resistance to a ban in countries where over three quarters of the world population live stem largely from the fact that the vast majority of victims were blue-collar workers – often unskilled – or the women who washed their work clothes.

The figures on mesothelioma from different European countries illustrate this. The regional register of mesothelioma cases in Italy's Veneto region records 1,093 cases,

1. Researcher at the European Trade Union Institute (ETUI).

613 of which concern exposure to asbestos at work.² The definition of ‘work’ excludes unpaid domestic work by women, which is classed as domestic and environmental exposure (102 cases analysed, mostly women). Not using asbestos would have significantly lowered not just the incidence but especially the unequal occupational distribution of mesotheliomas. For 1990–1999, the incidence of mesothelioma in men was 1.73 cases per 100,000 of population a year, rising to 170.3 per 100,000 among asbestos cement factory workers, 36.6 per 100,000 for shipyard workers, 14.7 per 100,000 for dock workers and other workers engaged in handling goods. The chemical industry stands out as having a frequency of mesothelioma triple the average, and the construction industry double the average.

The national mesothelioma surveillance programme in France estimates that an industrial pipe fitter has a 17.5 times higher than average probability of being diagnosed with pleural mesothelioma.³ For a boilermaker or sheet metal worker, the risk is multiplied by 7.12, and for unskilled building workers, by 2.36.

Statistically there is a frequency of mesothelioma of around one in 1,000 (lifetime risk) in the general population in Great Britain; however, the distribution of the disease displays a pronounced demographically unequal pattern.⁴ One in seventeen carpenters from the generation born in the 1940s will die of mesothelioma and a similar proportion will die from asbestos-related lung cancer. Frequency rates are also high among plumbers and electricians. Living with someone occupationally exposed to asbestos doubles the mesothelioma incidence rate among women, because it was usually the wives who washed their husbands’ work clothes.

A higher than normal mortality rate from asbestos-related diseases is found near industrial plants where large quantities of asbestos were used: asbestos cement factories, shipyards, etc. Working-class homes are more often located in areas of industrial pollution, thereby adding to the social inequalities in health. In Catalonia, for example, a 400-times higher rate of mesothelioma mortality was found in the Prat de Llobregat industrial suburb of Barcelona, and also in Cerdanyola, the site of a factory belonging to the Uralita Group that produced asbestos cement for over eighty years. These industrial settlements – factory villages – where the asbestos industry set up and whose residents are still dying partly because of where they worked and partly from exposure in their homes, are found everywhere in the world. Examples include Casale Monferrato in Italy, Payerne in Switzerland, and Condé-sur-Noireau in France. Similarly, atlases of cancer mortality in the United States show that coastal towns with shipbuilding industries and refineries have a higher than normal rate of mortality from the main asbestos-related cancers (lung cancer, mesotheliomas). The mining towns of Australia (Winnedon), South Africa (Penge), and the United States (Libby) have also paid a high price.

These asbestos statistics throw light on the notion of ‘acceptable risk’ that underlies employers’ approaches to occupational health policies. To accept the concept of ‘acceptable risk’ has adverse health consequences, especially for those vulnerable workers and their families, more often than not on the lower status rungs of society and work. The media coverage of asbestos is equally illuminating: the death of the actor Steve McQueen, who was exposed to asbestos in his youth working on dismantling ships, attracts more headlines than the millions of workers killed over nearly 150 years.

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2. Merler E. (dir.) (2006) Il ruolo dell’esposizione lavorativa ed ambientale ad amianto nella genesi dei casi di mesotelioma insorti in residenti del Veneto. Registro regionale veneto dei casi di mesotelioma. Secondo report, Padua, Centro Operativo Regionale per l’Epidemiologia Occupazionale. <http://www.epicentro.iss.it/temi/tumori/pdf/SintesiMesoteliomiVeneto.pdf>.
 3. Goldberg M. and Imbernon E. (2008) Quels dispositifs épidémiologiques d’observation de la santé en relation avec le travail?, *Revue française de Affaires sociales*, 2/3, 21–44.
 4. Peto J. *et al.* (2009) Occupational, domestic and environmental mesothelioma risks in Britain: a case-control study, Research report RR696, London, Health and Safety Executive. <http://www.hse.gov.uk/research/rrpdf/rr696.pdf>.

A highly concentrated industry

During the first three quarters of the twentieth century, asbestos was mainly produced and consumed in the industrialised countries, the two main production centres being Canada and the former Soviet Union. Throughout the entire twentieth century, these two centres accounted for over two-thirds of world asbestos production.⁵ Other industrialised countries were lesser contributors to asbestos output – the United States and Italy in particular (each accounting for approximately two percent of world production in the twentieth century) and, to a minor extent, Greece and Australia (about one percent of twentieth century world output combined). Asbestos production in colonial countries was relatively low in comparison with these countries' traditional role as producers of raw materials. On the continent of Africa, asbestos was mainly mined in South Africa and Zimbabwe (about ten percent of twentieth century world output combined). To these 'medium-sized' producers can be added two countries – China and Brazil – where production took off only late in the closing third of last century (approximately seven percent of twentieth century world output combined).

Table 1 World asbestos production during the twentieth century (metric tonnes)

	1900	1940	1960	1970	2000	Cumulative during the 20 th century
Former Soviet Union	NA	102,000	598,743	1,065,943	983,200	67,100,000
Canada	26,436	313,514	1,014,647	1,507,420	320,000	60,500,000
South Africa	158	24,850	159,540	287,416	18,782	9,920,000
Zimbabwe	NA	50,809	121,529	79,832	145,000	8,690,000
China	NA	20,015	81,647	172,365	370,000	7,700,000
Brazil	--	500	3,538	16,329	170,000	4,540,000
Italy	NA	8,271	59,914	118,536	--	3,860,000
United States	956	18,198	41,026	113,683	5,260	3,280,000
World Production	31,587	573,728	2,213,533	3,493,800	2,070,000	174,000,000

NA = data not available ; -- = zero

Asbestos consumption was also heavily concentrated in the industrialised countries. Only in the final quarter of the twentieth century was the almost uninterrupted growth in asbestos demand reversed in this part of the world. The downturn was not the result of economic or technical developments, but mainly due to labour campaigning against the use of asbestos, long known to be a health disaster.⁶ Perversely, the extent of the damage in industrialised countries is now being measured only after consumption has been slashed or halted altogether. This delayed measurement is due to the long latency period for asbestos-related

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5. Unless otherwise specified, the economic figures in this article, including those in the tables, are taken from the reports by Robert Virta of the U.S. Geological Survey, in particular *Worldwide Asbestos Supply and Consumption Trends from 1900 to 2000*, U.S. Geological Survey, Open-File Report 03-83.
 6. Carnevale F. and Chellini E. (1993) Amianto: evoluzione delle conoscenze relative al suo impiego, agli effetti sulla salute e alle misure di prevenzione nei luoghi di lavoro, con particolare riferimento alla situazione italiana, *Rassegna di Medicina dei Lavoratori*, 29/30, 172-198.

cancers to develop. Generally, the mortality curve for asbestos-related cancers follows the asbestos consumption curve with a lag of about thirty to forty years.⁷ In Europe, therefore, the mortality curve will peak around 2020, but with each country varying according to its asbestos consumption curve.

Table 2 Apparent consumption of asbestos in Europe (metric tonnes) *

	1920	1950	1975	1990	2000
Overall Consumption in Europe	40,905	506,396	2,697,091	2,582,294	537,302
Former Soviet Union	1,629	136,458	1,286,697	2,151,800	507,125
United Kingdom	21,199	107,606	137,487	15,731	244
Germany	6,828	93,842	378,143	15,084	189
France	445	38,921	136,587	63,571	- 30
Europe (excluding Former Soviet Union)	39,276	369,738	1,410,394	430,494	30,277

* Apparent consumption is calculated as national asbestos production plus imports less exports. Negative apparent consumption means that exports (or re-exports) of existing stocks for the year concerned were higher than national production plus imports.

The big four corporations

A wide range of industrial activities made use of asbestos, the biggest single application being asbestos cement. Asbestos’ insulating properties also spawned many industrial uses, such as textiles for cladding boilers and insulating other heat sources, and materials for electrical systems, while many commonplace household items such as toasters and hot plates contained asbestos. Asbestos production, often using fairly basic technology, became increasingly concentrated in a few enterprises by the last quarter of the twentieth century. The asbestos industry sector has been mainly in the hands of four corporations worldwide.

The US-based Johns-Manville company was born of the merger of companies founded by two American businessmen: the New Yorker Henry Ward Johns filed the first patent for the use of asbestos in 1868, and in 1886, Charles Manville and his three sons set up a pipe covering and insulation company in Milwaukee. Turner & Newall was founded in 1871 in Rochdale, Great Britain, and started using asbestos for textile production in 1879. Cape Asbestos was another British group with extensive interests in South Africa set up by two former diamond industry businessmen who saw the immense profit potential of asbestos.⁸ The Eternit Group was a complex structure of companies interwoven among three families: the Schmidheins in Switzerland, the Cuveliers in France, and the Emsens in Belgium. The French and Belgian branches are now in the Etex Group, with which the Swiss branch is no longer affiliated.

Lawsuits by asbestos victims in the United States plunged Johns-Manville and Turner & Newall into a financial meltdown. The other two companies benefited from generally more accommodating justice systems and continue to robustly flourish thanks to their belated conversion to one form or another of green capitalism.

7. Woiwitz H.J. (2003) Asbestos-related diseases: the current situation, report presented to the European Asbestos Conference, Dresden, 3-6 September 2003.
 8. McCulloch J. (2002) Asbestos blues: labour, capital, physicians and the state in South Africa, Bloomington, Indiana University Press.

In addition to these four asbestos giants was the Soviet state, accounting for some forty percent of twentieth-century world production. In the Stalinist era, the main asbestos mines formed part of the industrial labour camp system operating mainly with prisoners or deported workers under house arrest. The Bajenovski re-education-through-labour camp, for example, had a workforce of 7,644 inmates as of January 1, 1952.

The companies are both horizontally and vertically integrated. A small number of enterprises have been central to both the production of asbestos cement and a wide range of products containing asbestos, and driving a prodigious worldwide expansion for these applications. The same companies often engineered a vertical integration by opening or acquiring mines in relatively remote areas in countries such as South Africa, Quebec, and Brazil.

These powerful companies become immensely influential in informing policy and manipulating scientific data. There has been a concerted strategy to downplay the risks and shape government decisions. Some of the various committees funded by the asbestos industry have managed to get renowned scientists and even trade unionists on board, explaining their involvement on the grounds of protecting jobs.

A toxic science

A forensic historical study has been done of the way in which the industry's three big Anglo-American firms set about manipulating the scientific findings.⁹

The roots of the defence strategy put in place by the asbestos producers date back to the 1930s, when the first court cases were brought in the United States by workers suffering from asbestosis. Instead of taking preventive action, the industry decided to influence medical studies, setting up the Air Hygiene Foundation in 1935 to organise systematic co-operation between business and selected academic institutions in the United States. This created a template for later initiatives that can still be found today across the world. The agenda is to study working conditions in the industries concerned; to put forward measures for controlled use, in particular by adopting exposure limits; to lobby government bodies; to give a veneer of science to specious information designed to downplay the scale of the risks; and occasionally to accommodate the interests of trade unionists.

The industry had hard figures on asbestos-related diseases much earlier than the public authorities. Between 1929 and 1935, industry-commissioned studies found that about half of asbestos miners and asbestos textile workers would fall seriously ill. Understanding the possible impact of public reaction on its bottom line, the industry set about creating two distracting arguments.

One is the claim that there is no asbestosis in Canadian asbestos mines. Industry says that observing basic industrial hygiene rules is enough to eliminate the risk. The other is the claim that asbestosis is a substantially less dangerous disease than silicosis, so there is no need for binding legislation.

The link between asbestos and lung cancer was first shown in the early 1940s, when Dr Leroy Gardner at Saranac Laboratories had white mice breathe in asbestos fibres; over eighty percent developed pulmonary cancer. Although Dr Gardner reported his findings in

9. McCulloch J. and Tweedale G. (2008) *Defending the indefensible: the global asbestos industry and its fight for survival*, New York, Oxford University Press.

1943 to the National Cancer Institute,¹⁰ his findings as reported to the asbestos giant Johns-Manville were kept tightly under wraps.

Industry-funded research was not just done on laboratory animals; it also used human guinea-pigs. Tens of thousands of workers exposed to asbestos were repeatedly studied over dozens of years. In addition to vital business funding, these 'human resources' were used as a corporate asset by industry groups and made available to some researchers, or denied to other more critical and independent ones. This may offer some explanation for the near-symbiotic relationship between renowned epidemiologists like Richard Doll and the asbestos industry.

The industry responded to the early mesothelioma studies by claiming a new counter-narrative that chrysotile is a comparatively harmless form of asbestos. An internal document of the North America section of the Asbestos International Association says in so many words that what must be done is to 'start to tell the chrysotile story and discredit the other fibres'.

Industrial transformation

The sharp decrease in asbestos use in industrialised countries produced a global shift in the industry, resulting, in effect, in the creation of a double standard.¹¹

In industrialised countries, substitutes were found for asbestos in all applications. Even the exception contained in European Union legislation for asbestos filters in chlorine production is actually less of a technical requirement than a political quid pro quo for the German government's support for an asbestos ban in the European Union. The exception should have ended in 2009 but has been extended for no good reason other than pressure from two multinationals – Dow Chemicals and Solvay – with German government backing.

Currently, under pressure from Dow Chemicals, the European Commission, together with the European Chemicals Agency (ECHA – the body responsible for implementing REACH), are considering extending the exception until 2025. The European Commission claims that, in legal terms, this exception authorises the import into Germany of not only the electrolysis cells that contain asbestos fibre but also of the asbestos fibre required for their maintenance. This interpretation is at odds with the text of REACH annex XVII and runs counter also to the case law of the European Court of Justice. Both the Commission and ECHA appear keen to justify their position by stating that no risk is entailed for the workers of the two firms concerned located in Europe (Dow in Germany and AarhusKarls- hamn Sweden AB in Sweden). This argument is not sufficient. It fails to take account of the risks run by workers throughout the life cycle of the imported fibres, from their mining in Brazil to their recycling at the end of their useful lives. Above all, there is a need for consistency: the European Union cannot call for a worldwide ban on asbestos while itself continuing to import this substance.

In most 'developing countries', by contrast, asbestos continues to be played up as an irreplaceable natural resource that is safe to use under the right conditions. Often, the same industrial conglomerate will diversify its production according to the country, lining up under the pro-asbestos lobby banner in some parts of the world, while developing less dangerous alternatives in the most developed countries.

10. Letter from Dr. Leroy Gardner to Ludwig Hektoen, Chairman of the Committee on Cancer Research for the National Cancer Society, March 15, 1943. <http://www.jdsupra.com/post/documentViewer.aspx?fid=8732defd-8ba8-45e7-9651-e946a7ef6fda>.

11. Castleman B. (1999) Global corporate policies and international "double standards" in occupational and environmental health, *International Journal of Occupational and Environmental Health*, 5 (1), 61-64.

An overview below gives a broad picture of trends in world asbestos production, consumption, and political context in Russia, Quebec, the United States, Latin America including Brazil, South Africa, the Pacific region, and Asia.

Europe's Russian exception

The market for asbestos in Europe is virtually non-existent with the signal exception of Russia, which remains the leading world asbestos producer and the third major consumer after China and India. Ukraine and Belarus remain important consumers (with 55,900 metric tonnes and 25,100 metric tonnes, respectively, in 2011). Asbestos production and marketing started here in the Urals at the start of the nineteenth century. By the onset of World War I, Russia was the world's second biggest producer of asbestos, although well behind Canada. Essentially halted by the war and subsequent civil war, asbestos production took off again starting in the late 1920s. In fact, one of the earliest tentative joint ventures between the Soviet state and American capital involved the Urals asbestos mines, which even during Lenin's time interested the businessman Armand Hammer.¹² Modernisation of the rail network enabled the intensive development of the Uralasbest mine. By the late 1930s, Soviet industry had a widely diversified asbestos products industry. In the 1960s, new mines were opened in the Autonomous Republic of Tuva (part of the Russian Federation) and Kazakhstan. In 1975, Soviet Russia overtook Canada as the world's leading asbestos producer, and remains so today.

The early 1990s, however, saw a dramatic collapse in asbestos production from its 1989 peak of 2,600,000 metric tonnes (approximately sixty percent of world production) to just 743,000 metric tonnes in 1996, rising again to around 1,260,000 metric tonnes in 2003 (900,000 metric tonnes in the Russian Federation and 360,000 metric tonnes in Kazakhstan). Since 2003, production has slightly levelled off: Russia's output hovers between 900,000 and 1,000,000 metric tonnes, while Kazakhstan's slipped to 241,600 metric tonnes in 2012. The collapse in asbestos production in the early 1990s was entirely due to the general upheaval in manufacturing industry and construction, and was in no way related to concerns about occupational health or environmental protection. It was the result of shock therapy from the re-introduction of capitalism. The country's principal asbestos mine (Uralasbest) was privatised, partly sold off to German investors, and eventually ended up under the control of new Russian capitalists. It was even declared bankrupt in 1997, only to start back up in business afterwards.

There was virtually no debate on asbestos either under the Soviet regime or subsequently. Following the banning of asbestos in the European Union, the Putin government set up a panel of experts to give an opinion on a possible Russian asbestos ban. The panel mainly consisted of occupational medicine specialists. Its final report is an impassioned defence of asbestos use.¹³ The Russian press tends to take a jingoistic approach to the asbestos issue. The struggle by world trade unions and victim support groups to get asbestos banned is sometimes portrayed as the product of a trade war waged with 'the deep pockets of transnational trusts'.¹⁴ The pro-Russian asbestos lobby claims that the substance entails relatively little danger to health. The same arguments can be heard coming out of Canada, Zimbabwe, and Brazil. Industry funding appears to spur creativity among some scientists whose surprising findings accommodate the dry language of the laboratory with patriotic fervour.

12. Gillette P.S. (1981) Armand Hammer, Lenin, and the first American concession in Soviet Russia, *Slavic Review*, 40 (3), 355-365.

13. Mnenie rossiyskoi grupy ekspertov po probleme total'nogo zapreta asbesta, Moscow, 2002.

14. Chi interesy oni zashishaiut?, <http://www.chrysotile.ru/>.

The Russian authorities continue to deny the havoc wrought by asbestos on health. This rose-tinted view is challenged by the figures from Eastern European countries that, almost exclusively, imported Soviet asbestos. Szczucin in southeast Poland has been the site of a large asbestos cement factory since 1959. The town's population has one of the highest rates of pleural mesothelioma in the world, and 125 times the Polish average. The prevalence of lung and stomach cancer is also very high.¹⁵ An article in the Russian press voiced concern about the practice of firms manufacturing asbestos products handing out production residues to private individuals as filling material, thereby adding to asbestos pollution of the environment.¹⁶

Under the Putin regime a major section of the scientific community became caught up in propaganda campaigns in favour of asbestos. The denial of reality in the interest of patriotism displayed by the Russian scientific establishment rose to levels of irrationality comparable with those of western researchers working in partnership with industry. In an article published in 2011, Sergey Kashansky asserted that he had undertaken a systematic revision of the scientific literature on mesothelioma published in Russian between 1881 and 2006 and had established 'that asbestos and chrysotile asbestos in particular is neither the leading nor the obligatory etiologic factor'¹⁷.

Can a Quebec worker's job be placed in the balance with an Indian worker's life?

The most significant change in recent years has been seen in Canada where asbestos production was halted at the end of 2012.

Canada was the leading world asbestos producer until 1975, benefiting from its proximity to the main consumer market – the United States. The asbestos mines initially opened and operated by British and American capital were mainly located in rural Quebec, where low pay and much worse working conditions than in other mining sectors in North America could be imposed. Canadian asbestos production was thus fated to decline when the United States market all but disappeared and asbestos demand shrank steadily in the other countries of the American continent.

There was no economic reason to continue with asbestos production in Quebec and the survival of the mines was dependent on government subsidies. While Canada continued to champion the 'safe use of asbestos', it took good care not to consume any of its production which it exported, primarily, to Latin America and Asia.

The Canadian position was attributable to exclusively political factors. Quebec nationalists regarded asbestos production as a national cause, the reasons for this identification being historical. The asbestos miners had been in the forefront of the Quebec labour movement in the years following World War II and the nationalist ideology had served to turn the struggle against exploitation into a struggle for asbestos. Accordingly, the Quebec trade union movement had gone along with the nationalist demands for continuing asbestos production in Quebec, turning a blind eye to the fact that the deadly fibres were then exported to other parts of the world. The price paid by workers was a very heavy one, both in Quebec and in other Canadian provinces.

15. Szeszenia-Dubrowska N. (2004) Asbestos as an environmental hazard: the example of the Szczucin Community, report presented to Global Asbestos Congress, Tokyo, 19-21 November 2004.

16. Volodina N. (2004) Vse veschestva yadovity i ni odno ne bezvredno, *Argumenty i fakty*, 36, September 2.

17. Kashansky S. (2011) Mesothelioma in Russia: review of 3603 published cases, *Journal of US-China Medical Science*, 8 (2), 84-91.

Environmental pollution from appalling waste management in the mining region and exposures in buildings containing asbestos is a growing concern in Quebec.¹⁸ A report noting very high exposure rates on construction sites¹⁹ also reports 1,530 newly diagnosed cases of pleural mesothelioma (320 in women) in Quebec province between 1982 and 2002. High mesothelioma death rates among Quebecers are partly connected with this pollution and partly with housework-related exposure (wives washing their husband's work clothes, in particular).

Opposition to the pro-asbestos nationalist consensus came first from a small left-leaning group, Québec Solidaire. Amir Khadir, its MP in the Quebec Parliament, tabled a bill in December 2010 to ban exports of asbestos. In the April 2011 federal elections, the NDP Social Democratic Party won a landslide victory in Quebec province, such as to change, potentially, the balance of political forces. The NDP supports an asbestos ban.

A section of the trade union finally reneged on its commitment to the pro-asbestos alliance. 'The life of an Indian worker, just like that of a Quebecer, cannot be blindly sacrificed in the name of a job.' This stark reality check to asbestos workers comes from Claudette Carbonneau, President of the Confederation of National Trade Unions (CSN), Quebec's second biggest union in membership with approximately 300,000 members. 'Quebec, like many advanced industrial societies, has been shaken by the use of a resource which sows death. Asbestos, which is barely used any longer here, is today intended for export to developing countries like India. If health and safety conditions do not prevent these deadly illnesses in Quebec, it is difficult to pretend that there can be safe use of asbestos in developing countries,' said the union leader.

United States: A near-ban in 1989 overturned by the courts

The United States was the biggest asbestos user during much of the twentieth century in many manufacturing sectors and the construction industry (consuming about eighteen percent of cumulative world asbestos production throughout the century). During the first half of the century, U.S. consumption averaged sixty-two percent of world asbestos production. The second half of the century falls into two equal periods. Up to approximately 1975, the U.S. remained one of the largest asbestos consumers; after that, demand slumped.

The Environmental Protection Agency (EPA) started moving towards an asbestos ban in 1979. Pressure from business circles and the Canadian government pushed the Reagan Administration to act to stop the EPA from putting its plan into practise. In 1984, the issue was transferred to the federal Occupational Safety and Health Agency (OSHA) and the Consumer Product Safety Commission (CPSC). With both organisations failing to act, the EPA reclaimed the initiative. It carried out a detailed assessment of the health threats posed by all forms of asbestos, and then in July 1989 enacted a regulation outlawing most products containing asbestos.²⁰ That regulation was overturned by a federal court of appeals in 1991.²¹

18. INSPQ (2003) *Fibres d'amiante dans l'air intérieur et extérieur : état de situation au Québec*, Montréal, Institut national de santé publique du Québec.

19. Dubé-Linteau A., De Guire L. and Adib G. (2011) *Amiante : connaissances acquises sur l'exposition et les maladies des travailleurs et de la population générale du Québec de 2003 à 2009*, Montréal, Institut national de santé publique du Québec.

20. Environmental Protection Agency (1989) *Asbestos: manufacture, importation, processing and distributions in commerce prohibitions*. Final Rule, Federal Register, 54 (132), 29460-29513.

21. *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5th Cir. 1991).

Since then, trade unions and environmental groups have continued to press for an asbestos ban. Various moves in the U.S. Congress to ban asbestos have so far failed and the Obama administration's intent is not clear. However, the huge cost of damages won by asbestos victims has deterred most sectors of the economy from continuing to work with asbestos. Halliburton – a name familiar to the public from its role in Iraq and being headed by former U.S. Vice President Dick Cheney – is a case in point. The company had to pay out compensation in excess of \$4 billion to hundreds of thousands of asbestos victims in the early 2000s.

Overall, asbestos use has shrunk to relatively marginal levels. From its 1973 peak of over 800,000 metric tonnes, it fell to around 40,000 metric tonnes in 1990, just under 15,000 metric tonnes in 2000, and about 1,000 metric tonnes in 2012. The United States continues to import manufactured products containing asbestos, but here too the numbers are sharply lower, and the market accounted for just \$26.4 million in 2012.²² The main importing country was Mexico.

Table 3 Apparent asbestos consumption in the United States (metric tonnes)

	Metric tonnes
1900	20,400
1920	153,000
1940	238,000
1950	660,000
1960	643,452
1973	803,000
1980	358,708
1985	162,000
1990	41,000
2000	14,600
2009	869
2012	1,200

Latin America: A patchy picture

As asbestos use declined in the United States, the risks noticeably shifted to Mexico. From the 1970s on, Mexico had as it were helped the U.S. transition towards (nearly) asbestos-free production by manufacturing asbestos-containing products for its northern neighbour.²³ This partly explains the doubling of asbestos consumption in Mexico between 1970 (40,000 metric tonnes) and 1980 (79,000 metric tonnes). Over the following decades, Mexican consumption declined as both the local and U.S. markets contracted. Since 2004, the volume of asbestos consumption has hovered between 10,000 and 18,000 metric tonnes.

Mexico's manufacturing with asbestos is characterised by extreme disaggregation of businesses, rendering any control almost impossible. In 2001, Mexico had 1,881 firms importing asbestos, many of them subsidiaries or subcontractors of U.S. companies. From the 1990s

²². Customs statistics do not always distinguish between articles containing asbestos and similar asbestos-free products, so the value of imports of articles containing asbestos may well be less than \$25 million.

²³. Aguilar-Madrid G. *et al.* (2003) Globalization and the transfer of hazardous industry: asbestos in Mexico, 1979-2000, *International Journal of Occupational and Environmental Health*, 9 (3), 272-279.

on, however, Mexican exports of products with asbestos began to diversify. In 1992, the U.S. was almost the only export market (ninety-six percent) for Mexican exports. By 2000, fifty-eight percent of exports containing asbestos still went to the United States, but forty percent went to Central American countries and Cuba. This trend is likely to have continued. Having all but eliminated asbestos in its own manufacturing production, the U.S. is gradually reducing the use of products that contain asbestos in construction (the largest traditional user) and its automotive industry (where asbestos was used in the manufacture of brake linings).

The movement to ban asbestos in Latin America chalked up some signal successes in the early twenty-first century. Between 2001 and 2004, Argentina, Chile, Uruguay, and Honduras all outlawed it. Nevertheless, the asbestos lobby has managed to stem the movement in other countries. Asbestos consumption is declining even where asbestos is not actually banned. But it is a slow, and not necessarily irreversible, trend.²⁴

In Colombia, the government is in thrall to multinationals, and trade union freedoms are under serious attack, making it hard to speak out about the effects of asbestos. A ban is highly unlikely as things now stand. Recent data on asbestos production and consumption in Colombia are patchy. Asbestos consumption is significant also in Bolivia (5,590 tonnes in 2011) and in Ecuador (6,150 tonnes in 2011).

Table 4 Apparent asbestos consumption in different Latin American countries (metric tonnes)

	Brazil	Colombia	Cuba	Venezuela	Mexico	Peru	Argentina	Salvador	Chile
1970	37,710	16,763	NA	10,161	40,460	1,828	21,141	963	8,800
1980	195,202	27,057	NA	9,111	79,014	4,870	21,410	3,324	NA
1990	163,238	21,437	1,500	1,418	39,316	1,060	6,863	904	7,749
1995	182,129	22,925	3,000	5,012	19,154	4,947	6,088	398	11,666
2000	181,689	12,189	3,000*	2,727	26,880	1,188*	2,333	1,678	1,460
2007	93,800	4,840	8,190	862	16,700	999	300	1,670	-
2011	185,000	20,000	5,860	NA	10,200	NA	NA	NA	-

NA = data not available ; * Figures for 1999 (no figures available for 2000)

Brazil: Conversion of the Workers' Party government to the pro-asbestos cause

The situation in Brazil merits a more detailed examination. Asbestos production there started in the 1930s, and flourished under the military dictatorship, rising from around a thousand metric tonnes in 1965 to 169,000 metric tonnes in 1980, plateauing at around 200,000 metric tonnes in the 1990s and climbing steadily to 288,000 metric tonnes in 2009.

The production of asbestos and manufactured products containing asbestos is a two-tier system: a small handful of companies dominate the sector (in practise, now just Eternit), with a swarm of small and very small companies handling the least profitable and most

24. Short-cycle changes are not necessarily significant, since they also reflect swings in the business cycle and, especially, in the construction sector.

dangerous work. During the production boom under the military dictatorship, it was almost impossible to speak out publicly against the damage asbestos was doing to workers' health. The one exception was Paulo Nogueira Neto, who trail-blazed environmental defence in Brazil and was the first secretary of state for the environment from 1974 to 1986. He first called attention to the dangers of asbestos in 1975, but his warnings were countered by a disinformation campaign run by employers' lobbies. Before 1983, there are almost no reported medical studies on asbestos-related diseases: the literature reports fewer than twenty cases, even though asbestos has been used since the early 1930s. In 1983, an occupational health doctor reported fourteen cases of asbestosis in a single company. The following years saw a disturbing rise in the number of reported cases.

Asbestos increasingly became a focus of labour dispute and debate. Brazil's main central labour federation, the Unitary Labour Confederation (Central Unitaria de Trabalhadores or CUT, also known as Unified Workers Central), came out in favour of an asbestos ban in 1994. In the same year, motor manufacturing industry trade unions won a tripartite agreement to have asbestos replaced by less dangerous fibres, but the agreement was blocked by a government refusal to ratify it in 1996. In December 1999, the CUT set up a national campaign around the slogan 'Asbestos kills. In time.' Most of Brazil's other union federations have also lined up behind an asbestos ban.

In 1995, ABREA (the Brazilian Association of People Exposed to Asbestos) was set up in Osasco, a city in the São Paulo industrial belt. Its membership includes many current and former Eternit workers, and it has expanded rapidly to other parts of Brazil. There is also political opposition to asbestos; by the late 1990s, bans had been declared by Municipalities and States. Among the States of the Brazilian Federation, Mato Grosso do Sul State outlawed asbestos in January 2001, followed in the same year by three of the country's most populous States – the states of São Paulo, Rio de Janeiro, and Rio Grande do Sul. Pernambuco brought in ban legislation in May 2004, followed by Mato Grosso State in April 2005, and Para State in 2007. In February 2001, a number of Municipalities also decided to outlaw asbestos use in new building construction, including Brazil's biggest metro area, São Paulo.

The industry reaction was swift. Most state laws and municipal ordinances were appealed to the Supremo Tribunal Federal (Brazil's federal supreme court). The current situation is a muddle, with some bans upheld and others struck down. Generally, the Supreme Federal Court has not ruled on the legitimacy of the asbestos ban per se, but the fact is that the decisions one for the federal authorities.

Many thought that the election of Luiz Inácio da Silva (Lula) as President of the Republic in October 2002 would lead to an early asbestos ban. The new government included leaders from the main central labour federation, the CUT.

In March 2004, the government announced a ban on asbestos. In June 2004, an interdepartmental committee was set up which was due to give its conclusions on an asbestos ban by the end of 2004. Out of the blue, the Mines and Energy Ministry decided on July 16, 2004, to set up another committee to promote the so-called 'controlled use' of asbestos.

As it happens, that ministry was headed by Dilma Rousseff, who in 2010 was elected president after Lula's second term of office. She is the leader of the Workers' Party (PT), which has close links to industry sectors that oppose an asbestos ban. In the parliamentary majority, the Communist Party of Brazil stands out for its ferociously nationalist pro-asbestos stance. This position is shared by the CGTB, a trade union confederation affiliated to the World Federation of Trade Unions.

Central government inaction contrasts with the robust movement in Brazilian society to get asbestos banned. *Epoca*, the mass circulation weekly magazine, published an

article on April 29, 2005, titled 'Government Falters, Society Moves on'. The number of lawsuits against companies that exposed their workers to asbestos is rising, and the amounts awarded in damages are acting as a deterrent to some Brazilian employers. A large number of asbestos-using firms are planning to switch over to less harmful substitutes. Saint Gobain's Brazilian subsidiary, Brasilit, has gone over entirely to asbestos-free production, investing 100 million reais (about U.S. \$63 million) in a factory that manufactures the asbestos substitute, polypropylene, at Jacaré in São Paulo State. Brasilit and Eternit are now at loggerheads. Brazilian researchers have developed new processes that enable plant fibres to be used in the production of building materials. Eternit is belligerent in its vigorous defence of asbestos, but out of the public eye it is investing in possible alternatives.

Brazil currently ranks third in the world in asbestos production after Russia and China with more than 15 percent of the world market. A significant share of Brazil's asbestos production is sold to other countries. Its main export markets for this killer fibre are India (forty percent of export sales in 2007), Indonesia, Thailand, and Mexico. Brazil's policy on asbestos is in some ways akin to Canada's. Asbestos use on the Brazilian home market has fallen in the past decade while exports have soared. Brazilian government policy is one of an international division of labour in which the most dangerous activities are shipped out to poorer countries.

Table 5 Production, consumption and export of asbestos, Brazil (1997-2007)

	1997	1999	2001	2003	2007	2012
Production	208,447	188,386	172,695	231,117	254,204	304,568
Imports	38,941	24,049	33,136	11,856	36,441	11,931
Exports	63,164	49,418	53,919	144,343	172,662	150,829
Apparent domestic consumption	184,224	147,716	151,912	98,630	137,864	165,671

Source: Ministério de Minas e Energia, Departamento Nacional de Produção Mineral

Africa: South Africa leads the way

South Africa announced an asbestos ban in 2004 with a first draft proposed in 2005, with a final draft of the anti-asbestos regulations effective in 2008. For a producer country going through hard economic times to ban asbestos is an encouraging new development. South Africa's workers see the fight against asbestos as inseparable from that against apartheid and the colonial past. From 1986 on, even before the end of apartheid, the Building Allied Mining and Construction Workers Union (BAMCWU) was campaigning to ban asbestos in both South Africa and the neighbouring countries from where many asbestos miners originated.

Most asbestos mines were opened with English capital. European multinationals were systematically guilty of double standards²⁵ by refusing to apply prevention measures in their South African sites as strict as European standards. In the Penge asbestos mine, exposure levels measured in 1983 were 130-134 fibres/cm³, or 260 times the limit value at the time in British companies.²⁶

25. Tweedale G. (2000) Magic mineral to killer dust: Turner & Newall and the asbestos hazard, Oxford, Oxford University Press, p. 223-225.

26. Thébaud-Mony A. (1990) L'envers des sociétés industrielles : approche comparative franco-brésilienne, Paris, L'Harmattan, p. 126.

Asbestos production in the Turner & Newall mines in South Africa and Zimbabwe (formerly Southern Rhodesia) ensured labour exploitation through a combination of exploitive production relations and specific attributes of colonial oppression.²⁷ Workers were not employed under individual contracts. The production unit invariably comprised a male worker plus several members of his family (assorted women and children). This family unit had considerable autonomy to organise its work. A guaranteed output was ensured through performance pay. This meant that the women and children generally received no individual wages, and mining industry employment legislation did not apply to these kinds of contracts. Up to the 1970s, workers in some mines received part of their wages in the form of vouchers exchangeable for goods in the company-owned store (the 'truck' system).

It was mostly manual work. Under apartheid, the works doctors employed by asbestos-producing and -using companies put their employers' business interests before any health concern. Asbestos-related illnesses of black workers' were seldom recognised as occupational diseases. Workers were often laid off as soon as they showed signs of breathing disorders. For recognised cases of asbestosis, black workers received much lower compensation than white workers. South Africa now has to deal with the terrible burden of the environmental damage caused by asbestos mining as well as the health damage from exposure on three fronts: at work, at home, and from environmental mismanagement.

Zimbabwe continued its asbestos production until 2010 in a chaotic context in which business circles close to President Mugabe were taking over from the British multinationals. The two principal mines located at Shabani and Mashaba suspended production. However, the regime hopes to relaunch asbestos production and took active steps to prevent the application of the Rotterdam Convention to chrysotile.

In 2010, Mozambique became the second southern African country to ban asbestos. Two countries in North Africa have also banned it: Egypt in 2005 and Algeria in 2009. They are the two most heavily populated countries in the region.

Elsewhere in Africa, asbestos is still permitted, but, for economic reasons, the continent is not a prime market. Annual asbestos consumption in Africa was between 7,000 and 17,000 tonnes between 2008 and 2011, accounting for less than one per cent of world consumption.

The Pacific Region: Oceania, New Zealand, New Caledonia, and Australia

In Oceania, asbestos was banned by Australia in 2003. New Zealand has banned asbestos imports which, with no local production, amounts to a ban on asbestos. New Caledonia outlawed asbestos in 2007, ten years after mainland France! The stakes were highest in Australia, which has produced asbestos for most of the twentieth century and used it wholesale, in common with most industrialised countries. Working conditions in the Wittenoon crocidolite mine betrayed a total disregard for occupational health. Most workers were immigrants – mainly Italians – forced to remain working there because they were unable to repay their travel costs to the company owning the mine. Australia has the highest prevalence of mesothelioma in the world.

27. McCulloch J. (2002) *Asbestos blues: labour, capital, physicians and the state in South Africa*, Bloomington, Indiana University Press.

The Middle East

The Middle East is not a very big market for asbestos. Any official ban aside, asbestos consumption is following the same downward trend as in industrialised countries. Kuwait (1995), Bahrain (1996), Saudi Arabia (1997), Oman (2001), Jordan (2005), Qatar (2009), and Israel (2011) have all taken various steps to ban asbestos.

The shift towards Asia

Asia is now the asbestos industry's prime market – it is lobbying hard to avoid a ban there. The Russian Federation and Asia account between them for more than eighty-five percent of global asbestos consumption.

The situation in Asia is one of marked contrasts, however. Most uses of asbestos were made illegal in Japan in October 2003, followed by South Korea in 2008, and Taiwan in 2009. The bans came at a time when asbestos consumption was already in a substantial decline. Most firms using asbestos in Taiwan relocated to mainland China, Vietnam, and Thailand in the 1990s.

Asbestos consumption had started to trend downwards in Vietnam in the early 2000s, only to rise again between 2003 and 2007. These fluctuations are prompted less by health concerns than the business cycle. The picture is similar in Indonesia.

It is in China and on the Indian subcontinent that asbestos consumption is tending to rise most sharply.

Table 6 Apparent asbestos consumption in Asia (metric tonnes)

	1920	1950	1975	1990	2000	2007	2011
China	--	102	150,000	185,748	410,190	626,000	638,000
India	1,847	11,160	61,826	118,964	124,516	302,000	322,000
Thailand	NA	NA	42,521	116,652	120,563	86,500	81,400
Vietnam	NA	NA	NA	NA	44,150	64,400	60,400
Indonesia	NA	39	4,845	28,599	42,877	46,200	124,000
Korea	NA	610	61,303	76,083	28,972	1,100	--
Japan	4,965	12,245	255,551	292,701	98,595	58	--
Total consumption in Asia (excluding Russia)	6,812	25,383	702,351	976,459	861,381	1,220,000	1,509,000

NA = data not available ; -- = zero

China has also become a major asbestos ore producer. Conditions in China's asbestos mines are particularly horrendous. There is a large number of small mines in rural areas. Initial sorting and weaving of the fibres was long done by peasants as a side-job at home. The conditions of Chinese asbestos production prompt many questions. There are concurring reports that China's largest asbestos mine is worked by prison labour. In 1995, the celebrated Chinese dissident, Harry Wu, succeeded in photographing the Xinkang mine in a prison camp in the country's southwestern Sichuan Province. He reported that most prisoners

worked about a fifteen-hour day without protective equipment.²⁸ This information is corroborated by the mine's inclusion in the list of companies using forced labour drawn up by the U.S. Customs Service in 1992. The Laogai Foundation reports the mine as having an annual output of 30,000 metric tonnes. The asbestos produced by prison labour is marketed under the Kangyin brand.

Working conditions in Chinese companies are characterised by serious occupational health failings.²⁹ The lack of free trade unions makes it hard for workers to stand up for their health. The official trade union confederation is a delivery system for the Chinese Communist Party and many new capitalists have come from party leadership circles, their close family members, in-laws, and allies. Foreign multinationals have tended to forge alliances with leadership loyalists through mixed ownership companies or subcontracting networks. Some analysts have readily talked of 'an institutionalised aversion to worker participation in safety issues'.³⁰

The legislation in force is often inadequate, but still systematically flouted. The health and safety inspectorate is ineffective due to understaffing, poor technical capability, and widespread corruption. A study of six categories of occupational hazards was conducted in 1990-1991 in 1,438 firms located in fifteen different provinces.³¹ It found that the rules were being enforced in forty-one percent of workplaces. Wide variations were found according to the type of risk: for benzene and chromium, most of the workplaces inspected were compliant with regulations; for asbestos, not one of the twelve workplaces inspected was obeying the law! And 24.5 percent of the workers examined in these workplaces were considered to be suffering from diagnosed or suspected asbestosis (the average rate for all diseases examined for was 15.4 percent).

There are few epidemiological surveys of occupational lung cancers in China notwithstanding the large numbers of workers exposed to such risks.³² Those that are available, however, point to asbestos becoming a major cause of mortality for the workers exposed. A cohort study of 5,893 workers in eight workplaces where asbestos is used found 183 cancer deaths out of a total of 496 deaths. That represents a relative risk of 5.3 times that of the control group. Another study of workers exposed to chrysotile only observed relative risks of 6.6 for lung cancers and 4.3 for all cancers. Another survey in the textile sector of female former asbestos weavers pointed to lung cancer-specific death rates 4.17 times higher than for the control group.³³

This high prevalence of asbestos-related diseases shows that Chinese official figures on occupational diseases have only the most tenuous relationship with reality. In the past forty years, barely 4,300 workers have secured recognition of an asbestos-related occupational disease.³⁴ The Chinese studies are also valuable for once again giving the lie to claims

28. Pandita S. (2004) Banning asbestos in Asia, campaigns and strategies by the Asian Network for the Rights of Occupational Accident Victims (ANROAV), report presented to Global Asbestos Congress, Tokyo, 19-21 November 2004.

29. On working conditions in China, see <http://www.chinalaborwatch.org>.

30. Pringle T. and Frost S.D. (2003) "The absence of rigor and the failure of implementation": occupational health and safety in China, *International Journal of Occupational and Environmental Health*, 9 (4), 309-316.

31. Zhi S., Sheng W. and Levine S. (2000) National Occupational Health Service policies and programs for workers in small-scale industries in China, *AIHAJ: a journal for the science of occupational and environmental health and safety*, 61 (6), 842-849.

32. Wang X.R. and Christiani D.C. (2003) Occupational lung disease in China, *International Journal of Occupational and Environmental Health*, 9 (4), 320-325.

33. Zhang X. *et al.* (2004) Survey on the mortality of malignant tumours in asbestos manual spinning female workers, report presented to the Global Asbestos Congress, Tokyo, 19-21 November 2004.

34. Takahashi K. and Karjalainen A. (2003) A cross-country comparative overview of the asbestos situation in ten Asian countries, *International Journal of Occupational and Environmental Health*, 9 (3), 244-248.

about the relative innocuousness of chrysotile asbestos. The Chinese researchers who have studied asbestos display a more robust independence, attachment to ethical principles, and disciplined methodology than researchers of other countries, who have collaborated with the asbestos industry.

The situation is certainly no better in India, which is a small producer but a big user of asbestos. Production is dispersed among many small mines located in rural areas. Production waste is discharged into the environment, contributing to high levels of environmental pollution. Overall, there is an observable correlation between increasing asbestos use and worsening respiratory health in the Indian population.³⁵ The fight to ban asbestos stirs high passions and, as in Brazil, state measures may well be precursors of federal government action.

Elsewhere throughout the Indian subcontinent, the conditions of asbestos use are no less woeful than in India itself, although consumption at least is lower.

In Pakistan, Peshawar University researcher Noor Jehan carried out a systematic analytical study of mesothelioma cases in the Northwest Frontier Provinces.³⁶ She found 601 cases that occurred between 1995 and 2003. One characteristic of the situation is the very high prevalence of mesothelioma among female homemakers (around 200 cases) and farmers (about 100 cases). This was related to the crude organisation of work in asbestos cement manufacture. The asbestos bags, mostly from Canada, are opened in public places or farms without even the slightest precaution. The fibres may be used in the same mills where flour is ground. They are mixed with cement and water by the whole family. No information is provided about the danger of fibres or necessary precautions. Photographs I have seen show work being done in a kind of fog of airborne asbestos fibres.

All the available data for emerging Asian countries for the asbestos market tally – the exposure levels for Asian workers vastly exceed the already woefully inadequate standards set by local legislation. In India, a study of enterprises in the informal sector working with asbestos found exposure levels of 18.2 fibres/cm³ (more than 180 times the admissible OEL in the European Union).³⁷ Waste management is virtually unheard of. The unused asbestos is scattered around villages or densely populated towns.

A survey conducted in fourteen villages in Jharkhand State, where there is an abandoned asbestos mine, found a high prevalence of respiratory problems.³⁸ Waste containing asbestos fibres often runs to the villages downstream from the mining zone in the monsoon season and, in the dry season, warm winds carry fibres across the area.

Some countries (chiefly Bangladesh and India) have another source of asbestos pollution: shipbreaking of scrap vessels from Europe and North America. The Russian Federation has also been found to be exporting asbestos industrial waste to India.³⁹ This seems not to undermine confidence in its own claims about the benefits of controlled asbestos use.

The situation in Thailand remains unclear. Asbestos imports doubled from 90,700 metric tonnes in 1987 to 181,348 metric tonnes in 2002, decreasing thereafter due in part to the economic slowdown and in part to a rising groundswell of anti-asbestos feeling. The

35. Joshi T.K. and Gupta R.K. (2003) Asbestos-related morbidity in India, *International Journal of Occupational and Environmental Health*, 9 (3), 249-253.

36. Jehan N. *et al.* (2004) Asbestos risks: occupational and para-occupational health status in Pakistan, report presented to Global Asbestos Congress, Tokyo, 19-21 November 2004.

37. Joshi T.K., Ansari M.A. and Uttpal B. (2004) Asbestos debate in India and South Asia, report presented to Global Asbestos Congress, Tokyo, 19-21 November 2004.

38. Dutta M., Sreedhar R. and Basu A. (2003) The blighted hills of Roro, Jharkhand, India: a tale of corporate greed and abandonment, *International Journal of Occupational and Environmental Health*, 9 (3), 254-259.

39. Subramanian V. and Madhavan N. (2005) Asbestos problem in India, *Lung Cancer*, 49 (Suppl. 1), 9-12.

figures on worker exposure are appalling: the Thai statutory OEL of 5 fibres/cm³ was exceeded in over thirty-six percent of cases analysed in a survey,⁴⁰ and the OEL of 0.1 fibres/cm³ was exceeded in more than ninety-six percent of these cases.

The campaign to ban asbestos was met with highly active lobbying by multinationals supported by Canada, Russia and China. The intention to ban asbestos had been announced by the Thai government in April 2011 but the measure was not adopted and asbestos consumption has remained at a high level (81,400 tonnes in 2011). The Oran Vanich firm, which produces building materials made of asbestos cement, invested large sums in mendacious propaganda campaigns. In 2012 it distributed thousands of T-shirts bearing slogans proclaiming that chrysotile was regarded by the World Health Organisation as less dangerous than its substitute products and stating that tooth picks were more harmful than asbestos fibres. The state of political instability was used by industry to win time. In January 2014 the minister for health announced his intention of banning all forms of asbestos but it is too early, at the time of writing (April 2014), to know whether this commitment will be honoured by the government.

Action is needed now on an impending health disaster

The Indian subcontinent, China, and Southeast Asia are home to more than forty percent of the world population. The full impact on health due to the sharp rise in asbestos consumption will take a relatively long time to become apparent. This is a major public health disaster waiting to happen. Arguably, the scale of the disaster will be magnified in Asia by the extremely poor working conditions, with residential areas lying cheek by jowl with workplaces, resulting in wholesale public exposure, the most vulnerable being babies and children, and the lack of health check-ups for the immense majority of exposed workers. Thus, a race against the clock is now going on in the countries concerned, where many trade unions and victim support groups have joined forces to try to stave off the disaster. But it is no easy task. Asia's workers rightly expect solidarity in the other parts of the world. Action is needed now against multinationals and countries that are involved, directly or indirectly, in producing, selling, and using a fibre proven to be highly toxic, a product that costs lives.

40. Siriruttanapruk S. (2004) Global health impact of asbestos: an experience from Thailand, report presented to Global Asbestos Congress, Tokyo, 19-21 November 2004.

Essay 2

Asbestos in the USA today



Dr Barry Castleman¹

USA Asbestos Country Report

Background

The United States was the world's largest consumer of asbestos until some time in the 1980s. Despite a massive literature on the hazards of asbestos, consumption continued rising until the peak year of 1973, in which the U.S. consumed about 800,000 metric tonnes. There followed a decline in the 1970s and a much steeper drop in asbestos use after 1980. The publicity on asbestos centred around Dr Irving Selikoff and his co-workers in New York and the enactment of laws creating the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) in 1970 were very important. There was growing public concern over the environmental dangers of sprayed asbestos fireproofing, asbestos-cement water supply pipe, and reports of asbestos in consumer products and intravenous drugs. Non-governmental environmental groups and unions were also important in raising public awareness and pressing for regulatory action.

Though EPA issued rules in 1989 to phase out all major uses of asbestos by 1997, the regulations were overturned in a court challenge. EPA was unable to get the Justice Department to appeal the 1991 court decision, and legislative efforts to ban asbestos in 2007 failed (this will be discussed below). Nonetheless, the annual consumption of asbestos continued to drop steadily after 1991, to only 715 metric tonnes in 2009. Most of this appears to be used in asphalt roofing felts and sealants. Asbestos use in U.S. manufacture of automotive friction materials, asbestos-cement pipes and sheets, and gaskets have all ceased, and the last asbestos mine in the U.S. closed in 2002. Some of the above-mentioned asbestos products are still imported, and this is one reason that efforts continue to ban asbestos in the U.S.

The decline in asbestos use in the U.S. resulted from growing public awareness, regulation, and liability. Liability cases brought by individuals dying with mesothelioma frequently involve payments of several million dollars. At least US\$ 100 billion has been paid in claims brought by individuals with asbestos diseases, and an even greater amount is forecast in future claims. Liability considerations have therefore been prominent in leading US industry to follow the lead of the Nordic and other European countries and turn away from asbestos use in the 1980s and 1990s.

The death toll from asbestos related diseases was estimated at 10,000 per year in 2004, reflecting the consequences of use of asbestos products in previous decades.

1. Author of *Asbestos: Medical and Legal Aspects*, now in its fifth edition; he has frequently been called as an expert witness for plaintiffs and for defendants; he also has testified before the U.S. Congress on asbestos use in the United States. His testimony in November 2010 before the Tribunal of Turin gave an overview of the European cartels of asbestos cement manufacturers and Eternit's role in controlling prices and markets, noting that similar acts were prosecuted in the asbestos industry in the United States in the 1940s. The essay here was written for the *Asbestos Atlas* of the PanAmerican Health Organisation and appears here with the permission of Dr Castleman.

Recorded deaths from asbestosis have remained at 1,500 per year in recent years after steadily rising until the end of the 1990s. Mesothelioma mortality has continued rising, and over 2,700 deaths from this cause were recorded in 2005. It was estimated in 2008 that 1.3 million U.S. workers face significant asbestos exposure in construction and general industry; this, too, is largely a legacy of the past from asbestos remaining in buildings, piping systems, and vehicles.

Current occupational standard

The permissible exposure limit (PEL) for occupational exposure to asbestos is 0.1 fibre/cubic centimetre, fibres longer than five microns and counted by phase contrast microscopy. Excursions up to 1 f/cc for 30 minutes are permitted under regulations of the Occupational Safety and Health Administration (OSHA). The OSHA asbestos standard also has mandatory provisions for either the use of negative-pressure enclosure system with high efficiency air filter or use of wet methods by mechanics doing brake repairs.

OSHA requires exposure monitoring at least once every six months for workers who may be at risk of exposure at the PEL or the excursion limit. Workers must be notified of the results of air monitoring within fifteen days. Protective clothing and limits on access to the working area are required where workers are exposed above the PEL or the excursion limit. This full body protective clothing is to be provided by the employer and laundered at least weekly. Protective clothing is to be changed only in change rooms that have separate lockers for street clothes and work clothes, with showers. Lunchrooms must have positive pressure, filtered air. Specified respirators are allowed under some circumstances.

Building owners are required to determine the location of asbestos-containing materials and maintain records so workers can be informed and protected. Most products containing one percent or more asbestos are required to bear warning labels to the effect that asbestos dust is a 'Danger' that presents a 'Cancer' hazard. Training about the danger and requirements of the standard is required for workers who may be exposed at the limits in the standard; essential aspects of such training are detailed in the rule, and the training must be understandable to the worker.

Warning signs are to be posted at each regulated area, reading: 'Danger/Asbestos/Cancer and Lung Disease Hazard/Authorised Personnel Only.' Similar health warning text is required for labelling of asbestos-containing waste and products. The rule also requires pre-placement and annual medical examinations for workers covered by the standard, and that physicians certify that the workers have been told the results of these examinations. There are also requirements for retention of records by employers.²

Efforts to enact a ban on asbestos use in Congress were made in 2007,³ and a bill was passed by the U.S. Senate that would have banned all products with asbestos in bulk

2. See http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9995

3. Testimony of Barry Castleman, ScD, Environmental Consultant, before the U.S. Senate Committee on Environment and Public Works, June 12, 2007, at http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=09318724-bee5-4130-b3b1-455abef3f84a.

Castleman calls the current 'public health catastrophe' tragic; the 'cancer hazard of breathing asbestos dust was noted in *The New York Times*, *Business Week*, *Scientific American*, and *Newsweek* all before this time in the year 1950.' He concludes his testimony by emphasising the importance of an asbestos ban in the United States for countries across the globe: 'I work with people all over the world on asbestos, and everywhere the local asbestos industry points to the US and says, "But asbestos is not banned in the United States." It would be great value to public health workers the world over if the US finally banned asbestos.'

concentrations of one percent or more. The one percent limit would have banned all conventional asbestos products. This limit arose from the fact that the ban bill was an amendment to a pre-existing law (Toxic Substances Control Act of 1977) which so defined 'asbestos-containing materials'. Public health workers were concerned about lower bulk fractions of contaminant asbestos, however, and attempts to modify the law in the House of Representatives met resistance from crushed stone and mining interests. Chlorine manufacturers using the asbestos diaphragm-cell process also requested exemption from the ban, at least temporarily, as in Europe where three such plants still operate in European Union countries. The failure of the previous Congress to pass legislation to ban asbestos means that it all has to be done over in both Houses of Congress.

The U.S. government has convened expert panels on asbestos now considering the issues raised in dealing with asbestos and asbestos-like mineral fibres in some stone quarries, hard rock mines, and places where vermiculite, taconite (iron ore), and talc are extracted. There is additional concern over the use of asbestos-contaminated talc and vermiculite in consumer products. Significant airborne exposure to respirable fibres was found in industrial hygiene monitoring of road building, where the stone used contained 0-0.4 percent asbestos. Excessive rates of asbestosis, lung cancer, and mesothelioma in talc miners in the state of New York and in the counties where these minerals are extracted have been reported.

The National Institute for Occupational Safety and Health (NIOSH) has a panel investigating 'elongate mineral particles' to determine how particle size, shape, and composition relate to health effects. Because of the many ways in which elongate fibres occur in minerals and the lack of consistent scientific nomenclature used in the literature by geologists, health scientists and others, a big problem arises just in standardising the terms to be used. The state of the science and a 'roadmap' for research was put out by NIOSH for public comment repeatedly, with the last comment period ending in mid-April, 2010.⁴

4. See <http://www.cdc.gov/niosh/review/public/099-C/pdfs/AsbestosRoadmapPublicDraftV4a.pdf>
The NIOSH roadmap was also discussed in a report of the National Academy of Sciences, at http://www.nap.edu/catalog.php?record_id=12697

Essay 3

Britain's asbestos legacy



Laurie Kazan-Allen¹

Great Britain's asbestos story is far from over. For over one hundred years, asbestos was widely used and highly prized in Britain. It has been estimated that six million tonnes of asbestos were used during this time; the consequences of the national love affair with asbestos is the country's worst epidemic of occupational diseases which currently claims 4,000 lives a year. A cursory look at epidemiological data reveals a less than comprehensive tracking of asbestos mortality. While data on mesothelioma deaths is available from 1968 to 2009, information for asbestosis fatalities is only accessible for the period 1978-2009. An enquiry to the Health and Safety Executive on July 12, 2011, confirmed that no attempt has been made to quantify the cumulative national mortality from asbestos-related diseases. Attempting to bridge this gap using online statistics and best guestimates, we calculated that, from 1968 to 2010, the total death toll from mesothelioma, asbestosis, and asbestos-related lung cancer may well have exceeded 110,000. This figure was deemed 'reasonable' by a leading UK epidemiologist working in this field who pointed out that by 2050 we can expect a further 45,000 mesothelioma deaths in Great Britain. Asbestos use was finally prohibited in 1999. The ban came too late for generations of workers, family members, consumers and local people whose exposures to asbestos caused them to contract deadly respiratory diseases and/or cancers. It would be nice to think that the asbestos ban achieved after years of lobbying by victims groups, trade unionists, non-governmental organisations and concerned individuals was a happy-ever-after ending to a tragic story. Unfortunately, this is not the case.

During the twentieth century, British asbestos stakeholders spent large sums of money to spread industry propaganda and aggressively market asbestos as a substance indispensable for economic development. It was no easy task to challenge the asbestos myths so carefully crafted by vested interests: Chrysotile asbestos is safe, asbestos incorporated within asbestos-cement products is safe, it is possible to work safely with asbestos under controlled conditions, asbestos poses no risk to public health, etc. Changing the public perception of asbestos has taken decades of hard work. Accomplishing the major paradigm shift from 'controlled use' of asbestos to 'no use' required the mobilisation not only of asbestos victims and their supporters but of public health campaigners, scientists, environmentalists, doctors, civil servants, trade unionists, engineers, technicians, lawyers, journalists, and academics. Bringing the voice of the victims into the national asbestos dialogue could not have been accomplished without the grassroots mobilisation of asbestos victims and affected communities which took place during the 1990s. Nowadays, there are around twenty groups working throughout England, Scotland, Wales, and Northern Ireland. Unfortunately, in the current economic climate, the legal help available to claimants from government-funded schemes and victims groups is shrinking. With the reduction of charitable contributions from members of the public, grass-roots groups, already working on shoestring

1. Editor of the *British Asbestos Newsletter* (www.britishasbestosnewsletter.org.) and the coordinator of the International Ban Asbestos Secretariat (www.ibasecretariat.org).

budgets, are hard-pressed to continue operations; at least one such organisation has had to close. In other words, there are more victims and fewer services.

Of course, the ban adopted by The Asbestos (Prohibitions) (Amendment) Regulations 1999 was a positive step. Since then, progress has indeed been made in securing the provision of more effective medical treatment for those suffering from asbestos-related diseases, expediting the judicial processing of personal injury claims, and passing legislation that provides universal compensation for all mesothelioma sufferers. These and other improvements are a result of sustained efforts by a broad-based civil society campaign which has worked with the grassroots as well as with government agencies, parliamentary bodies, academic institutions and international agencies. Of particular note in effecting positive change for victims have been: the Asbestos Victims Support Groups Forum, a nationwide umbrella group which has enabled scores of local bodies to contribute to the national asbestos debate with a unified voice, the Parliamentary Asbestos Sub-Group,² Mesothelioma UK, the June Hancock Mesothelioma Research Fund, the Mick Knighton Mesothelioma Research Fund, the asbestos disease list at the Royal Courts of Justice, the Asbestos in Schools Campaign and Action Mesothelioma Day. The evolution of the national campaign has been documented in the pages of the British Asbestos Newsletter (BAN); this publication, which is on file with the British Library, constitutes a historical record of the national fight for justice and serves as a central point of contact and archive for activists.

As the incidence of asbestos cancer in Britain rises, and epidemiologists predict it will continue to do so for some years to come, asbestos defendants and their insurers are working even harder to develop ways to minimise payouts to asbestos victims. Numerous strategies have been devised to undermine the rights of mesothelioma sufferers. Currently, asbestos defendants are focusing their attention on the development of arguments to refute claims from mesothelioma victims who were exposed to low levels of asbestos such as took place in contaminated school buildings. Of the thousands of victims of asbestos-related lung cancer in Britain, only a handful receive official recognition or compensation for their work-related illnesses; court cases for asbestos-related lung cancer are rare. A major success achieved by solicitors acting for asbestos defendants has, it is believed, saved British insurers up to £1 billion. By reversing over twenty years of legal precedents, in 2007 defendants secured a House of Lords ruling that declared pleural plaques were no longer compensable. Legislative attempts to overturn this ruling succeeded in Scotland but not in England, Wales or Northern Ireland with the result that a pleural plaque sufferer in Scotland is able to obtain court-awarded compensation while a sufferer elsewhere in the country is not.

The coalition government led by the Conservative Party, which took power in 2010, is actively pursuing strategies that will further marginalise asbestos victims. Should a bill – The Legal Aid, Sentencing and Punishment of Offenders Bill – currently going through

2. Through the Asbestos Sub-Group subjects such as the double diagnosis of mesothelioma victims, delays in obtaining state benefits, inequitable government regulations and lack of funding for research and treatment of asbestos-related diseases have been raised. When an issue has been tabled, MPs discuss ways to address the grievances, often deciding to bring the topic up with relevant Ministers or civil servants. Through this process many issues have been resolved. The Sub-Group was pivotal in raising awareness of the potential impact of the inequitable decision by the House of Lords in the notorious Barker case. (The Law Lords had ruled on May 3, 2006, that mesothelioma damages should be apportioned amongst those responsible for wrongful exposure according to their degree of contribution. As many negligent employers had gone out of business and/or insurance policies been lost in the decades between when exposure had occurred and the disease had been diagnosed, this ruling would have had a serious impact on the viability of mesothelioma cases.) Working closely with the Forum, trade unions, NGOs and others a nationwide campaign was spectacularly successful when, within less than eight weeks, Parliament acted to restore victims' rights by passing legislation which re-established joint and several liability for negligent employers in mesothelioma cases. Such a quick response by Parliament to a Law Lords' decision was virtually unheard of.

Parliament become law, the effects could be catastrophic for individuals with many of the injured becoming unable or unwilling to bring claims and the groups which represent them being deprived of vital financial support. Of course, the Government claims these proposals are necessary due to the current economic climate nevertheless it is clear that the property-owning classes, shareholders and pension fund managers would hope to prosper by shutting down pathways to compensation as would the Government which retains liabilities for the negligence of nationalised industries.

Concluding thoughts

The continuing presence of asbestos in hospitals, schools, public and private buildings constitutes a both a public health and occupational hazard. The inappropriate and poorly regulated demolition of asbestos-riddled buildings continues to expose new generations to the deadly dust. Government cut-backs in 2011 have led to reductions in on-site inspections and combined with financial pressure the recession is putting on companies, more and more regulations are being flouted. The high cost of dumping asbestos waste does not encourage compliance with the law. Despite these and other challenges, British activists will continue their efforts to raise awareness of the asbestos hazard at home and make common cause with international campaigners. Initiatives planned for 2012 with European Union bodies and international agencies will broaden the asbestos dialogue to include populations in East European producer and consumer countries. As Dick Jackson, a former insulator who became a noted ban asbestos campaigner, said: 'Prevention is the only cure.'

For more information see:

- Asbestos Victims Support Groups Forum [http://www.asbestos-victims-support.org/sources_of_info.asp]
- British Asbestos Newsletter [<http://www.britishasbestosnewsletter.org>]
- Mesothelioma UK [<http://www.mesothelioma.uk.com>]
- June Hancock Mesothelioma Research Fund [<http://www.junehancockfund.org>]
- Mick Knighton Mesothelioma Research Fund [<http://www.mickknightonmesorf.org>]
- Asbestos in Schools Campaign [<http://www.asbestosexposureschools.co.uk>]

Essay 4

Asbestos in Canada today



Kathleen Ruff¹

Canada was in the world spotlight earlier this year, when our government refused to allow chrysotile asbestos to be put on a UN list of hazardous substances. Both in the House of Commons and at the UN, Prime Minister Harper and his ministers refused to answer increasingly exasperated questions as to its reason for blocking the listing. Instead, over and over, the government repeated the following words: ‘For thirty years, Canada has promoted the safe, controlled use of asbestos at home and overseas.’

As well as evading the question, this statement is untrue. In reality, for decades, Canada has done exactly the opposite.

The UN meeting was simply one more egregious example. The Rotterdam Convention promotes responsible trade in hazardous substances. Placing chrysotile asbestos on its list would require that countries obtain ‘prior informed consent’ before exporting it. Canada refuses to act responsibly when it comes to asbestos and opposed even this minimum safety measure, thus ensuring uncontrolled trade of asbestos.

Canada, in fact, is at the heart of the global asbestos lobby and has repeatedly intervened to prevent other countries from adopting safety controls or bans on asbestos.

When Thailand and South Korea decided to require warning labels on bags of asbestos, the Canadian government exerted political pressure to prevent this.

When South Africa moved to ban asbestos, Canada threatened it with trade sanctions. When Chile announced that it would ban asbestos, Canadian Prime Minister Chrétien personally telephoned Chilean President Ricardo Lagos to pressure him to withdraw the ban, causing Chilean trade unionists to hold a demonstration outside the Canadian embassy.

Canada even filed a complaint at the World Trade Organisation, arguing that countries should not be allowed to ban asbestos. The WTO dismissed Canada’s case in September 2000 and dismissed it again on appeal – one of the rare times the WTO has ruled against corporate interests.

The key player in Canada’s role as global defender of the asbestos industry is the Chrysotile Institute, formerly the Asbestos Institute. Created in 1986 by the Canadian and Quebec governments and the asbestos industry with the specific aim of marketing asbestos to developing countries, it has received around \$50 million, mostly from the two governments, and also from the asbestos industry. According to the Institute, representatives of the Canadian and Quebec governments sit on its board of directors.

The Harper government defers to the Chrysotile Institute as its scientific authority on asbestos. In fact, the Institute is the registered lobby group for the Quebec asbestos industry.

1. The founder and coordinator of the organisation Right On Canada of the Rideau Institute to promote citizen action to advocate for human rights in Canadian government policies. In 2011, she was awarded the Canadian Public Health Association’s National Public Health Hero award for ‘revealing the inaccuracies in the propaganda that the asbestos industry has employed for the better part of the last century to mislead citizens about the seriousness of the threat of asbestos for human health’. In November 2011, she posted the article ‘Canada at heart of global asbestos lobby’ (www.rideauintstitute.ca/2011/11/01/kathleen-ruff-canada-at-heart-of-global-asbestos-lobby), which appears in slightly edited form here.

The Institute has zero scientific credibility and is condemned by medical experts as ‘endangering public health by disseminating misleading and untruthful information.’

The Chrysotile Institute has assisted in the creation of similar asbestos lobby organisations in India, Russia, Brazil, Mexico, and elsewhere.

Luis Cejudo Alva, the president of the Mexican asbestos lobby organisation, Instituto Mexicano de Fibro Industrias, told the BBC how the Chrysotile Institute has paid him to lobby to defeat efforts of Mexican health professionals to get asbestos banned in Mexico.

Alva told the BBC that, but for the quick intervention of Canada’s Chrysotile Institute, Peru would have followed Chile’s lead in banning asbestos. The Chrysotile Institute has played a similar role in countries such as Colombia, Brazil, Indonesia and India, to undermine efforts by health professionals to end the use of asbestos.

Canada became the nexus of the global asbestos lobby when in 1997 the Asbestos International Association (now named the International Chrysotile Association) was incorporated in Quebec under the protection of the Chrysotile Institute. Natural Resources minister, Ralph Goodale, boasted: ‘The location of this head office underlines Canada’s international leadership and expertise in dealing with chrysotile asbestos issues.’

In spite of its impressive name, the International Chrysotile Association (ICA), is a shadowy organisation. Mysteriously, it has now opened an office in Thetford Mines, the location of Quebec’s only operating asbestos mine. The mine is under bankruptcy protection and about to close down, having exhausted its asbestos deposit, but is seeking to extend the mine into a new deposit.

The ICA office at Thetford Mines refused to provide any information, referring people to long-time asbestos lobbyist in the US, Bob Pigg, who also refused to provide any information.

Quebec’s corporate directory, however, lists Clément Godbout, president of the Chrysotile Institute, as the lead administrator for the ICA. Then follows a list of administrators who are a who’s who of the global asbestos lobby in Indonesia, Bolivia, Peru, UAE, Mexico, Vietnam, Brazil, Iran, Kazakhstan, Russia, China, India, Senegal.

This global asbestos lobby is determined to prevent developing countries from banning asbestos, as the industrialised world has done. Thanks to the ICA, it has the money and a vehicle to do so.

Right now, in Malaysia, the Department of Occupational Safety & Health has proposed a ban on asbestos. A powerful international public relations company, APCO Worldwide, has intervened to stop this. It wants the Malaysian government to exclude chrysotile asbestos. Chrysotile asbestos represents 100% of the global asbestos trade.

APCO has refused a request to identify its client. It has been learned, however, that the client is the International Chrysotile Association.

APCO cut its teeth working for the tobacco industry. It was hired by Philip Morris in 1993 to set up a front group, the Advancement of Sound Science Coalition, to block public health efforts to protect people from second-hand tobacco smoke.

As its expert, APCO hired David Bernstein, whose work has all been funded by the asbestos industry, including a million dollar study commissioned by the Chrysotile Institute. For eighteen years prior, Bernstein carried out research for the tobacco industry.

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