

# **The tragedy of asbestos**

**Eternit and the consequences of a hundred years of asbestos cement**

by

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# Foreword

The processing and use of asbestos has already cost tens of thousands of people's lives. In the years to come, hundreds of thousands of victims will be added to this toll. The use of asbestos has, in addition, caused enormous damage to the environment.

In the European Union, the use of asbestos has been totally forbidden since January 1st, 2005, but in a number of developing countries it continues to rise. At the present time, on the world scale, two million tonnes of asbestos per year are used, usually without any form of protection.

As long ago as 1930 it was confirmed that exposure to asbestos dust was dangerous to the point of being life-threatening. It nevertheless took until the beginning of the 21st century to have asbestos use banned within the EU. Before this, tens of thousands of victims suffered while a long struggle was fought against the 'magic mineral'.

By means of their massive power and extensive influence the asbestos cement concerns succeeded in postponing the ban on asbestos by decades, years in which huge profits were made at the expense of a multitude of factory workers and their families.

In this report we reveal how, since the 1920s, the major asbestos concerns have used an international cartel to distort knowledge of asbestos and its dangers, with profit as their only goal.

On the basis of these facts, some of which we have uncovered and will be new to the reader, and some of which are already well-known, we argue that these corporate groups should be held responsible for the human suffering which they have caused. Environmental damage must be systematically mapped and the high costs of cleaning it up should be paid by the polluter.

The authors

# 1 Introduction

Around 1900 the Austrian Ludwig Hatschek designed a process whereby asbestos fibres could be mixed with cement. The resulting material, known as asbestos cement, possessed excellent technical properties which quickly led to its adoption for a number of different applications, including corrugated sheets, wall coverings, roofing plates and water pipes. Under the trade name Eternit numerous companies were established, each of which worked with Hatschek's patent. Asbestos cement firms became by far the biggest processors of asbestos. Asbestos has been totally banned in the EU since January 1st, 2005, but its use in other parts of the world continues to grow.

## **Harming people and the environment**

In the industrialised countries asbestos is the leading cause of work-related sickness and, after tobacco, the deadliest carcinogen in the environment. Between 1995 and 2029 it is estimated that in western Europe alone 250,000 men will die from the asbestos-related disease mesothelioma. In the Netherlands to date 7,000 people have died from this illness, and in the next twenty-five years around 12,000 more will do so. At the same time at least as many victims will succumb to asbestos-related lung cancer.

## **Who is responsible?**

During the last decade the movement in many countries in support of the victims of asbestos-related diseases has grown, while almost yearly another country is added to the list of those where asbestos is banned. This is leading also to an increase in the number of court cases concerning the payment of compensatory damages.

These cases continually raise the question as to who is responsible. Asbestos corporations try every means to escape responsibility. It is particularly the case that the struggle has turned out, in many different countries, to be most difficult when it comes to firms bearing the trade name Eternit. Holdings in which they own a share or have done so in the past have not been overly forthcoming with information regarding their managerial practices. Nor were they listed on the stock exchange. Nothing has been done to force these firms to make information public, as has happened to a number of concerns in the United States and Great Britain. The resulting limited knowledge in relation to Eternit companies is what prompted the Socialist Party of the Netherlands to begin a thoroughgoing investigation.

## **This report**

Collaboration between Eternit companies has been used quite consciously to work against the introduction of measures responding to the dangers of asbestos cement, preventing them completely or delaying them for as long as possible. How this has been achieved is the subject of this report.

Chapter 2 describes the way in which Eternit companies have co-operated intensively during the whole period of their existence. The third chapter demonstrates that these firms knew very early on about the dangers to health their product presented. Chapter 4 shows what these firms did with this knowledge. Through lobbying and by delaying research these companies worked against the introduction of measures to deal with the dangers of asbestos cement. In the fifth chapter we look at the disinformation campaigns organised by Eternit companies, by means of which they succeeded in manipulating their customers' trust, political decision-making and the medical debate.

Chapter 6 brings the report's most important conclusions together and offers a number of recommendations on the basis of our research.

## 2 A network of Eternit companies

One way in which Eternit companies escape their responsibility before the courts is through the assertion that these firms are unrelated and therefore cannot be expected to have any knowledge of a specific danger just because it is well-known elsewhere. In this chapter we demonstrate that there has always been intensive cooperation between the various Eternit companies.

### **A century of asbestos cement**

Asbestos is a mineral fibre extracted from mines. In ancient times it was known and used by various cultures, but it was in the industrial revolution of the 19th century that it came into more and more widespread use, for the most part as a heat-conserving insulation material. In 1900 an application was patented which in the extent of its use would come to dwarf all others: the strengthening of cement by means of adding asbestos. The Austrian asbestos goods manufacturer Ludwig Hatschek was the inventor of this asbestos cement, an important advantage of which is that plates and pipes which were lighter in weight could be manufactured than had earlier been possible.

A patent on the process was lodged in as many countries as possible, and an exclusive, protected trade mark, 'Eternit' adopted, the word coming from the Latin *aeternus*, eternal or immortal. In each country Hatschek permitted only one firm to use the name Eternit. Licences to use it were quickly granted in Belgium, France, Switzerland, Italy, Great Britain and the United States.

In 1911 the Italian engineer Adolfo Mazza came up with a plan to develop a process enabling the production of pipes from asbestos cement. After technical improvements in the 1920s made mass-production of these pipes possible, they were widely adopted for use in water supply.

During the Second World War asbestos was reserved for military use and supply broke down; at the same time, cement was subject to rationing. After 1945 there began a massive expansion in the use of asbestos cement. In the years of reconstruction in continental Europe the material suited the industrial style of working which made its appearance in the building trade. Other applications of asbestos also grew, for example its use in protection against fire.

Growth reached its zenith during the 1970s. Then came a reversal as public debate arose over the dangers of asbestos for health. Through closure, take-over and buying and selling of other producers, the production of asbestos cement came to be increasingly concentrated in the hands of one concern, the Belgian Eternit Group, later known as Etex, which did not halt production world-wide until 1st January, 2004.

Local production in countries where the use of asbestos is not forbidden has continued beyond this date. Among such countries are the huge, heavily populated nations of Asia. In countries which together account for two thirds of the world's population the use of asbestos goes on. On an ever-increasing scale asbestos cement is used to construct low-cost housing. Particularly in China, India, Indonesia and Vietnam, use has grown enormously.

### **The Eternit companies**

The history of the Eternit companies is extremely complex. Because the Belgian and Swiss branches would eventually become the most important, emphasis in the time-line below has been placed on the main points of their history.

- 1900 After 1900 in Europe and the US independent companies are established on the basis of Hatschek's patent. With the exception of the Netherlands, where the factory is known as Martinit, these firms use the trade name Eternit.
- 1905 In Belgium the company Eternit SA is established by cement producer Emsens. Patent-holder Hatschek takes a number of shares in this firm.
- 1920 The Swiss family Schmidheiny come into the picture for the first time. Ernst Schmidheiny's firm, Holderbank, had up to that time been the most important supplier of cement to the Swiss Eternit-Werke. In 1920 Schmidheiny acquired an interest in Eternit-Werke.
- 1922 Eternit Switzerland acquires an interest in Eternit Belgium.
- 1922 Alphonse Emsens uses his licence to establish, together with Frenchman Joseph Cuvelier, SA Eternit France. Emsens has a minority interest in the holding company, Cuvelier a stake in Eternit Belgium.
- 1923 In Switzerland the holding company Amiantus AG is established, with the Schmidheiny's having a dominant interest.
- 1924 Amiantus acquires an interest in the Belgian cement firm Cimenteries et Briquetteries Réunies (CBR), in which the Emsens also own a major stake.
- 1928 Emsens and Schmidheiny establish the German firm Deutsche Asbest-Zement AG Berlin. Other Eternit companies also take small numbers of shares.
- 1929 European Eternit firms establish the SAIAC cartel (see following paragraph). The British producer of asbestos goods Turner and Newall (T&N) is also involved. In the cartel, agreements are drawn up relating, among other things, to the exclusive right to establish Eternit companies outside Europe.
- 1932 Emsens acquires a majority interest in Martinit Nederland.
- 30-49 In the 1930s and 1940s Eternit companies expand outside Europe. In part this was to gain control of asbestos mines and thus to guarantee supply.
- 40-59 Concentration took place: Eternit Switzerland and Eternit Belgium control an ever-increasing number of Eternit companies within and outside Europe.
- 1960 Eternit Belgium, Johns-Manville (US), T&N and Eternit France together form TEAM, under whose auspices many new firms are established in Asia.
- 70-90 Influenced by the debate around the dangers of asbestos, British and American firms are the first to begin to withdraw from the market. T&N and Johns-Manville transfer their interests in TEAM to Eternit Belgium. In addition, Eternit Switzerland withdraws, selling a growing proportion of its interests to Eternit Belgium. By 1989 almost everything which was originally divided between a number of other firms is in Belgian hands. This includes the US firm Eternit Inc.
- 2004 The Belgian Eternit Group, known since 1994 as Etex, halts production of asbestos cement worldwide.

From this outline history alone can be seen numerous overlapping strands. Patent-holder Hatschek granted exclusive licences, one per country, and took his payment in packages of shares. The Swiss

family Schmidheiny acquired interests in the Belgian branch owned by the Belgian family Emsens. Together they established the German firm. Emsens set up the French branch, in co-operation with Cuvelier and with the help of moneys acquired through the sale of shares to Schmidheiny. These four families, Hatschek, Schmidheiny, Emsens en Cuvelier, would be bound together for generations.

### **Cartelisation**

In 1929 the Eternit companies took a further step, establishing a cartel, SAIAC, an abbreviation of Sociétés Associées d'Industries Amiante-Ciment. Participants included firms in Belgium, France, Germany, Austria, Hungary, Czechoslovakia, Britain, Spain, the Netherlands, Italy and Switzerland. To these were later added companies established in other countries by the various families involved, while the British T&N also took part. The secretariat was based in Switzerland under the leadership of Ernst Schmidheiny, who had been responsible for the original initiative.

Some years ago from the archives of T&N a document revealing the goals of SAIAC came to light:

The objects of this Cartel are, inter alia:

The exchange of technical knowledge;

The establishment in Switzerland of an Institute of research for the entire industry;

The foundation of new factories in neutral countries;

The organisation of the export business;

The standardisation of quality, and minimising unnecessary variety in the product;

Mutual assistance in securing the necessary raw material on the best terms.

...

The position of the European Asbestos Cement Industry is thus rationalised, and we expect great benefit by way of improved technique and economy to accrue to all concerned. This miniature League of Nations has a great future before it, for it is based upon the principle of mutual help, which now displaces the previous atmosphere of distrust and suspicion.

The formation of cartels was not in those days unusual and in Europe still not forbidden. A ban was not in fact introduced in the EU until 1986. In the US, on the other hand, cartels were prohibited. A formal involvement of American firms in the European cartel was therefore out of the question.

Relations within the cartel were typified by something which happened in 1941. Max Schmidheiny had, at the end of the 1930s, taken interests in a chalk quarry serving cement production in South Africa and was in 1940 considering establishing an asbestos cement factory. Asbestos was readily available in the country and because of the war in Europe the production of asbestos was falling. Schmidheiny, however, was here entering the territory of Turner & Newall. In the British group's view social unrest was too likely in South Africa for the firm to want to make any further investment there, for which reason it was prepared to allow the Swiss firm to go ahead, provided only that the trade name was changed to Everite. This was confirmed in a telegram.<sup>1</sup> The result was that in 1941 the firm of Everite Ltd was established in Johannesburg. In the same year Schmidheiny established a company in Brazil, despite the fact that it had earlier been agreed in SAIAC that the Belgians would invest there. This agreement was annulled by the war.<sup>2</sup>

<sup>1</sup> Text of the telegram: 'You can go ahead in South-Africa', Der Eternit-Report, pp. 45-46.

<sup>2</sup> Der Eternit-Report, p.135

During the war numerous agreements could not be maintained. After the war was over, however, SAIAC once again picked up the threads. In a commemorative text of 1950 cooperation was characterised as follows:

“Today there are more than two hundred asbestos cement goods factories working on the basis of the Hatschek process throughout the world. With the majority of these undertakings the company in Vöcklabruck, where asbestos cement was born, has friendly relations. The active exchange of experiences and ideas for improvements has had fruitful results for all of these enterprises. Close co-operation has meant that time and again new possible applications for asbestos cement have been found and that new products have been developed by a number of different firms.”<sup>3</sup>

Agreements on the division of markets continued to operate, as is evident from, amongst other things, a text of 1975: “The Eternit factories in western Europe have concluded an agreement on markets which means that production from Eternit-Werke Ludwig Hatschek will be directed at domestic demand.”<sup>4</sup>

### **Persistent interconnections**

The close co-operation between Eternit companies was not only evident from the SAIAC cartel. A range of sources, including annual reports, demonstrate that the four families who had been there at the industry’s inception, and in particular the Emsens of Belgium, continued to play an important role within Eternit companies world-wide. There were Swiss and Belgian Eternit groups. The Belgian group consisted in turn of two branches: Cie. Financière Eternit SA (CFE) and Eteroutremer. In both holdings the Swiss group held a roughly 25% interest.

From CFE annual reports of 1967 (covering 1966) and 1981 (covering 1980) it can be seen that the four original families retained a prominent presence. In the Board of Management in 1966, in addition to five members of the Emsens family, there is a certain Guillaume Cuvelier, a Frédéric Hatschek and two Schmidheyns, Ernst en Max. A further three members could be counted as belonging to the Emsens family<sup>5</sup>. The same goes for two members of the Board of Governors.

In 1980 we see the same picture: four individuals who carried the Emsens name, as well as half a dozen that could be counted members of the family. Frédéric Hatschek, Max Schmidheiny andn Ernst Schmidheiny continued to hold places in the Board of Directors. Guillaume Cuvelier had been replaced by Joseph Cuvelier while Stephan Schmidheiny had been added. Again, two members of the Board of Governors belonged to the Emsens family.

The annual report of the Belgian Eternit NV from 1976 shows the same pattern. In the Board of Management there were two Emsens and two other men belonging to the family, as well as one Gui Cuvelier, a Rupert Hatschek and two Schmidheyns. One Emsens family member sat on the Board of Governors and two more in the management, including Alphonse B. Emsens.

A comparison of the composition of the Board of Directors, the Board of Governors and the management reveals that numerous names appear several times and that the Cuveliers, Hatscheks and above

<sup>3</sup> Der Eternit-Report, p.135

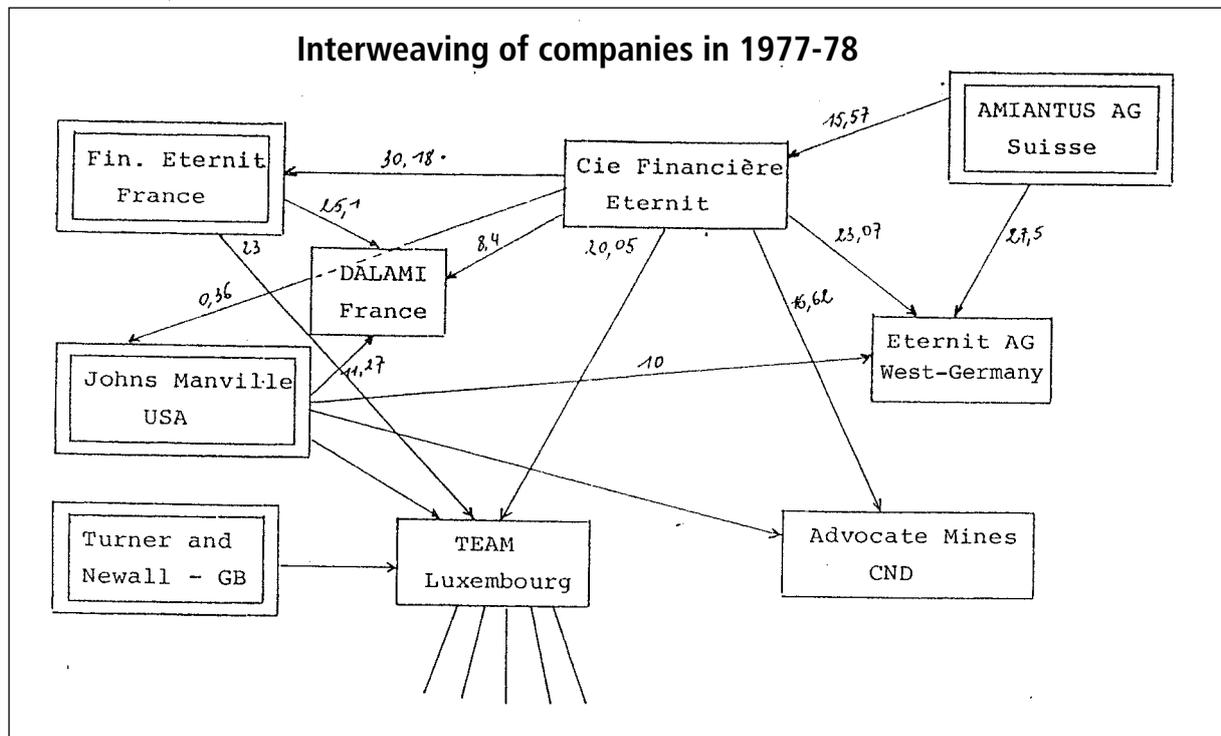
<sup>4</sup> Cornelia Binder, Die Asbestzementindustrie. Dargestellt an einem bedeutendem Österreichischen Unternehmen, Vienna 1975, p.118.

<sup>5</sup> These were the children of daughters and relations by marriage. For example, Etienne van der Rest, born in 1925, was the son of Paul van der Rest, the husband of Marguerite Emsens (1891-1975) a daughter of Alphonse Emsens.

all the Schmidheyns are well represented. This positional board game played by these families demonstrates the extent of cooperation between Eternit corporations.

As noted above, one of SAIAC's aims was mutual assistance in the supply of raw materials. This was organised through centralised buying. As late as 1981 a report of a meeting published in the Eternit Netherlands magazine Eternieus stated that 'All asbestos is bought centrally by the Group.' One point on the agenda of this meeting was the different properties of asbestos from the German factory in Nordenham and that of Johns-Manville.<sup>6</sup> In later chapters we will show how within the Belgian Eternit Group there was also discussion of, amongst other things, how to tackle the problem of the dangers of asbestos.

For the moment suffice it to say that over the years intensive cooperation has taken place between the industry's four founding families. In particular, the Schmidheyns and Emsens played a major role in a very large number of Eternit firms throughout the world.



Source: Etude de Secteur de l'Asbeste-ciment, Gresea 1979, p11

6 At a 'Consultation meeting' of Eternit on 13 April 1981, Eternieus, voorjaar (spring) 1981

## 3 The dangers were known

What did the Eternit corporations know about the dangers to health from asbestos cement and when did they know it? Before we answer this question we should perhaps first outline just what those dangers constitute. These facts were brought to light long ago by reliable scientists. A review of the most important publications indicates that it can certainly be assumed that Eternit companies have known of them for a very long time. At the end of this section we list a number of documents which demonstrate that this was the case.

### The dangers of asbestos

By the time asbestos cement was invented there were already reports that asbestos fibres could cause pulmonary diseases. Attention was initially directed primarily towards the processing of asbestos for use in textiles. Concern focused on the large quantity of dust in asbestos factories and the recommendation was for better ventilation. In later years further reports appeared regarding damage to health, not only in medical journals but in other occupational publications, information bulletins and ordinary newspapers. In 1918 the US Bureau of Labor Statistics went so far as to publish a book which noted that a number of major American and Canadian life assurance firms were refusing to sell any further policies to asbestos workers, whom statistics had shown to suffer a high rate of premature death. The first mention of claims for damages against an asbestos firm on the grounds of pulmonary disease dates from 1929. The company in question was Johns-Manville. Such claims for damages were also a concern for insurers providing policies against industrial risk.

Scientific interest in the problem increased following the publication in 1924 of a paper on asbestos fibrosis of the lungs in the British Medical Journal. From 1927 a number of further papers appeared in England and the term asbestosis was used for the first time. It was noted that due to the lack of microscopic and anatomical research in earlier years pulmonary diseases had too frequently been diagnosed as tuberculosis. Confusion also existed over the influence of silicon, silicosis being already recognised as an occupational disease. It had previously been possible only after the patient's death to specify the actual cause of the illness, but from 1927 a new radiography-based diagnostic method was developed. The increase in the number of people suffering from asbestosis led in the UK to legislation being enacted which laid down rules for counteracting the dust. This law – the Asbestos Industry Regulations – came into force in 1931 after a laborious tug-of-war with the manufacturers over the scope of the regulations. Reducing dust always involves costs. The manufacturers attempted to establish that the chance of a worker becoming ill was small, that it depended to a great extent on the duration of exposure and that moderate regulations would be sufficient.

Significant restrictions were placed on the industrial sectors to which the regulations applied, while the duration of an individual's exposure during working time had to be at least 8 hours. This made it pos-

sible for manufacturers to avoid claims for damages by varying the tasks performed by their workers. Medical research for a long time paid no attention to workers who, after a period of years working with asbestos, moved on to other occupations.

These Regulations were important for the example they set to other countries and were at least something. In practice they often meant little, however. The bad name that a factory could acquire amongst workers and people in its vicinity was generally more important and established a connection between the dust and the occurrence of diseases.<sup>7</sup> Of course, firms had to recruit personnel. Also of importance was the fact that the Regulations meant that asbestosis was recognised as an occupational sickness for which compensation for damages could be claimed. In the following years this recognition spread to other European countries with Switzerland joining the UK in 1939, Germany in 1943, France in 1945, Belgium in 1953 and the Netherlands in 1951.

In the '30s and '40s more papers were published on asbestosis, dealing with both the disease itself and the number of victims. In addition, reports began to appear on the incidence of the illness amongst people who had had no involvement in asbestos processing, but who had inhaled dust outside the workplace.<sup>8</sup> The first mentions were made of a possible connection between asbestos and lung cancer and even of mesothelioma (cancer of the pulmonary membrane and peritoneum). Interest remained small, however. The economic crisis of the '30s followed by the war made the number of victims generally more acceptable. The industry was, moreover, able to prevent or delay by many years the publication of the results of numerous studies. When official state institutes conducted research they promised anonymity and confidentiality.<sup>9</sup> With an eye to the possibility of claims for damages, or in order not to alarm personnel, health risks were treated as company secrets. For firms in the UK and US it became more difficult to find insurance against the risk of asbestosis. In Italy in 1939-1940 a study was conducted into the health of workers in the asbestos textile factories of Turin. The results of this study were indeed published, but nothing was done about its recommendations.<sup>10</sup>

On the European continent the use of asbestos declined between 1940 and 1945, while the war also clouded the picture when it came to the number of victims of earlier contamination. Most new reports came from the United Kingdom and the United States. In these countries the use of asbestos continued unabated, with the asbestos insulation industry experiencing a huge upsurge. This industry began to produce a large quota of victims, but the authorities immediately after the war, in 1946, introduced measures to impose standards limiting the concentration of free-floating fibres. The adequacy of these limits as a means of preventing disease was soon called into question, a fact well known to the directors of the corporations involved.<sup>11</sup> Concerned by the costs, the industry for many years resisted the widening of the scope of these protective measures to include further groups of workers.

Interest in asbestos-related diseases began to rise after the Second World War, but remained to a large extent unpublicised. New papers on the link with lung cancer and on mesothelioma did find their way into print. For these illnesses no connection appeared to exist between the duration and extent of exposure to asbestos fibres and the occurrence of disease. This could only mean that exposure outside

7 Geoffrey Tweedale, *Magic Mineral To Killer Dust*, Turner & Newall and the Asbestos Hazard, p.176

8 For further information on these and later years see Castleman, Chapter 7

9 See Castleman, *Asbestos: medical and legal aspects*, 4th ed. 1995, Chapter 3

10 Jock McCulloch, *Asbestos Blues*, Labour, Capital, Physicians and the State in South Africa, 2002, p. 87  
There were many cases of asbestosis.

11 Vandiver Brown, senior adviser at Johns-Manville at a symposium in 1947: 'So far as I have ever been able to ascertain, no one can state with certainty what is the maximum allowable limit for asbestos dust.' The symposium was hosted by the Saranac Laboratory which conducted research for asbestos firms. See Castleman, p. 314

the context of work carried a great deal more risk than had up to then been assumed. Moreover, mesothelioma can strike long after the exposure, as long even as thirty years or more. It became ever more obvious, in addition, that damage to the lungs was irreversible. No safe threshold value for the inhalation of fibres could be specified. Improvements in health care in relation to bacterial infections led to a fall in the rate of premature death, meaning that fewer people were dying before asbestos-related diseases manifested themselves, the result being an increase in their incidence. In addition, more reports appeared on asbestos-related diseases amongst family members, people living in the neighbourhood of asbestos plant and others who may have inhaled clouds of dust. It was in the areas where it was mined that asbestos dust was most widespread.

An important breakthrough came with the publication in 1964 of an epidemiological study conducted amongst insulation workers and their families by a team led by American doctor Irving Selikoff. This revealed that even a brief exposure could provoke mesothelioma. These findings attracted a great deal of attention. Then, in 1969, Dutch physician Dr J. Stumphius produced a dissertation which showed that a small quantity of asbestos dust could cause mesothelioma, and that this was also evident amongst people who did not work in the industry. His research was based on a shipyard and a machine factory owned by the firm Koninklijke Schelde (Royal Schelde) of Walcheren. Stumphius concluded that: 'In view of the presently occurring spread of asbestos use, most notably beyond the industry itself, one must fear an explosion of the same dimensions throughout the whole population. The consequences will become visible over several decades. Asbestos is developing from a problem of occupational medicine into a clear public health problem – the result of the Walcheren research is in this respect a warning which should not be misunderstood.'<sup>12</sup>

In the 1970s attitudes amongst politicians began to change. Initially, this meant a tightening of standards in Western Europe and the US. Later, bans were gradually introduced on one or another type of asbestos. A definitive break with asbestos was delayed, the possibility of requesting exemptions being exploited to the full by firms in the industry.

Different Eternit corporations asserted that asbestos was not dangerous if it was encased, as was the case with asbestos cement (see Chapter 5). For years this argument was used to prevent the introduction of restrictive measures, yet it was based on a specious picture of the actual dangers involved with this material. The whole life cycle of asbestos cement must be taken into account when these are assessed, from mining and transport, via the production process and all the way through to the processing of the waste. Examining asbestos cement in this light reveals that its dangers certainly do not disappear simply because it is encased in cement. In each part of its life cycle asbestos presents dangers to health.

### **Who knew what when?**

The most important medical publications concerning asbestos were:

- 1930 Relationship between asbestos dust and asbestosis established  
Merewether, E. and Price, C. Report on the effects of Asbestos Dust on the lungs and Dust Suppression in the Asbestos Industry (London: Her Majesty's Stationary Office, 1930)
- 1955 Relationship between asbestos dust and lung cancer established  
Doll, R., "Mortality from lung cancer in asbestos workers" British Journal of Industrial Medicine 12, 1955, pp. 81-87.

<sup>12</sup> Dr J. Stumphius, *Asbest in een bedrijfsbevolking* ('Asbestos in a company workforce'), 1969, p 223.

- 1960 Relationship between asbestos dust and mesothelioma (cancer of the pleura and peritoneum) established  
Wagner, J.C., Sleggs, C.A. and Marchand, Paul, “Diffuse Pleural Mesothelioma and Asbestos Exposure in the North Western Cape Province”, *British Journal of Industrial Medicine* 17, 1960, pp.17 ff.
- 1969 It is established that a small quantity of asbestos dust can provoke mesothelioma, including amongst people who have never worked in the industry. Stumphius, J., *Asbest in een bedrijfsbevolking, Voorkomen van mesotheliom bij werknemers van de Scheepswerf De Schelde in Vlissingen* (“Asbestos in a company workforce. Occurrence of mesothelioma among workers at the De Schelde Shipyard in Vlissingen [Flushing]”) (Van Gorcum Assen, thesis, 1969)

As this short overview shows, the dangers of asbestos dust have long been known. It can certainly be assumed that producers of asbestos cement were aware of these important publications regarding their product.

### **They knew**

The producers cannot claim that they did not know anything about asbestos-related diseases. They kept up to date with reported findings and had contacts with medical experts. As well as their involvement with asbestos cement, owners of these firms might have holdings in companies which used asbestos for other applications.<sup>13</sup> In a German publication of the 1980s, *Der Eternit-Report*, Werner Catrina reported how, since as far back as the 1930s, the firm had played down the threat of asbestosis.<sup>14</sup> Silicosis was worse, they claimed, and in any case life was short. “Dust on the lungs was in earlier times taken as a matter of course,” argued one Dr. Blumer from Niederurnen in an interview with Catrina. “Working practices which were dangerous to health in mine galleries were somewhat better paid.” By this time he had more problems with accidents involving machines in the Eternit factory.

In the same report Max Schmidheiny, longstanding boss of Eternit Switzerland, is quoted as saying that “The only problems I had to concern myself with were the cases of asbestosis that you found here and there... we considered this to be the same as silicosis. It was even said back then that silicosis is more dangerous because of the quartz dust found in stone works and quarries. Asbestosis certainly did not appear to people to be so terribly dangerous.”

The occurrence of asbestosis was, in addition, less noticeable in the past because numerous affected workers came from other countries, being employed for three or four years before returning to their homes. This of course raises the question as to why temporary guestworkers were employed for the most dangerous work. It was already known that the incubation period for asbestosis could be extremely long. What the above quotation expresses is a lack of concern which was structural: why worry yourself about a few victims? Workers could be replaced.

In 1950 SAIAC received a letter from Eternit Netherlands in which the Dutch firm requested more information on the occurrence of asbestosis. In the Netherlands a ‘silicosis law’ was in preparation which devoted one of its articles to asbestosis. SAIAC in turn requested information from members, who included other Eternit firms and T&N, and distributed copies of medical articles on the subject of

<sup>13</sup> Eternit Belgium was, amongst others, involved with Fadamac and with the French company Dalami (Société des dalles et produits amiantés), in which Johns-Manville also held an interest. Eternit Netherlands was, through Nefabas, involved with other asbestos products.

<sup>14</sup> *Der Eternit-Report*, p. 82. The journalist Werner Catrina was offered the opportunity in 1984 and 1985 by Stephan Schmidheiny to speak intensively with people who had been involved with Eternit.

asbestosis in Germany. The tone of the reactions was reassuring. Not a single case had been demonstrated. Yet SAIAC's letter to Eternit Netherlands dated 6 July 1950 tells a somewhat different story, stating that "all of our employees are extremely interested in becoming informed as to the current state of knowledge regarding the occasional occurrence of asbestosis in the asbestos cement industry." In the person of Max Schmidheiny, SAIAC's secretariat urged members to take measures to reduce dust emissions. Of particular interest is the reaction of T&N which drew attention to a number of requirements of the Asbestos Industry Regulations of 1931, as follows:

*These regulations apply substantially to the processes scheduled in the Asbestos Industry (Asbestosis) Scheme, 1931 and, in brief, require that, inter alia,*

- (i) an exhaust draught effected by mechanical means be provided to prevent the escape of asbestos dust into the air in any room in which persons work;*
- (ii) mixing or blending by hand of asbestos shall not be done except in a special room in which no other work is ordinarily carried on, nor except with an exhaust draught effected by mechanical means to ensure the suppression of dust;*
- (iii) a sack which has contained asbestos shall not be cleaned by hand beating but by machines;*
- (iv) all sacks used as containers for the transport of asbestos within the factory shall be constructed of impermeable material;*
- (v) a breathing apparatus shall be provided for every person employed in chambers containing loose asbestos, or in cleaning dust settling or filtering chambers or apparatus.*

The requirements for firms in the UK were, as can be seen from this, known to all Eternit companies, but were nevertheless not complied with. The chance of detecting an asbestos-related disease remained small in the 1950s, because production and use of asbestos cement had been for many years restricted by economic and political conditions. After 1950, with the rapid growth in production and use of asbestos, the possibility of this happening had begun, however, to grow markedly. In many countries new factories were established. In this period, also, new reports of sickness amongst workers in other sectors where asbestos was processed began to appear. In 1959, in Johannesburg, a conference was organised during which the pathologist Christopher Wagner presented the results of research amongst mineworkers and those who lived in the neighbourhood of mines. The results revealed the existence of mesothelioma in both categories.<sup>15</sup> Later, the publication of these results found a world-wide audience and the findings were frequently cited.

The first major wave of public disquiet was provoked by the investigations and actions of Dr Selikoff. In *Der Eternit-Report* it was noted that the attitude had been 'let sleeping dogs lie' (p.99). This became untenable when, in 1974 in Sweden, a threat to ban all asbestos goods arose, a ban which would of course have included asbestos cement.<sup>16</sup> New Eternit Switzerland boss Stephan Schmidheiny was deeply impressed and argued for a transition to asbestos-free products. Family members and others who were involved (the Emsens, Cuveliers and Hatscheks) saw no necessity for this, though in 1976 it was mentioned in annual reports that they were considering changing the name of asbestos cement, substituting the term 'fibre cement'. In defence of asbestos persistent emphasis was placed on the use of specious comparisons: the risks of smoking, or of traffic or household accidents, for example.<sup>17</sup>

<sup>15</sup> A paper appeared in 1960 in the British Journal of Industrial Medicine. Wagner therefore travelled through western Europe during these two years and in England spoke with managers from T&N, who, according to Wagner, advised him not to go through with his investigation. See Tweedale, p. 154.

<sup>16</sup> As early as 1964 it was already specified in Sweden that asbestos must be replaced wherever possible. In 1972 a limited ban was introduced in Denmark, but this did not apply to asbestos cement.

<sup>17</sup> See e.g. *Der Eternit-Report* p. 88. See also: 'But just one cigarette increases risk more than thousands of asbestos fibres. And eating a charcoal grilled steak every week is more dangerous than living in an asbestos-insulated building.' Statement by Michel Camus, a scientist at the University of Quebec, quoted in a Belgian newspaper and cited by Laurie Kazan-Allen.

It is clear that the Eternit companies had at, a very early stage, knowledge of the gravity of the risks to health posed by asbestos cement. What they did with this knowledge is the subject of the following chapter.

## 4 Organised opposition

The dangers of asbestos cement were known to all of the companies involved. Eternit companies worked hard to prevent measures to counter these hazards from being introduced. In this chapter we look at the lobbying carried out by these firms and their attempts to hinder research into possible alternatives to asbestos. If the Eternit corporations had invested more energy in the finding of an alternative material, production of asbestos cement could have been halted far earlier than it was. Yet not only did they not make much effort to seek alternatives, they even put a stop to such research. A third form of opposition – disinformation spread by Eternit about the dangers of asbestos cement – is the subject of Chapter 5.

### Lobbying and legislation in the Netherlands

In 1949 a law was proposed relating to silicosis in which a single passage dealt with asbestosis. What provoked this was a series of articles on asbestosis written between 1938 and 1945 by Dr. P. Luyt, a medical advisor at the labour inspectorate. Luyt pointed to the risks involved in the sawing up and smoothing off of asbestos cement.<sup>18</sup> The law, which came into force in 1951, offered the possibility of specifying more detailed requirements, but it was not until 1971 that this was acted upon. In 1970, Mr Roolvink, the then Minister for Social Affairs, speaking in a parliamentary debate, reacted to the thesis recently published by Dr Stumphius by stating that “The relationship between the quantity of asbestos inhaled and the long-term inception of mesothelioma is insufficiently understood for it to form the basis of policy,” adding that “The assertion that inhalation of a few asbestos fibres leads irrevocably after thirty or forty years to malignant tumour, as is being said, must be emphatically denied. It has the same character as the assertion that anyone who has at any time ever smoked a few cigarettes will inevitably get lung cancer.”<sup>19</sup>

Despite this, the labour inspectorate imposed an occupational health directive relating to exposure to asbestos. The asbestos industry was involved in this, the recommendations being largely taken from the British Regulations. At a conference in London in 1971 a spokesman for the asbestos industry, Kolff van Oosterwijk, spoke about the beginnings of disquiet in the trade union movement.<sup>20</sup> As a delaying tactic he proposed the setting up of as many committees as possible which, due to their

18 See P. Swuste, A. Burdorf and J. Klaver, *Asbest, het inzicht in de schadelijke gevolgen in de periode 1930-1969 in Nederland*, (‘Asbestos, understanding of the harmful consequences in the period 1930-1969 in the Netherlands’) 1988.

19 Proceedings, Tweede Kamer (Lower House of Dutch national parliament, sitting 1970-1971, 2500-2501).

20 Kolff van Oosterwijk was a director of Hertel, the Netherlands’ biggest insulation firm and one which had itself seen a striking number of victims amongst its own personnel.

expertise, must be involved in decision-making by the state and public authorities. This would offer space for the necessary delays and time to lobby against critics of the use of asbestos.<sup>21</sup> Sure enough, a series of committees including representatives of the industry was established.

In a letter to the labour inspectorate Eternit Netherlands attempted to play down the medical risks. Doctors were cited who contested the proof that a causal relationship existed.<sup>22</sup> In 1972 Eternit Belgium's chief physician Dr Lepoutre wrote a letter to the inspectorate headed 'The biological effects of asbestos' in which he claimed that the international conference in Lyon had recognised that 'a limit value for exposure exists and that with the help of technical regulations this can be achieved with respect to prevention.'<sup>23</sup> Lepoutre further stated that encasing the fibres rendered asbestos products harmless.

In reaction the medical advisor to the labour inspectorate wrote that while at the Lyon conference a dosage effect had indeed been specified for asbestosis, this was not true for mesothelioma.<sup>24</sup> He also dismissed out of hand the argument regarding encasement, stating that 'The product must moreover still be manufactured, during which loose asbestos will certainly be present.' The advisor also wrote to a colleague that as a member of the conference Advisory Committee, Lepoutre must know that his observation was in conflict with the conclusions arrived at in Lyon.<sup>25</sup> In December 1973 another letter arrived from Lepoutre, in which he stated that support had 'been given' in Lyon 'to studies conducted by, amongst others, Dr Muriel Newhouse, an article by whom I have recently read in which it is stated that "The figures suggest that the risk of mesothelial tumours is strongly related to both the degree and the length of exposure to asbestos dust, and that although there may be no critical level where the cancer risk can be confidently said to be eliminated, strict control of factory hygiene and dust suppression may minimise the risk."<sup>26</sup> Vagueness was piled upon vagueness, with the conference in Lyon used as the purported source.

### **Substitute products**

Industrial production techniques were Ludwig Hatschek's winning card. Cement was easy to mould to a particular size and shape, but had to be reinforced. Reinforcement by means of asbestos fibres seemed to work well, while a second advantage was the relatively low weight of the materials involved. The product was so good that the manufacturers were not inclined to look for new discoveries when it came to the material's construction. New techniques related instead to new manufacturing processes and new applications. Nevertheless during the 1920s and 1930s patents had already been lodged by people outside the industry for materials in which substances other than asbestos were added to the cement.<sup>27</sup>

By means of industrial production techniques buildings could become relatively cheap, so that keen interest among building contractors responsible for major works such as stations, factories, exhibition complexes, hospitals and educational facilities was quick to manifest itself. Later, farmers sought the product for sheds and irrigation pipes. Contractors were also pleased by the prospect of being able to build cheaper private dwellings for working people.

21 Laurie Kazan-Allen, 'The Asbestos Frontline' p 21-22, in Steven P. McGiffen (ed.) *The Polluter Pays: Notes from the international conference on asbestos held in Amsterdam in May, 2004* (Hoorn: Comite Asbestslachtoffers, 2005)

22 The doctors in question were Dr H.T. Planteydt and Prof. Dr Gyselen who turn up regularly in Eternit texts. Letter of 3 August 1972 to the director J. van Haagen.

23 Letter to the Medical Adviser to the labour inspectorate, 27 November 1972.

24 Letter from the Medical Adviser to the labour inspectorate to Dr Lepoutre, 25 January 1973.

25 Letter from the medical department of the Directorate-general of Labour, 1 February 1973.

26 Letter to the Medical Adviser to the labour inspectorate, 4 December 1973.

27 See Castleman, pp. 454-455. Such patents also appeared in the '50s.

The Schmidheins, and to a lesser degree the Emsens' had traditionally held extensive interests in other building materials, a fact which enabled them to influence middle-men and building firms.<sup>28</sup> Through their holdings in the cement industry they had an interest in an increasing use of asbestos cement (large scale fibre cement), of which cement itself was of course the foremost component. The Swiss and Austrians enjoyed a monopoly in the production of asbestos cement in their own countries and a near-monopoly in its trade. The Belgians also had a near-monopoly, and dominated the market in various other countries, notably Germany and the Netherlands. This gave them so much market power that they could direct interests of the asbestos cement industry. They were involved with builders' trade magazines, organised training courses on building work, and presented an architecture prize in the judging of which the use of asbestos cement was a prime consideration. In different countries of the Third World they were unable to maintain a majority interest in asbestos cement firms, opting instead for control of technology and patent rights. In these countries interests were also acquired at an early date in a number of building materials in order to strengthen influence over the market.

#### Market Power

For applications in insulation and fire-proofing, alternatives, including stone wool and fibre glass had been available since the 19th century. From a technical point of view, however, asbestos combined a number of different qualities. The '20s and '30s saw rapid consolidation of asbestos firms. The consolidated corporations had an interest in emphasizing the exceptional properties of asbestos and by means of their strong economic position were able to hamper market access for alternatives. Customers could be put under pressure while firms making competing materials could be bought out, a policy pursued without restraint by the then biggest concerns Turner & Newall and Johns-Manville.<sup>29</sup>

In the First World War firms had by necessity to switch to substitute products simply because no more asbestos was being supplied, or because it was reserved for war-related purposes, principally to do with firefighting. Experiments were conducted with materials derived from plants, particularly with cellulose from wood. These products turned out to be less durable. The same conclusions were reached from experiments carried out during the Second World War. After both wars the switch back to asbestos fibres happened as rapidly as possible and there was no incentive for further experiment. No competitor arose to enter the market with new cement-based materials. This would not happen until, in 1975, Sweden imposed a ban on blue asbestos and, in 1976, on the installation of asbestos cement materials. Competition did come from the 1950s onwards from plastic building materials, and later, in addition, from plaster, leading Eternit holdings to buy into the companies involved. Because of competition profit margins for plastic were, however, lower than those for asbestos cement. Asbestos-free plates were only made before this time for use inside buildings. After the oil crisis of 1973 Eternit Belgium put more work into diversification.

Just after 1977, at the instigation of Stephan Schmidheiny, a programme of research into substitute fibres was established. The foremost motive behind this was growing social concern over the health risks from asbestos, because of which products containing asbestos threatened to become unsaleable. An additional motive was provided by the sharp rise after 1973 in the price of raw asbestos.<sup>30</sup> This was caused in part by higher energy prices which had a strong effect on transport and wage costs and higher requirements for protection against free-floating dust. The other Eternit companies were

28 Agreements were made involving exclusive arrangements with distributors. By building up a certain prestige on the basis of service and quality of materials, they were also able to demand a higher price. See Tom Stockman, *Het management van distributiekanaal: gevalstudie Eternit* (The management of distribution channels: case study of Eternit), 1992.

29 See Geoffrey Tweedale, *Magic Mineral to Killer Dust*, Turner & Newall and the asbestos hazard, 2003 p.139, and Barry Castleman, *Asbestos: Medical and Legal Aspects*, 1996, p. 35.

30 Werner Catrina, *Der Eternit-Report*, p.117

formally associated with the research and contributed to it financially, but they were less motivated. In the mid-eighties a spokesman told the journalist Werner Catrina why: 'Der Herr Schmidheiny hat mehr als genug Ausweichmöglichkeiten. Er kann es sich leisten, das NT-Experiment einzugehen. Wird es ein Fiasko, dann bleiben ihm noch genügend andere Geschäftsbereiche. Bei uns ist Asbestzement das absolut Dominierende, wir können das nicht leichtfertig aufs Spiel setzen.'<sup>31</sup> People's lives could apparently be put in jeopardy without any problem.

In 1978 Schmidheiny was alarmed by the announcement that in Switzerland a competitor – Durisol<sup>32</sup> – had been established with the intention of making a different kind of fibre cement. Shortly afterwards, the firm was bought out. In 1983 Eternit Switzerland announced that a number of products would become asbestos-free – window boxes, and plates for facades, the underside of roofs and interior walls – and that in the case of certain other products – roof plates and corrugated plates for facades – the quantity of asbestos contained in them would be reduced by half. In 1990 it was further announced that all products for use above ground would henceforth be free of asbestos and that it was expected that products for underground use - pipes – would be asbestos-free by the end of 1993. In the same decade firms outside Switzerland were also forced out of business or closed down. Eternit Belgium in addition began to trade in asbestos-free products, but continued to deal in asbestos as long as it was still permitted, persisting with asbestos cement right up until 1st January, 2004. Shortly before that Etex also sold its interests in asbestos cement companies, for example in Eternit Everest Ltd.<sup>33</sup>

The introduction of new kinds of fibre cement was thus delayed. When it came to competition from other materials, exacting demands were made on their properties and production costs. The Eternit companies were certainly not willing to lose market share and delaying tactics were for this reason important to them. Etienne van der Rest, director of Eternit Belgium said of this that 'A substitute product for asbestos must fulfil a number of conditions. First and foremost it must be decidedly less unhealthy than asbestos. That is not so simple to demonstrate ... The materials which have to date been recommended as replacements such as glass wool, stone wool and other fibres, are certainly not harmless. At least we now know a great deal about asbestos and through drastic measures we can improve its safety somewhat. Second condition: the substitute material must be comparable in quality. Thirdly: the substitute must be economically viable, perhaps to some degree dearer than asbestos but nevertheless within reasonable proportions.'<sup>34</sup>

In reality, glass wool and stone wool had already been long in use and no health risks comparable to those posed by asbestos had appeared. The argument served mainly to gain time, particularly when it came to the second and above all the third condition. After some years it emerged that in relation to each type of application and also with regard to varying climate conditions a different kind of fibre cement needed to be developed.<sup>35</sup> New types of fibre come principally from the synthetics industry, though plant-based material is an alternative in poorer countries.<sup>36</sup> New materials developed during

31 Fritz Bachmeier, director of Eternit Austria in Der Eternit-Report, p.224. NT stands for Neue Technologie (New Technology).

32 According to Asbest und Profit (Asbestos and Profit), PSO, 1983, p 75.

33 Now that the company is wholly owned by Indian nationals (via the ACC group) more asbestos is again being used as a fibre in cement. Resistance in India is at the same time growing.

34 NRC Handelsblad, 3 June 1982.

35 For the Swiss this was a reason also later to withdraw from the production abroad of asbestos-free fibre cement.

36 e.g. waste from banana plantations in Costa Rica, which was widely and cheaply available in the vicinity. Der Eternit-Report, p 132. In the International Journal of Occupational and Environmental Health of July, 2003, p. 285 the fact that the government in 1984 did not want to spend any hard currency on the import of asbestos is given as a motive. The cement was supplied by a subsidiary of Holderbank.

the 1980s were mainly intended for western Europe<sup>37</sup> the region where asbestos use came under most pressure.

The public authorities also for many years permitted the use of asbestos where substitute products were dearer. A Dutch report of 1980, *Asbest en Milieuhygiëne* ('Asbestos and environmental health'), stated that 'Notwithstanding the obscurities of the situation, the conclusion appears warranted that for many products containing asbestos technically sound, commercially viable and reasonably acceptable alternatives are often available.'<sup>38</sup> The report continued by stating that there were exceptions in friction materials and packaging. There was no mention of asbestos cement. Yet for many more years asbestos cement could still be processed and exceptions were granted even for the use of pipes containing blue asbestos.

37 'La substitution de l'amiante dans les produits traditionnels s'est orientée, pour les sociétés du secteur européen.' ('Substitution of asbestos in traditional products is directed towards the European sector'), Annual Report of CFE for 1987, p 8.

38 Published by the Ministry of Public and Environmental Health, p 4.

## 5 Disinformation

Eternit companies have used disinformation to manipulate the medical debate, political decision-making and their customers' trust. In influencing these matters they have always made it a priority to keep the lid on any bad news emanating from the world of medicine, preserving the image of a substance with few risks. If in the course of time doubts grow and the number of claims for damages increases, then the idea is spread that in earlier years too little was known of the risks for those involved to be held responsible.

### 'Fixed in cement'

In the asbestos cement industry's early days there were already victims, but the number which can be proven was originally very small. Nevertheless, inspectorates and doctors showed some interest, and the industry was concerned to keep asbestos cement out of the limelight. T&N director Mr Turner wrote for example in 1937 in a letter to a subsidiary operator in India: "All asbestos fibre dust, whether it arises in a factory or elsewhere, is a danger to lungs... [however], if we can produce evidence from this country that the [asbestos cement] industry is not responsible for any asbestosis claims, we may be able to avoid tiresome regulations and the introduction of dangerous occupation talks."<sup>39</sup>

Only the industry's growth in the '50s and '60s laid the basis for the appearance of greater numbers of victims in later years. Asbestos cement producers followed the news about the dangers of asbestos, but restricted themselves to taking steps within the factory to do with storage and processing. At a meeting on asbestos on 3rd May 1937 in Germany representatives of the asbestos cement industry stated that for more detailed research in their factories only workers who, in the management's judgement, worked in dangerous parts of the plant would be involved.<sup>40</sup> Attention was at that time paid only to the idea of improved dust extraction and the wearing of dust masks. In 1940 in Germany standards for contact with asbestos in the production process were considerably tightened in response to the danger of contracting lung cancer from a relatively brief exposure.<sup>41</sup> This must have been known to the owner-directors of Eternit companies. Nevertheless, though the supply of asbestos in continental Europe was halted by the war, at the end of this period production was resumed unchanged. The claim was that no-one needed to worry about the health risks because after manufacture the asbestos fibres were fixed in the cement and could not float free. In guides to the use of asbestos cement plates and pipes on building sites, nothing whatever was said about health risks.<sup>42</sup>

39 Cited in Tweedale, p. 23.

40 In 1936 papers on asbestosis were published in Germany by, amongst others, a Professor Baader. At a meeting on 3 May 1937 in Berlin Baader indicated that the finest dust was the most dangerous and that a cure was probably not possible.

41 Castleman, p. 298-299. Whether these were implemented during the years of war is not stated.

42 For example, Well-Eternit Handbuch 1959.

A new line of defence came into play after 1978, when in one country after another the use of blue asbestos (crocidolite) was brought to an end, as this was the kind which appeared to carry the greatest risks. Blue asbestos was primarily used for the production of pipes and was by this time rivalled by plastic. The Eternit companies then announced that they would henceforth use only the less dangerous white asbestos (chrysotile). Yet by this time all of the results announced at the 1977 conference of the International Agency for Research on Cancer (IARC) in Lyon were well-known, results which, after thorough investigation, had led to the conclusion that white asbestos was also carcinogenic.<sup>43</sup> These crucial findings from an extremely prominent cancer research institute were systematically suppressed by Eternit firms which, however, never disputed their accuracy or attempted to refute them. In fact, the difference in risk between the two forms of asbestos had been overstated, as chrysotile was used on a far greater scale, having around 90% of the market. The ending of the use of blue asbestos served also to give the impression that health risks were being taken seriously, while at the same time the much more important market in white asbestos was defended. In Europe, where asbestos cement was widely used, companies lobbied successfully, but in the US a new regulation introduced in 1980 drew no distinction between types of asbestos.

The argument about the fixing of the dust in cement was trotted out endlessly, used by leading people from the industry, especially in Belgium, as an aggrieved reaction to criticism. Below are a few examples:

In a letter to the labour inspectorate in the Netherlands dated 27th November 1972, written by Dr J. Lepoutre, chief physician at Eternit Belgium:<sup>44</sup>

‘It is now generally accepted that a finished asbestos product, when the asbestos fibres are “locked in” – that’s to say bound within another product – has become harmless.’

In a 1976 report from Eternit Building Products Ltd to the Advisory Committee on Asbestos to the British Health and Safety Executive it is noted that dust from asbestos cement differs from asbestos dust itself:

‘In each case, asbestos cement behaves as cement, whatever the conditions used in this study.’ In other words, the asbestos is ‘locked-in’. This conclusion was confirmed in three reports.<sup>45</sup>

In Eternit Belgium’s annual report of 1977:

‘The problem of “asbestos and health” has been raised on our markets. The company has conducted an extensive action aimed at the competent authorities and public opinion in order to persuade them that the physiological properties of asbestos fibre are different when they are fixed in our material. This is proved by rigorous scientific research. On the other hand we must add to this that the important investments which we have made in the past in order to assure safe working conditions will be continued uninterrupted.’

43 International Agency for Research on Cancer, Monographs on the evaluation of carcinogenic risk of chemicals to man. Asbestos, vol. 14 (Lyon, IARC, 1977).

44 Letter included in the documentation on the Cannerberg affair held by the Ministry of Social Affairs.

45 Selected written evidence submitted to the Advisory Committee on Asbestos 1976-77, p.74

Max Schmidheiny in autumn 1984:

“And then, at the beginning of the `sixties...I heard about Mr Selikoff, I heard for only the first time from Eternit Berlin. Of this it's been said, that man is a fantasist who does research to make money. We have said that Eternit is absolutely not dangerous because the fibres are encased in the cement. Totally safe, which is also correct.”<sup>46</sup>

In De Standaard 22/23 July 1995, director of communications Paul van der Straten Waillet for Eternit Belgium:

‘That asbestos is fully encased, it does not find its way into the air. Asbestos which is sprayed on the walls as insulation, such as was done in the Berlaymont, is indeed dangerous to health. The public confuses the two ways in which asbestos is handled.’

As stated in Chapter 3, the argument that encasement renders asbestos safe is incorrect. In the whole life cycle of asbestos cement, from mining to waste processing, a great deal of ‘non-encased’ asbestos is freed and people are exposed to it.

### **Influencing the medical debate**

Interest in the health risks of asbestos has since as far back as the 1920s been a source of concern to producers of asbestos goods. A historical study by the American environmental advisor Barry Castleman has shown that major US concerns such as Johns-Manville were well aware of the problems and did their best to suppress bad news and limit financial risks, whether from damage claims, absenteeism through illness or compulsory safety measures. For the British firm Turner & Newall the same pattern is described by the historian Geoffrey Tweedale.<sup>47</sup> A great deal less is known about the Eternit companies, because their archives have to date remained closed. Yet they must, due to the close contacts which existed between asbestos corporations, as well as through their holdings in asbestos mines and experience in their own factories, have been aware of the situation. In the `20s the magazine Asbestos was already carrying occasional reports about asbestos-related diseases. This magazine for several decades reported news on anything and everything which touched the interests of asbestos companies. News about Eternit corporations occupied a prominent place. After March 1930, however, the publication ceased to carry stories about health risks. Correspondence has been uncovered from which it emerges that the asbestos corporations had led the publisher to understand that no mention should be made of the risks.<sup>48</sup>

The fact that symptoms of disease usually took years or even decades to appear, and that by that time the victims often no longer worked for asbestos concerns, also played a part in the story of asbestos and its use, as did the fact that not everyone who had been exposed became ill. This made it easier to argue that a causal relationship between exposure and these illnesses had not yet been conclusively proved.

The denial of a proven causal connection has for decades formed an important part of the industry's resistance. The purpose was not only to be able to continue using asbestos, but also to avoid claims for damages. Tweedale's findings have shown that research institutes which the industry itself set up or financed have primarily concerned themselves with tests on animals and on chemical analyses of

46 Cited in Der Eternit-Report, p.79 and p.81-82.

47 Barry Castleman, *Asbestos: medical and legal aspects*, 4e ed. 1995; Geoffrey Tweedale, *Magic Mineral To Killer Dust*, Turner & Newall and the Asbestos Hazard, 2000.

48 Castleman, p.183

different kinds of asbestos, doing almost no epidemiological studies. Tweedale describes in particular what occurred at the 'Asbestosis Research Council (ARC)', established in Britain in 1957.<sup>49</sup> The ARC had associated members such as 'Johns-Manville in America, James Hardie in Australia, Eternit in Belgium, and the Quebec Asbestos Mining Corporation'. It had to create the impression that it was objective and impartial, closely following developments in other countries and sending specially selected researchers to conferences at the Council's own expense.

For a long time it was also widely stated that there must be a threshold value for exposure to dust below which asbestos was safe to use. This threshold value should of course be economically viable, giving standards for concentrations of airborne dust which could be safely respected. Another idea was that there were 'safe fibres', below 5 microns in length. These fibres were widely used for insulation and in asbestos cement. Starting from these basic assumptions, the ARC as late as 1987 came up with a threshold value under which the counting of the number of fibres was restricted to what was visible through an optical microscope. By then, however, it had already been long known that with an electron microscope a thousand times as many fibres could be seen, and there was absolutely no proof that these shorter fibres were any less dangerous. The ARC knew this, as Tweedale noted. Moreover the search for a threshold value had significance only in relation to asbestosis. In relation to the risk of cancer, no scientist had ever formulated an exposure limit, because there was no indication as to under what threshold value this risk no longer existed. Asbestos cement firms had already deliberately ignored this essential difference between the risk of asbestosis and that of cancer when they came out with the argument that they had for some time maintained valid limit standards.

In general, corporations sought to postpone undesirable conclusions, by constantly emphasising that more research was still required. The industry was trying to buy time, in the expectation that the benefits would outweigh the costs. Tweedale concluded:

'The ARC created uncertainty and suggested that various "problems" needed to be resolved by time-consuming research (rather than by common sense)... Typically, when mesothelioma was recognised - and the public and scientific community registered alarm - the ARC advised "caution" and argued that: "much more investigation is necessary before firm conclusions can be reached. First to be clarified is whether the nature of the cancerous change might be related either to a specific type of asbestos or to some accompanying impurity contained in the asbestos fiber... The disentangling of these and other questions will take much time and effort.."'<sup>50</sup>

Another form of obstruction consisted of attempts to demonstrate that substitute materials such as fibre glass also posed risks to health. In this vein, the ARC stated in 1987 that 'there is no hazard which is unique to asbestos among fibres'.

#### Asbestos Project Group

During the 1970s the Netherlands was one of several countries which saw growing interest from critical scientists in the subject of chemicals and health, as well as working conditions in relation to the problem of asbestos. A number of them were from 1979 organised as the 'Asbestoprojektgroep' – the Asbestos Project Group – in cooperation with the country's largest trade union federation, the FNV. They conducted research into working conditions in factories, - including Eternit - into the transport of waste and the possibility of substitute materials. Their findings were in stark contrast to those of the rose-tinted messages emanating

49 Geoffrey Tweedale, 'Science or Public relations? The Inside Story of the Asbestosis Research Council, 1957-1990', *American Journal of Industrial Medicine* 38 (2000), 723-734.

50 Tweedale in *American Journal of Industrial Medicine* 38 (2000), 729.

from Eternit. Eternit's response was to write letters of complaint to universities and advanced technical colleges in which they accused those involved of unscientific behaviour. They particularly called into question the integrity of scientists from the Group's Delft-based section 'Veiligheidskunde' ('Safety Knowledge').

### **Influencing the authorities**

During the legislative course and implementation of the above-mentioned Asbestos Regulations Act in the UK, companies established in that country did all that they could to interfere with the determination of the Act's scope. Such interference is, to be sure, not unusual in the history of legislative regulation related to occupational health and the inspectorates responsible for it. Tweedale's research revealed that the approach in the UK was to play down the risks and restrict the scope of the regulations as well as of liability with regard to potential groups of victims. Measures must not be too costly and must not pose a threat to the firm's existence, while attention must be paid to the danger of competition from other countries where less rigorous rules were in force. Castleman describes a similar situation in the US. In later years exerting influence on the regulatory activities of the state authorities would become an important aspect of the ARC's work. When, at the end of the sixties in the United Kingdom stricter regulation could not be avoided, the ARC changed tack, arguing that firms needed more time to implement the measures. This argument was also used in the Netherlands and elsewhere.

### **Influencing customers**

Eternit companies have in the past put a lot of effort into the business of reassuring their customers. Instruction manuals for many years contained no reference to health risks. Only in the late '80s in the wake of a campaign by the Canadian Asbestos Institute was a guide to 'safe use' of asbestos (chrysotile) produced. For many decades Eternit published its own magazine in three languages, AC-Revue, yet this contained just as little on the dangers of exposure as did the various manuals. Asbestos, being encased in cement, is harmless, this was the longstanding answer to critics. Only when the debate went public were any instructions given for 'safe use'.

In the 1960s the issue was raised of the release into the air of asbestos fibres during processing and the suggestion was made that for this reason labels drawing attention to this danger should be placed on products. In the US, as early as 1964, shortly after the publication of Selikoff's paper, warning labels on asbestos products were introduced on a limited scale by a number of different producers. This did not include the sacks of pure asbestos which were transported from mines in Canada and South Africa: 'Not until 1969 were the first warnings also placed on sacks of asbestos fiber; other products, such as asbestos-cement panels and brake linings, do not appear to have borne warning labels until the 1970s.'<sup>51</sup>

In the US, in the years following this, labelling was made compulsory. In other countries, however, there was a great deal of resistance to this, as is evident from the establishment of an international lobbying group for asbestos firms, the AIA (Asbestos International Association), under the chairmanship of Etienne van der Rest, a member of the Emsens family who sat on the board of a number of different Eternit companies. From internal AIA communications it emerges that in 1978 a consensus existed that warnings of the dangers of asbestos should be kept to a minimum.<sup>52</sup> In particular, warnings of the danger of cancer should be avoided. When, in 1980, Turner & Newall decided nevertheless to use the word 'cancer' their management received an anxious letter from Van der Rest asking for clarification,

51 Castleman, p 387.

52 Castleman, p 844-845.

because the danger existed that in Europe such strongly worded warnings might become compulsory. T&N reacted to this by arguing that the explicit wording could help stem legal claims for damages. The company also stated that in its experience warning labels did little harm. The European Community, in any case, went no further in 1983 than the formulation ‘asbestos dust is dangerous to health’, a clear sign of the influence of Eternit, the biggest user of asbestos in the EC’s member states. Outside Europe, Australia and the US, the multinationals, aided and abetted by Canada, succeeded in long delaying any labelling requirement, or ensuring that labels could be formulated in extremely abstract wording.

In September 1989 Eternit Netherlands sent another letter, this time to architects, building contractors, housing associations and local authorities in which the company responded to criticisms of its role from the Socialist Party and others. A few passages: ‘Since the founding of the factory in Goor in 1937 every attention has been paid to combating dust, despite the fact that no-one was proposing legislation or regulation to this end. When, at the end of the `60s the health risks from asbestos became known, Eternit applied itself to the task of maximising safety in its own factory and on building sites. ... The determination of the fact that blue asbestos has exceptionally dangerous properties was seen, at an early stage, as a reason to end its use. By means of correct measures, ensuring a low rate of asbestos exposure, the risk associated with the use of white asbestos, the only type which is now used in Eternit products, is esteemed by experts – including the health council – to be negligible.’

Eternit referred in fact to a draft advisory note which spoke of a probable smaller risk. This had attracted a great deal of criticism, and because of this it was never published (see box). Responding to it, the Ministry of Public and Environmental Health, in a 1980 report entitled *Asbest en Milieuhygiene* (‘Asbestos and Environmental Health’) said: ‘In any case it is precisely the data on chrysotile that provided the grounds for the acceptance that in relation to exposure to asbestos fibres no threshold value exists under which the chance of contracting lung cancer is effectively nil.’<sup>53</sup>

#### Cleverly-chosen references

Eternit asserts that the ‘health council’ had esteemed the risk from white asbestos to be negligible. The company here refers to a draft advisory note of 1988 from the Health Council’s Consultation Group on Toxicology and Ecology entitled *Asbest, toetsing van een ontwerp-basisdocument* (‘Asbestos, review of a draft basic document’) This draft advisory note was written at the request of the Minister of the Environment in reaction to an earlier draft advisory note on asbestos prepared under the aegis of RIVM – a state research institution responsible for providing information, monitoring and a scientific basis for public health policy – in order to provide a basis for environmental quality goals.

In the Health Council’s advisory note it was stated that white asbestos cannot, or rarely does, cause mesothelioma. It does also mention the fact that, in order to express the difference in the potential of white and blue asbestos to provoke mesothelioma, the RIVM document suggests a reduction factor for quantitative risk evaluation of 10-100. The Consultation Group judged this reduction factor to be arbitrary and stated that the necessary data which would have made possible an accurate estimation were as yet unavailable.

Criticism of this advice note came from a number of sides and the final version was to adopt a very different tone. Eternit, however, spotted the opportunity and, insofar as it suited the company’s interests, cited the Health Council’s original draft advisory note.

Also relevant was what the Minister for Social Affairs and Employment, Mr B. de Vries, said in a letter of 9th January 1990 to the Labour Council regarding the ban on asbestos:

“The carcinogenicity of asbestos has recently been the subject of a study by the Working Group of experts. In this Working Group’s report one of the conclusions was that white asbestos must be considered to be a proven human carcinogen, for which it is not possible to specify with certainty that a threshold value exists with regard to the provocation of lung cancer. Furthermore it is stated that on the grounds of currently available scientific data it should be concluded that no difference exists between the two types of asbestos with regard to the overall risk of cancer.”

53 *Asbest en Milieuhygiene*, p. 8. Stumphius knew about the danger from chrysotile as early as 1969.

## 6 Conclusions and recommendations

A hundred years of asbestos use has demonstrated the way in which the owners of asbestos corporations have consistently put their own interests before considerations of public health and the environment. They have been aided in this by politicians who believed ‘the economy’ more important than people’s health and continually drew back from imposing the necessary measures.

### **Eternit’s arguments**

In court cases concerning compensation for damages for the victims, Eternit companies try as far as is possible to evade their responsibility. They hide behind arguments such as a lack of knowledge of the dangers, the fact that they have not broken state regulations (though they have of course exerted influence on these same rules) and lack of proof that their companies or products are the cause of asbestos-related disease.

At the very first court case in the Netherlands, in 1989, Eternit presented documentation from the SAIAC cartel as proof that in earlier years attention had been paid to asbestosis. The documentation in question took the form of a circular sent out by SAIAC in 1950, following a request from the Netherlands, where in 1949 a bill had been prepared dealing with silicosis, one passage of which dealt with asbestosis. The immediate cause was a case of illness at an insulation firm. The report of the ‘inquiry’ would reveal that the possibility of asbestosis occurring was nil, or so the director Mr Rijks asserted in a letter to other holders of interests in the industry.<sup>54</sup> It emerged from the documentation, however, that Eternit companies kept each other informed and that doctors in Germany had, as early as 1936 or 1937, pointed out that there was unmistakably a risk to health. Among the documents there is even a letter from Eternit Switzerland in which a case is mentioned of a worker who had died from asbestosis.

At further court cases in the Netherlands and elsewhere it is in addition often asserted that the various Eternit companies have no connection to each other and for this reason could not be expected to have had knowledge of a specific danger just because it might be known to another firm. As recently as 2003 Eternit Nederland was claiming that: ‘So by means of the purchasing of a licence companies came into being which all operated under the “Eternit” name, yet – except for this name – had nothing in common with each other. So, for example, the Belgian concern, to which Eternit in Goor belongs, is wholly independent from the Swiss “Eternit” company, in view of which the two firms have nothing in common bar their name.’<sup>55</sup>

54 Letter of 22nd September 1950, received in trial papers. The case was instituted by the Socialist Party of the Netherlands on behalf of three asbestos widows.

55 Appeal procedure of Mrs A. Horsting versus Eternitfabrieken BV, Memorandum of objections of Eternit, 9th September 2003, point 4.2.

## Spy

The increase in claims by victims is a source of concern for the Eternit corporations and their owners. They therefore keep an eye in addition on the activities of victims' groups and people across the world campaigning against asbestos. On 2nd October 2004 a meeting took place in Geneva of victims and activists from France, Switzerland and Italy at which also in attendance – uninvited – was a person who, it emerged, was a representative of Eternit Switzerland. When he was unmasked he turned out not to be prepared to say anything to the meeting. The representative from IBAS (International Ban Asbestos Secretariat) Laurie Kazan-Allen commented: "It is understandable that after avoiding its asbestos liabilities for so long, the Swiss Eternit Group is getting jumpy. Compensation for injuries contracted through hazardous exposures at Eternit's asbestos-cement factory in Casale Monferrato, Italy, and Eternit mines and factories in South Africa are being vigorously pursued. The floodgates are being pried open and Swiss asbestos victims are in the forefront of those eager to expose the misdeeds of this powerful corporation."<sup>56</sup>

## The conclusions of this study

This report demonstrates that the arguments employed by Eternit companies do not stand up to scrutiny. Chapter 2 shows that Eternit companies during the entire period of their existence have cooperated intensively, that they were linked by shareholdings, cartelisation and mutual ownership. A number of subjects, including the health risks and the strategy to be followed in order to limit regulation, were the subject of explicit coordination.

The argument that the health risks were not known is refuted in Chapter 3. Not only is it extremely unlikely that the companies were unaware of well-known medical publications, it emerges quite explicitly from documentary evidence that they were indeed conscious of the dangers.

Knowledge of the risks is also shown by the resolute way in which influence was brought to bear on the medical debate, the political decision-making process and the confidence of customers. This can be seen, for example, from the agreement between Eternit companies to avoid, for as long as possible, the use of the word 'cancer' on labelling.

From the moment that the unfortunate truth seeped out that asbestos is not only, technically speaking, a wonder-material, but also quite deadly, the industry exerted pressure on the authorities in order to prevent the passage of restrictive legislation or outright bans. This refutes the industry's later argument that it was the state which had been negligent. It was precisely the industry itself which systematically argued against interference from the public authorities and rigorously resisted a ban on asbestos.

From countless national and international documents it can be seen that the industry was at an early date well aware of the danger of inhaling asbestos fibres. Reaction to this knowledge was not an immediate search for alternatives. The industry's purpose for decades was, on the contrary, to interfere in the medical debate and play down the risks. Medical research remained, to the extent that the industry was able to influence it, extremely limited. Even investment in safety measures was postponed for as long as possible. When in the US and Europe the use of asbestos was no longer tenable, different internationally operating asbestos corporations continued to promote its use outside of these areas.

The various manufacturers maintained a relationship with each other through cooperation in the buying in of raw materials, through cartels such as SAIAC and in national employers' organisations, as well as, in later years, in international institutions whose purpose was to make propaganda, and in medical conferences. They kept each other informed and discussed tactics for the defence of their interests. They are, therefore, directly responsible for the tens of thousands of victims of asbestos who have already succumbed to one or another disease and the even greater numbers which, due to the long latency period of these illnesses, are yet to come.

56 [http://www.ibas.btinternet.co.uk/Frames/f\\_lka\\_sec\\_sub\\_switz.htm](http://www.ibas.btinternet.co.uk/Frames/f_lka_sec_sub_switz.htm)

Asbestos cement firms were the most successful of asbestos-related concerns in continuing the use of asbestos in the industrialised countries. These firms were to a large extent in the hands of a small number of families who liked to conduct their business behind closed doors. They were able for many years to remain on the sidelines of the political debate on the health risks of their product, their motto being 'let sleeping dogs lie'. Throughout the whole of this time they were able to maintain the appearance that asbestos cement, because of the 'solid combination' of asbestos with cement was safe. The plain truth was rather that this combination was merely temporary, forming only one, limited phase of the production cycle between the mining of the raw material and the clearing away of the waste.

The longstanding practice of giving asbestos cement waste away for free for the paving of paths and yards, a practice which enabled the firm to escape the costs associated with more conventional dumping, demonstrates in a most distressing manner how indifferent the manufacturers were to the health risks and how hypocritical was their talk of a 'solid combination' of cement and asbestos which rendered the latter harmless.

More attention ought to be afforded to the tragic lot of the people in all those countries where no ban on asbestos is as yet in force. In many countries the owners are able to sell up or close down and then clear out without having to concern themselves with the consequences which their commercial activities have had for people or for the environment. Eternit Belgium continued even as late as 2004 to promote its product in other parts of the world while in a number of European countries, including Belgium itself, it was already banned. This double standard has saddled these firms with a heavy responsibility.

For decades the trade in asbestos cement was extremely profitable. Large amounts were also earned through the sale of companies, or shares in companies, in countries where no ban was as yet in force and the new owners could continue on the basis of 'business as usual'. The most influential families earned fortunes and remain to this day millionaires. This is most true of the Belgian manufacturing family Emsens, which should surely make good, in financial terms, the harm they have caused. They were the last of all to give up asbestos and have to a very large extent backed out of accepting any liability.

#### Victims chase shadows

'If you tackle the undertakings country by country, they slip through your fingers. They are often subsidiaries of multinationals; it's child's play simply to delocalise or, if necessary, declare bankruptcy. The victims chase shadows and the country in question is left with enormous environmental pollution... The communities of miners live in extreme poverty. Many are poisoned at an early age and die in their forties from asbestos-related cancer, leaving behind a young family with no income and no future. Often such a family lives in a company house which they will also be deprived of.'

Richard Spoor, *De Tribune* (Socialist Party of the Netherlands monthly magazine), May 2002.

From the moment that the health risks became evident the manufacturers began to use the threat of unemployment to defend their position. The public authorities, trade unions and many others – even the workers themselves – were for a long time sensitive to this argument. What was in fact overlooked was the longstanding reluctance of asbestos cement firms such as Eternit to seek alternatives to asbestos or indeed to use one of the alternatives which was already available. The unemployment argument can only thrive in an economic climate characterised by high unemployment and where people are afraid of poverty. That is why early in the last century workers from abroad could be attracted to relatively developed countries to do work which was dirty and dangerous. Once these workers had gone home, nothing more would be heard of the state of their health. The production of asbestos cement reached its highest level in the '60s and '70s, when in most western European countries there was no

thought of unemployment. It was not employment but profitability which provided the motive to continue with this production, despite the breakthrough during these years in understanding of the dangers of asbestos.

### **The authorities**

The public authorities in the Netherlands, in particular the Ministry of Economic Affairs, played a reprehensible role in promoting the interests of a number of major undertakings. In the core countries of the four families which dominated holdings in Eternit companies - Switzerland, Belgium, France and Austria – this was even more starkly the case. The reluctance shown by politicians to allow the public health interest to prevail over that of the profits of asbestos cement corporations has burdened the Dutch state with a heavy debt. This means not only that the state has an extensive duty towards the victims within our country – and the same goes, of course, for every other country which has been touched by these events – but also that the public authorities are charged with the task of clearing up the gigantic legacy left behind by asbestos.

In addition the state has the ever more urgent task of compiling a complete inventory of asbestos-contaminated buildings, dwellings and land, and of decontaminating them. The state must in this respect take both the organisational and the financial lead. Each year that the authorities delay, the problem grows greater, both in terms of the number of victims and in relation to the costs involved in decontamination.

Holding those liable who are in truth responsible for the harm done to human beings and the environment is of direct interest to the people and countries involved. But at the same time it can send a message to all those corporations in countries which have not yet instituted a ban, to get out of asbestos, quickly and of their own volition.

### **Recommendations**

On the basis of this investigation the authors would make the following four recommendations:

- 1 The government and state authorities in each country should conduct a complete national inventory of the presence of substances and materials containing asbestos in buildings and in the soil.
- 2 Following this inventory a systematic decontamination should take place. The costs associated with the decontamination of the soil around the Eternit factory in Goor and the former Asbestona factory in Harderwijk must, mindful of the vision of EU ministers that ‘the polluter pays’, be charged to Eternit Netherlands. The same principle must, of course, be applied in other member states where this problem exists and, given that ‘the polluter pays’ is now recognised internationally as plain justice, anywhere in the world where asbestos decontamination is needed.
- 3 All victims of exposure to asbestos have the right to full compensation for damages. The state should pay such compensation in the form of an advanced payment and then pursue those responsible in order to recover the costs.
4. A parliamentary enquiry should be established into the use of asbestos in the Netherlands and the consequences of such use in the broadest possible sense. Other countries should establish equivalent procedures according to their own laws and customs.

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### **Abbreviations**

GRESEA = Groupe de Recherche Pour une Strategie Economique Alternative, Brussels

CRISP = Centre de Recherche d'Information Socio-Politiques, Brussels

IARC = International Agency for Reseach on Cancer

WHO = World Health Organisation

# Annex 1

## The history of asbestos cement

### Rise and reversal

Asbestos is a mineral fibre which was already in use in ancient times. More than one culture had discovered that it had exceptionally useful properties. It was incombustible (the property indicated by its name), hard wearing and could be used for reinforcing or strengthening both earthenware and textiles. These qualities, as well as its insulating property, meant that when the industrial revolution arrived in the 19th century asbestos became everywhere a much sought-after product. With asbestos, hot sections of machinery could be insulated and hot pipes enclosed. Gloves and socks made from asbestos textiles helped to protect against the heat of fires and iron plates. Countless new applications followed, such as shipboard insulation and brake-linings. In 1900 a patent was issued which in the extent of its use would surpass all other applications: the reinforcement of cement with asbestos.

The Austrian asbestos goods producer Ludwig Hatschek was the inventor of asbestos cement. After years of experiment he succeeded in devising an industrial process for the mixing of Portland cement with asbestos in order to obtain reinforced plates for the production of a new kind of roofing capable of competing with existing products. A patent on the process was lodged in as many countries as was possible. A trade mark was also chosen: Eternit, a word derived from the Latin *aeternus*, meaning eternal or immortal. This trade mark was protected, so that in each country only one firm was allowed, with permission from Hatschek, to use it.

Licences carrying this trade mark were quickly obtained in Belgium, France, Switzerland, Italy, Great Britain and the United States. Things were more difficult in Germany, where the patent was challenged. The first factory was built in Vöcklabruck in Austria. Major supplies of asbestos could be obtained cheaply from Russia, so that short-fibre asbestos was used, a form which previously no-one had known what to do with. It was seen as nothing but a waste product created in the mining of long fibres of the kind which could be spun into asbestos textiles. The new product rapidly became successful, however, partly through new applications, such as corrugated plates (first introduced in 1910), decorative tiles for kitchens and bathrooms, and covering for façades (introduced in 1927). The core of this success lay not simply in the material's exceptional qualities, but also in the possibility it offered for the production of plates of different shapes and sizes through an industrial process.

In 1911 the Italian engineer Adolfo Mazza devised a plan to develop a process for making pipes out of asbestos cement. Production began in 1916. In the 1920s technical improvements appeared in a number of countries, making mass production possible, as well as the production of pipes of greater diameter.

Asbestos cement pipes were from then on produced on a mass scale for use as water pipes, which were introduced in an ever increasing number of towns. An important advantage of asbestos cement is that plates and pipes can be produced that are lighter than was possible using earlier materials.

During the First World War production in Europe stagnated, asbestos being considered a military-strategic material due to its non-flammability. It was principally used in battleships as an insulation material. In the 1920s, use of asbestos again grew strongly, partly as a result of new applications such as the aforementioned pipes, and walls. A great deal was exported to countries outside Europe. In the 1930s growth stagnated as a result of the Great Depression, yet at the same time the first factories were built in Latin America. In 1932, the Italian corporation Eternit Pietra Artificiale even established a factory in Japan. During the Second World War asbestos was again reserved for military uses and supplies were stalled, while cement was rationed.

After 1945 there began an enormous expansion in the use of asbestos cement. Firms bearing the trade name Eternit took full advantage of the growing demand and became in many countries the dominant producer of asbestos cement. Mergers and takeovers led to a situation in which a small number of mega-corporations came into being which would dominate the world market, notable amongst which were the Swiss firm owned by the Schmidheiny family and the Belgian company owned by the Emsens. In eastern European countries factories were expropriated and taken into state ownership, including plants belonging to the Eternit corporations owned by the Hatschek family. From the 1950s onwards western European firms also established factories in Africa, in further Latin America countries and in Asia.

In the years of postwar reconstruction in continental Europe the material was perfectly suited to the industrial system of work which made its entrance in the building industry. Other applications, such as fireproofing, also grew, but asbestos cement remained the most important. This was used principally on a large scale in utility building, in plates used to cover walls, in ventilation pipes and roofing materials. Asbestos cement plates were also employed in the façades of apartment buildings. The material was particularly sought after in agriculture, where it was used in the building and roofing of sheds. In Europe from 1910 onwards it was used on a smaller scale to build cheap housing for factory workers with partitions, wall-coverings and roofs all made out of the material, in what came to be known as the 'Eternit House'.<sup>57</sup> As late as the 1950s housing for staff at the Eternit Netherlands plant in Goor continued to be built with interior walls of asbestos cement. In the Third World its use for cheap housing was even more widespread.

Growth reached its zenith during the 1970s, at which point the industry suffered a reversal as a public debate over the health dangers of asbestos came to prominence. Although the use of asbestos in the form of asbestos cement remained for a long time out of the spotlight, there nevertheless appeared, among a few executives of Eternit firms, the realisation that this would not last for ever and that different fibres must be sought by means of which cement could be more safely reinforced. Through a process of closures, going over to other products and buying and selling of companies, the production

57 In 1916 in Amersfoort in the Netherlands a village was built to house Belgian war refugees with housing constructed entirely from materials supplied by the Dutch asbestos firm Martinit. The village was called Elisabeth-dorp, 'dorp' being Dutch for village. 'Martinit'-houses were also built for the state-owned mines in Heerlen, also in the Netherlands.

of asbestos cement came increasingly to be concentrated in the hands of a single corporation, the Belgian Eternit Group, later known as Etex. This firm continued to produce asbestos internationally until, by its own account, 1st January 2004. Local production in countries where the use of asbestos is not banned continued beyond this date. Countries where its use is permitted in fact account for two-thirds of the world's population. In particular in China, India, Indonesia and Vietnam asbestos use continues to increase enormously.

# Annex 2

## The history of the Eternit companies

### Division of markets

After 1900, in a series of European countries as well as in the United States, independent companies were established which worked with Hatschek's patent and used the trade name Eternit. The Netherlands, where the company which in 1912 established a factory took the name Martinit, was an exception.<sup>58</sup> In relation to further development, the companies in Belgium and Switzerland were the most important. They were linked to each other and later to a large extent divided the market between them.

In 1903 a group of Swiss investors acquired a licence to produce asbestos cement under the trade name Eternit.<sup>59</sup> Production began in 1904. Cement was obtained from other firms, most importantly from Holderbank, the cement company in which, amongst others, Ernst Schmidheiny in 1914 acquired, through a merger, a significant interest. In 1919 managing director Jean Baer put forward a plan for Eternit Switzerland to establish its own cement factory with the goal of becoming self-sufficient in the material, of which 85 to 90 percent of the substance of asbestos cement consists.<sup>60</sup> Baer's plan was, from the outset, a danger to Holderbank's sales. Following the tried and tested principle 'If you can't beat them, join them'<sup>61</sup>, Schmidheiny and Baer drew up an agreement to acquire between them a majority holding in the Eternit Works<sup>62</sup>, a plan which was realised in 1920. With this step the Schmidheiny family strengthened its position in the building sector, producing not only cement but other materials for the industry.<sup>63</sup> In 1923 a holding company was formed under the name Amiantus AG, while the original company was renamed Eternit AG Niederurnen. The Schmidheiny family held a dominant

58 Official name: "Eerste Nederlandsche Fabriek van Asbest-Cementplaten 'Martinit'" (First Netherlands Asbestos Cement Plate Factory 'Martinit')

59 "Schweizerischen Eternit-Werke AG" (Swiss Eternit Works plc The)

60 In Austria Ludwig Hatschek had also established his own cement factory.

61 See Hans O. Staub, *Von Schmidheiny zu Schmidheiny*, 1924, p.50

62 A subsidiary, 'Eternit-Bau AG' was also established in 1910, which amongst other activities built the cheap housing known as 'the Eternit House'. In 1924 the Wohnkolonie Eternit Foundation was established.

63 Originally wood and tiles, later adding plaster.

interest which continued to grow. In 1925 Schmidheiny established Glanz-Eternit to produce wall-coverings from Eternit's asbestos plates.<sup>64</sup>

In Belgium in 1905 an Eternit company was established in Haren by the cement producer Alphonse Emsens. The firm operated under the name Eternit SA. Emsens acquired the licence from Ludwig Hatschek in exchange for a package of shares in his firm, with a Hatschek also joining the board. In 1927 Emsens established Eternit Emaillé and in 1929 the holding company Financière Belge de l'Asbeste-Ciment was formed.<sup>65</sup>

In 1922 Eternit Switzerland acquired an interest in Eternit Belgium, while in 1924 Amiantus bought into the Belgian cement producer Cimenteries & Briquetteries Réunies (CBR) in which Emsens also held a major interest.<sup>66</sup> The Schmidheiny's at the same time took positions on the board of the Belgian Eternit corporations.

Also in 1922, Alphonse Emsens invited Joseph Cuvelier, an industrialist from northern France, to establish an asbestos cement company with the help of his own licence. A factory was built in Prouvy-Thiant, and the company took the name SA Eternit France. In addition, a holding company was formed, SA Financière Eternit<sup>67</sup>, in which Emsens held a strong minority interest, while Cuvelier, in the same way, held an interest in Eternit Belgium. The families each had a member on the board of the other family's company, and the Emsens came later to form a majority on the board of the French firm. In the same year, as has been mentioned, a connection with the Schmidheiny family was forged when Emsens sold Ernst Schmidheiny shares in his firm. The proceeds from this sale enabled Emsens to invest in the French company.

From that year onwards, and for generation after generation, the four families were linked. It was the Schmidheiny's and Emsens, however, who enjoyed the most influence. Their firms would later together establish the majority of subsidiaries outside Europe with a working agreement which gave them the broadest influence and control. The Schmidheiny's had, in relation to this, an extra iron in the fire through the expansion of the cement concern Holderbank, which they came to dominate. Subsidiaries of Holderbank often supplied cement to an Eternit company.

In 1928 Schmidheiny and Emsens together founded a new company in Germany, Deutsche Asbest-Zement AG Berlin, with a few other Eternit firms holding a small package of shares<sup>68</sup>. In the same year Emsens acquired a significant interest in the Dutch firm Martinit.<sup>69</sup>

### **Concentration within Europe**

In the fast growing market for asbestos cement products competitors who had not acquired a licence from Hatschek made an early appearance. Until such time as the patent expired, they used different production techniques. Over the years many were eclipsed by the Eternit corporations and were

64 Brought into the Eternit EG group in 1969.

65 In 1923 a second factory was opened in Kapelle op den Bos. This became the most important site and exists to this day.

66 In fact most of the Emsens family, which also held a significant interest in sand extraction (via Sibelco), had given up their majority shareholding in CBR shortly after the First World War, control over three big firms having overstretched them financially. In 1925 Holderbank acquired a majority holding in the firm Ciments d'Obourg which also held a package of shares in CBR.

67 The holding company held a majority interest in the Eternit company Société du Fibrociment, established in 1903 in Poissy, near Paris.

68 Eternit Switzerland at the time of this company's founding held 27% of the shares, and Eternit Belgium 20%. Later they would between them take a majority holding.

69 An important supplier of cement was ENCI Maastricht, in which as early as 1926 Holderbank had acquired a significant interest, to the extent that Ernst Schmidheiny became the firm's chairman. ENCI was established by a forerunner of CBR, which was controlled by Emsens.

subject to partial takeovers. In 1932, for example, Eternit Belgium acquired a majority interest in the Dutch firm Martinit, in which Eternit Switzerland probably also held shares. Members of the Emsens and Schmidheiny families joined both the management and the board of directors. In 1936 a new factory was established in Goor, beginning production the following year.<sup>70</sup> In later years the Dutch firms Asbestona of Harderwijk, Nefabas of Oosterhout and Ferrocal of Doesburg were also taken over. In 1962 Eternit Netherlands came fully into Belgian possession.

The Swiss and Belgians were extremely successful. The Swiss enjoyed a monopoly and the Belgians a near-monopoly within their own countries, and the owners in both cases were able to exercise a strong influence over other building material sectors. This was even more true of the Schmidheiny than it was of the Emsens, though the Belgian factories had more favourable export opportunities at their disposal through their overseas connections. Their joint control of the German Eternit company also guaranteed them a continuing strong position in that country. Both families generally had, within the companies in which they directly or indirectly participated, positions in the executive and board of directors.

The Eternit companies were not in every case so successful, however. The Austrian firm was hampered in its expansion by the outcomes of both world wars. In France, competition from other asbestos cement producers, who over the years merged to form the Saint-Gobain group, remained strong. Eternit France eventually acquired a controlling interest in companies in Portugal and in the Italian Edilit, but itself fell increasingly into the hands of Eternit Belgium. In 1948 there remained a connection with Eternit Spain (Uralita), though by 1975 this was no longer the case.<sup>71</sup> The German Eternit company was from the very beginning controlled by the Belgians and Swiss and as a result its growth was confined to its own country. Eternit UK was limited by agreements with T&N as far as growth in its domestic market went and was taken over by the Belgians, for whom the firm had previously acted as importer. The later firm Eternit Building Products came into being in 1976 as the product of a merger of three companies each of which had been fully or partly owned by Eternit Belgium. Eternit Tac was set up in 1986 as a joint venture T&N, and two years later fell wholly into Belgian hands<sup>72</sup>. In the 1930s the Italian Eternit company had been successful, especially in the market for pipes, but after the war came to a great extent to be owned by the Belgians and Swiss, with the Belgians at first holding a majority interest and later, after 1973, the Swiss doing so. The Swiss and Belgians also held interests in Swedish Eternit firms.

An exception to this pattern is provided by Dansk Eternit of Denmark, which though it had regular contacts with Eternit companies elsewhere remained outside any formal cooperation. The holding company Dansk Eternit, which was formed in 1927, participated in other Eternit companies in Scandinavia and also controlled asbestos mines in Cyprus.

From the 1970s, when the public debate over the dangers of asbestos flared up and increasingly strict legislation was enacted, relationships began to shift. The Swiss group under the leadership of Stephan Schmidheiny became the first to withdraw, step by step, from the production of asbestos cement. Schmidheiny closed several factories, amongst which was one in Casale Monferato in Italy, and in 1989 and 1990 sold shares in the Eternit companies in Europe, including the 25% holding in Compagnie Financière Eternit, to the Belgian group. Only the Swiss Eternit AG was handed over to

70 Nefabas was established in 1939 in Heemstede, moving to Oosterhout in 1950. The firm produced asbestos paper, cardboard and felt.

Asbestona was established in 1935 in Harderwijk, producing asbestos cement. Both firms closed down in 1983.

71 More data are as yet unavailable. The French Eternit company, in common with Eternit Switzerland, did not publish an annual report.

72 TAC – Turners Asbestos Cement – was a subsidiary of T&N which was formed as early as 1926. The joint venture effected a 50% take-over.

his brother Thomas Schmidheiny, a major owner and important executive of Holderbank. In 1991 the Belgian group turned out to hold a 20 per cent interest in the Swiss Eternit AG, which terminated in 1994. It is unclear whether these shares were then acquired by a third party or whether in one way or another they remained in the Belgian group's possession. The Belgians also gradually increased their share in the French firm, now known as Etext, acquiring it wholly in 1994, when they also took the majority of shares in Edilit. As well as the purchasing of shares in companies which were withdrawing from asbestos cement production the Belgians also, following the fall of the Berlin Wall, used Eternit Germany to acquire new interests in companies in Poland and Lithuania.

### **Expansion outside Europe**

As early as 1925 Ernst Schmidheiny had begun investing in cement factories in Egypt and later the Lebanon. An asbestos cement factory followed. During the 1930s, however, attention was focused exclusively on the cement market and on interests in asbestos mines, which brought the Swiss and others to South Africa. Eternit Belgium initially directed its attentions towards South America, in the period from 1935 to 1937 establishing firms in Argentina, followed by Chile, Peru and Uruguay.<sup>73</sup>

A few years after the Second World War, as business in Europe forged ahead, a new wave of establishments was created elsewhere in the world. In Latin America the Swiss and Belgians cooperated closely and divided control between themselves, allowing it in each case to rest with the party holding the most shares. The Swiss dominated in Central America and in Brazil, Colombia and Venezuela, while the Belgians controlled the rest of South America, with minority interests being held by nationals of the countries themselves. Initially the Europeans held the majority interest, but in the 1960s the holding of such majorities by foreign parties came to be banned. In practice this was not particularly important, however, as technical knowledge remained in Swiss or Belgian hands.

In Africa, territory was demarcated along colonial lines. Eternit Belgium established subsidiaries in the Congo and Burundi, while it can be assumed that in 1971 they gave Eternit Netherlands the task of founding the same in Indonesia.<sup>74</sup> Eternit France set up firms in Morocco and Tunisia, and in the former the Emsens and Cuvelier families also held interests in the supply of cement. For its part, Eternit Belgium established companies in the former British colony of Nigeria, where Eternit Italy was also active, in addition dividing establishments in the Portuguese colonies of Angola and Mozambique with Eternit Portugal. Eternit Switzerland was either directly or indirectly involved in former British colonies.

In Asia the Swiss limited themselves to a few joint ventures in the Middle East, while the Belgians set up a branch in the Philippines. In 1973 a joint venture, the Toray Glasal Corporation, was established with Toray in Japan.<sup>75</sup> In 1962, in order to further continued expansion in Asia, Eternit Belgium established a cooperation arrangement with Johns-Manville, Turner and Newall and Eternit France, under the name of TEAM. Under TEAM's watchful care asbestos cement corporations were set up in Bangladesh, Pakistan, Indonesia, Vietnam, Turkey and later China, Kenya, Senegal, Greece and Mexico. At the outset the Belgians held 8.8% of the rights in TEAM, but over the years this rose. In

73 Fadamac subsidiaries were also established in Argentina and Brazil. Fadamac (Société pour la Fabrication de Matériaux de Construction) was originally a Belgian firm in which the holding company Financière Belge de l'Asbeste-Cement held a substantial interest. Fadamac for a long time used a number of asbestos products. See, for example, the Eteroutremer annual report for 1978, p.12.

74 In the report of the Works Council meeting of Eternit Goor, held on 19 February 1971, it states that "The chairman announced that Eternit Netherlands had taken on the task of founding in Indonesia an asbestos cement plate factory and of bringing it into production. It is hoped that at the beginning of 1972 production can be started with a single plate machine." Eternit personnel from Goor were sent to Indonesia to train local staff.

75 Cooperation began as early as 1954, for the import of decorative 'glasal' plates.

the 1980s, when J-M and T&N found themselves in difficulties as a result of snowballing criticism of asbestos, they transferred their interests in TEAM to Eternit Belgium<sup>76</sup>, which also took shares in Eternit France. In 1989 Turner & Newall also sold their shares – something over 49 per cent – in the Indian firm Everest Ltd, to Eternit Belgium. In the same year Stephan Schmidheiny sold almost all of his shares in asbestos cement companies in Latin America, Asia and Africa to the Belgians or to local entrepreneurs<sup>77</sup>. In Brazil, the package of shares was sold to the French concern Saint-Gobain.

By 1989 almost everything which had in earlier years been shared out was in Belgian hands. In 1990 Eternit Inc (United States) also passed into Belgian ownership.<sup>78</sup> In order to finance one or another of these sales companies and packages of shares were one again sold. During the 1990s factories were closed in Kenya, Angola, Senegal, Zaire (now Congo), Burundi, Bangladesh and Paraguay<sup>79</sup>. With an eye to diversification and the switch to asbestos-free products, firms and share packages continued to be sold off.

### **Asbestos mines**

Since the very early days major producers of asbestos goods had taken shares in asbestos mines, or themselves opened their own mines. In this way a regulated supply of asbestos could be guaranteed and profit margins enhanced. The Eternit companies were rather late getting started in this<sup>80</sup>. With the formation of SAIAC, however, management of raw materials played an important role. By means of common agreements the aim was to fine tune production in the main countries to bring it into line with expected demand and to divide this amongst themselves. In this way a good price could be maintained without the risk of the most important producers suffering shortages. In agreements it might even be specified that the price of raw asbestos for competitors would be fixed somewhat higher.<sup>81</sup>

In 1941 Eternit France established the Société Minière de l'Amiante.<sup>82</sup> A mine was opened in Corsica and in 1947 on recapitalisation minority shareholdings were also taken up by the Belgians, Swiss and a number of others. In 1974 the mine was closed and the partnership dissolved.

During the war the Schmidheiny's cooperated with the Germans in the mining of asbestos in Yugoslavia, with the aim of ensuring a supply. In 1947 they opened mines in Southern Rhodesia (now Zimbabwe) in order to supply Everite Ltd. From here they developed the Asbesco firm as a subdivision of Amiantus. In South Africa in 1961 mines were opened in Kuruman for the exploitation of blue asbestos. The holding company was also involved in asbestos mining in Brazil and Colombia, and via its participation in the German and Belgian Eternit, also in Canada. In 1981 the mines in Zimbabwe and South Africa were sold, and later also those in Colombia, and, in 1990, those in Brazil. Eternit Belgium concentrated its attentions principally on Canada. In 1962 – the year in which TEAM was formed – it acquired a 10 percent share in the Asbestos Corporation Ltd, though this was later reduced. The German Eternit held the same proportion. The Asbestos Corporation had until then been the largest independent mining company. In 1963 a new mine came into production, the Mine Advocate Ltd, and Eternit Belgium was once again a participant. Another major shareholder was Johns-Manville, so that via this route too a connection existed between the two concerns.

76 Eternit Belgium, moreover, had held for years a small package of shares in J-M (0.36 per cent), while J-M had once held a 10 per cent share in Eternit Germany.

77 Shares had also been sold previously to local entrepreneurs, for example in Bahrein in 1985.

78 Eternit Inc had existed since 1910.

79 Trends, 19 October 1995

80 T&N owned a series of mines in Rhodesia and acquired the Bell Mine in Canada when they took over Keasbey & Mattison in 1934.

81 Such an agreement was mentioned in a report from T&N boss Shepherd on his trip to the US in the autumn of 1938.

82 The Asbestos Mining Company". With a small minority shareholding this was indirectly linked to the company in Poissy, as well as to Eternit France.

**'Holding world prices at an economically acceptable level'**

he policy of Turner & Newall Limited in relation to the marketing of Raw Asbestos will be to seek to enter into frank and equitable arrangements for its supply to the principal Manufacturers of the different countries of the World. Turner & Newall Limited are willing to give a definitive assurance that they will at all times furnish to even the smallest Manufacturer anywhere, whatever may be his requirements, and furthermore give this assurance to the Asbestos Industry as a whole, that they will develop their properties from time to time sufficiently to keep pace with the World's needs in order that, as far as possible, there shall be no further shortage of Raw Asbestos in the Industry. The price policy in the distribution of Raw Asbestos of the Turner & Newall group will be to establish World prices on an economic level, the meaning of this being, prices at such a level as shall permit the maximum development of the industry throughout the world, which will in future be assured of sufficient supplies as against the old state of affairs when Manufacturers from time to time did not know when or where they might be able to get their raw material.

## Annex 3

### Cartelisation: SAIAC SA

In 1929 the Eternit companies intensified their cooperation by establishing a cartel, SAIAC, the Sociétés Associées d'Industries Amiante-Ciment (Associated Companies of the Asbestos Cement Industries). Involved were corporations in Belgium, France, Germany, Austria, Hungary, Czechoslovakia, the United Kingdom, Spain, the Netherlands, Italy and Switzerland. These firms were later joined by companies established in other countries by the families which dominated the industry. Membership included the British asbestos goods producer Turner & Newall, which also manufactured asbestos cement and was in fact the leading supplier of this product to its domestic market.

SAIAC's secretariat was established in Switzerland under the leadership of Ernst Schmidheiny. SAIAC served to ensure the ordered development of the asbestos cement industry through restricting competition. Schmidheiny played the role of initiative-taker for the cartel, having gained in Switzerland all of the necessary experience through cartels which controlled other building materials, seeing in such methods a means whereby the capriciousness of the trade cycle could be managed.<sup>83</sup> Dividing up markets had initially concerned sales in the domestic market and existing export markets, but later involved also outlets in other parts of the world, particularly Latin America and Africa. Turner & Newall operated for the most part in English-speaking countries, including (former) British colonies.<sup>84</sup> The Eternit companies, on the other hand, operated mainly in non-English-speaking countries. In Great Britain and Ireland, 80 percent of the market was claimed by T&N and the remaining 20 percent by the various continental Eternit companies.<sup>85</sup> These had been active in the UK for some time, as is shown by the fact then when, in 1929, T&N acquired the patent from the Italian Eternit company for the production of pipes by means of the Mazza process, they paid a substantial sum to obtain an agreement that no more Italian pipes would be placed on the British market.

Cartelisation was not unusual during this period, and in Europe it was not yet forbidden. Only in 1986 was it banned in the EU.<sup>86</sup> In the US, on the other hand, cartels were banned and as early as 1928

83 See Hans O. Staub, 'Von Schmidheiny zu Schmidheiny', (1994), p.42 and Werner Catrina, 'Der Eternit Report' (1985), p.39

84 T&N also made agreements with other British firms relating to 'British empire markets', with the exception of Australia, Ireland and Cyprus. This came formally to an end in 1948. Competition came chiefly from Cape Asbestos (South Africa) and James Hardie (Australia).

85 The Monopoly Commission Asbestos and Certain Asbestos Products (London, 1973), p.128

86 In the UK the first restrictions were introduced as late as 1948, these being tightened in 1956. A 1972 investigation by the Monopolies Commission showed that in fact since 1948 all asbestos products had been subject to restrictive agreements.

legal proceedings were brought against seven American and Canadian asbestos corporations. Formal involvement of American companies in the European cartel was for this reason out of the question, though this did not stop agreements being concluded on the basis of a nod and a wink. The biggest American firm Johns-Manville had, at a later date, branches in Europe, but was never a major producer of asbestos cement goods in this part of the world. It was, however, active in the major countries of Latin America. Turner & Newall was able in 1934 to take over the American asbestos goods company Keasbey & Mattison, creating for this purpose a separate holding company in Canada in order to evade the cartel law. Behind the scenes they were nevertheless able to make agreements with Johns-Manville and others.

Something which occurred in 1941 typified relations. Max Schmidheiny had at the end of the 1930s acquired interests in a limestone quarry in South Africa, limestone which would be used to produce cement, and the following year also considered establishing a cement factory in that country, where asbestos is to be found in abundance. Because of the war in Europe asbestos production was declining. Here he was intruding in Turner & Newall's territory. The British corporation, however, was too concerned by the level of social unrest in South Africa to wish to invest further and was therefore prepared to allow the Swiss company to break into the country's market, provided the trade name was not Eternit but Everite! This was confirmed in a telegram.<sup>87</sup> In 1941, therefore, the firm of Everite Limited was established in Johannesburg. In the same year Schmidheiny established a company in Brazil, while it had previously been agreed in SAIAC that the Belgians would invest in that country. This agreement was severed as a result of the war, however.<sup>88</sup>

During the war numerous agreements could not be maintained, but once it ended the threads within SAIAC were once again picked up. Given the rapid growth in demand, strict working with quotas was no longer the order of the day. In a commemorative document published in 1930 cooperation was characterised as follows:

“Today throughout the world more than 200 asbestos-cement factories are operating on the basis of the Hatschek process. With the majority of these undertakings the company in Vöcklabruck, where the asbestos-cement industry began, has friendly relations. Active exchange of views on experiences and improvements has had fruitful results for all undertakings. Close cooperation has brought along with it a situation in which one after another new possible applications for asbestos cement have been found and new products have been developed by different companies.”<sup>89</sup>

The agreements over the division of markets continued to operate, as is shown by, amongst other evidence, a text of 1975: “The Eternit factories in western Europe have made agreements concerning sales areas, so that the product of Eternit-Werke Ludwig Hatschek is directed at domestic demand.”<sup>90</sup>

87 The telegram's text read simply “You can go ahead in South Africa”, Der Eternit Report, pp.45-46

88 Der Eternit Report, p.135

89 ‘50 Jahre Eternit-Werke Ludwig Hatschek’, 1950, pp.9-10

90 Cornelia Binder, ‘Die Asbestzementindustrie. Dargestellt an einem bedeutendem Osterreichischen Unternehmen’, Vienna 1975, p.118

#### **T& N Managing Director Shepherd takes a tour**

In 1932 in London an agreement was made to the effect that the market in raw materials would be gradually divided between the leading producers in Canada, Rhodesia and Russia (the USSR). In 1933 Johns-Manville withdrew from formal attachment to this, at which point T&N Managing Director WWF Shepherd took a trip through Canada and the US to make, despite this withdrawal, formal agreements in which SAIAC would also be involved. Though this did not lead to the intended results, in practice an intensification of competition was avoided. With an eye to the planned takeover of Keasbey & Mattison by T&N, J-M Managing Director Lewis Brown let it be known that they were prepared to cooperate with a company if it had sufficient knowledge of the market in the US and would not disturb the dominant system of distribution. In a meeting with top executives of the J-M subsidiary Raybestos-Manhattan, Shepherd announced that the value of any 'entente' lay squarely in whether the sides were prepared to agree on prices, on control of competition, and, if necessary, on quotas. In 1944 a judgement concerning these agreements was handed down by the US Federal Trade Commission, but no sanctions followed. In 1961 a new investigation took place. Letters from T&N, in which it was indicated that the agreement that K&M would not operate outside certain specified areas while T&N would not do business directly in the US, were destroyed by K&M. This came to light at a later date when T&N was forced to open its archives.<sup>91</sup>

#### **Changing names**

In Belgium on a number of occasions branches were reorganised and as a result of this new names were continually being introduced. In 1947 the Société Africaine Eternit was set up with an eye to the establishment of subsidiaries in Africa. In 1966 the holding company Financière Belge de l'Asbeste-Ciment became the Compagnie Financière Eternit (CFE). Eternit Emaillé was merged with Eternit (Kapelle op den Bos). In 1978 Eteroutremer was established with the aim of gathering together interests outside Europe, while those inside Europe fell under the new Compagnie Financière Eternit organisation. In 1989 all of these were brought together in the Eternit Group, which in 1995 became Etex. In 2003 Etex was split into a branch for building materials, which kept the name Etex, and a branch for plastic products which took the name Aliaxis.

The Emsens family's domination was conducted until 1989 through both their own share holdings and participation in companies. They formed until 2000 the majority of the executives.

In Switzerland a number of changes occurred. For the expansion in South Africa the Amindus Holding company was established. From the end of the 1970s companies were closed or holdings in them sold, the outflow accelerating between 1988 and 1990. In 1988 a number of Swiss firms were brought together in Eternova Holding. In 1989 Stephan Schmidheiny sold Eternit AG Niederurnen to his brother Thomas (Holderbank) and withdrew from foreign Eternit companies. Remaining firms and shareholdings abroad were brought together in 1990 in Nueva Holding, which in the same year shed its last remaining interests in Eternit firms.

91 See Barry Castleman, *Asbestos, Medical and Legal Aspects*, 4th edition, 1996, p.38

# Annex 4

## Structure of the Groups Eternit Switzerland and Eternit Belgium

Division of control over Eternit companies between the Swiss and the Belgians, 1985<sup>92</sup>

*Swiss Group*

*In Eternit Holding AG:*

Switzerland: Eternit AG\*, Eternit Verkaufs AG\*, Durisol Villmergen AG\*

Germany: Eternit AG

Italy: Eternit Spa\*

Costa Rica: APC, PPC,

Guatemala: Tubovinil

El Salvador: Tecno Plasticos

Honduras: Bobicassa

Saudi Arabia: Amiantit Co. Ltd

*In Amindus Holding AG*

Mexico: Eureka

Costa Rica: Ricalit

Honduras: Hondulit

El Salvador: Eureka

Nicaragua: Nicalit

Guatemala: Duralit

Bolivia: Duralit

Venezuela: Eternit Venezolana

Colombia: Eternit Colombia

Ecuador: Eternit Ecuatoriana

Brazil: Eternit SA

92 Werner Catrina, DerEternit Report, p.238 Only companies in which either the Swiss or Belgian group had a substantial interest are included. In many cases, both groups had an interest. Control rested by agreement with the group with the larger interest.

\* In these companies the Swiss group had a majority interest, in the others a substantial minority interest. In most cases the Belgian group also held a minority interest.

*Belgian Group*

*In Compagnie Financière Eternit SA\*\**

Belgium: Eternit SA

Netherlands: Eternit NV

United Kingdom: Eternit Building Products

France: SA Financière Eternit

*In Eteroutremer\*\**

Zaire (Congo): Eternit du Zaïre

Burundi: Eternit Burundi

Nigeria: Eternit Sapele

Angola: Lupral-Lusalite

Argentina: Eternit Argentina, Fadamac Argentina

Peru: Eternit Peruana

Chile: S.I. Pizarreno

Uruguay: Eternit Uruguay

Paraguay: Eternit Industrias Paraguayas

Brazil: Fadamac

Philippines: Eternit Corporation

\*\* The Swiss group held an interest of roughly 25% in each of these holdings.

# Annex 5

## Interests

### Eternit Belgium

Below is a list of the principle interests held by Eternit Belgium in firms working with asbestos, as of 31 December 1967, 1977 and 1990<sup>93</sup>

	1967	1977	1990
Financière Eternit, France	x	x	x
Etex, France x	-	-	
Dalami, France	-	x	-
Eternit, Netherlands	x	x	x
Eternit Building Products, UK	-	x	x
Eternit, Italy	x	x	x
Eternit, Germany	x	x	x
Eternitrör, Sweden	-	x	-
TEAM, Luxembourg	x	x	-
Johns-Manville Corporation, US	x	x	-
Asbestos Corporation Ltd, Canada	x	-	-
Advocate Mines, Canada	x	x	-
Eternit Argentina	x	x	x
Fadamac Argentina	x	x	x
Fabrica Peruana Eternit, Peru	x	x	x

<sup>93</sup> See annual reports for 1967, 1977 and 1990 of the Compagnie Financière Eternit SA. An 'x' betokens an interest, a '-' an absence of such. Through reorganisation names can disappear and new names come into use. So, for example, Etex later became part of Eternit France, which already held a substantial interest.

	1967	1977	1990
Eternit Uruguay, Uruguay	x	x	x
Sociedad Industrial Pizarreno, Chile	x	x	x
Eternit do Brasil, Brazil	x	x	-
Fadamac, Brazil	-	x	x
Eternit Venezolana, Venezuela	x	x	-
Eternit Colombia	x	x	-
Colombit, Colombia	-	-	x
Eternit Pacifico, Colombia	x	x	-
Eternit Ecuatoriana, Ecuador	x	x	-
Industria Asbestos Cemento, El Salvador	x	x	-
Ricalit, Costa Rica	x	x	-
Panac, Panama	x	x	-
Inerasbestos, Panama	-	x	-
Productos Duralita, Guatemala	-	x	-
Nicalit, Nicaragua	-	x	-
Grupo Eureka, Mexico	-	-	x
Eternit Corporation, Phillipines	x	x	-
Lusalite do Mocambique, Mozambique	x	-	-
Lupral de Angola, Angola	x	x	-
Cimianto de Angola	x	x	-
Eternit Burundi	-	-	x
Everite, South Africa	x	x	-
Asbestos Investments, South Africa	x	-	-
A.C.P. Nigeria	x	x	-
Eternit Sapele, Nigeria	-	x	x
Nigerite, Nigeria	-	-	x
Giwarite, Nigeria	-	-	x
Emenite, Nigeria	-	-	x

## Annex 6

### Compilation of executives of Compagnie Financière Eternit (CFE) and Eternit Kapelle op den Bos

*From the CFE annual report for 1966*

#### MANAGEMENT

MM. Jean EMSSENS,  
*Président.*  
André EMSSENS,  
*Vice-Président.*  
Louis A. de CARTIER de MARCHIENNE,  
*Administrateur-délégué.*  
Edouard BRACHT,  
Guillaume CUVELIER,  
Jules DUBOIS-PELERIN,  
Alphonse EMSSENS,  
Jacques EMSSENS,  
Stanislas EMSSENS,  
Frédéric HATSCHKEK,  
Paul JANSSEN de LIMPENS,  
Alfred L. PENHALE,  
Ernst SCHMIDHEINY,  
Max SCHMIDHEINY,  
Anton SCHRAFL,  
Etienne van der REST,  
Guy VOORTMAN.

#### COLLEGE OF COMMISSIONERS

MM. Georges CASSIERS,  
Jacques COUPEZ,  
Prosper de MATHELIN,  
Louis de SADELEER,  
Le Chevalier Albert de SCHAEZTEN,  
Robert de LATHUY,  
*Commissaire Reviseur.*

*From the CFE annual report for 1980*

## MANAGEMENT

Baron de CARTIER de MARCHIENNE, *Président*  
M. Jean-Marie EMSENS, *Vice-Président*  
M. Etienne van der REST, *Vice-Président*  
M. Charles VINCK, *Administrateur-délégué*  
M. Philippe COLS,  
M. Joseph CUVELIER,  
M. Alphonse EMSENS,  
M. André EMSENS,  
M. Stanislas EMSENS,  
M. Marcel GOBLET,  
M. Frédéric HATSCHEK,  
M. Paul JANSSEN de LIMPENS,  
M. Ernst SCHMIDHEINY,  
M. Max SCHMIDHEINY,  
M. Stephan SCHMIDHEINY,  
M. Anton SCRAFL,  
M. Guy VOORTMAN.

## COLLEGE OF COMMISSIONERS

M. Georges CASSIERS,  
M. Jacques COUPEZ,  
M. Jean de MAERE d'AERTRYCKE,  
M. Louis de SADELEER,  
Chevalier Albert de SCHAETZEN,  
M. Paul LURKIN, *Commissaire-reviseur*.

## BOARD OF DIRECTORS

M. Paul VAN REETH,  
M. Luc WILLAME,  
M. Frans VAN HOECK,  
M. Eric DE BRUYN.

*From the Eternit Kapelle op den Bos annual report for 1976*

## MANAGEMENT :

Baron de CARTIER de MARCHIENNE, *Voorzitter.*  
H. Alphonse N. EMSSENS, *Vice-Voorzitter.*  
HH. Gui CUVELIER.  
Alphonse EMSSENS.  
Jean-Marie EMSSENS.  
Rupert HATSCHEK.  
Pierre LAGRANGE.  
Paul LUYPAERTS.  
Léon MOERENHOUT.  
Max SCHMIDHEINY.  
Stephan SCHMIDHEINY.  
Guy VOORTMAN.  
Etienne van der REST, *Afgevaardigde Beheerder.*  
Charles VINCK, *Afgevaardigde Beheerder.*

## COLLEGE OF COMMISSIONERS

HH. Jacques COUPEZ.  
Paul JANSSEN de LIMPENS.  
Henri LIEKENS.  
Hans STOFFEL.

## BOARD OF DIRECTORS

Baron de CARTIER de MARCHIENNE.  
HH. Alphonse N. EMSSENS.  
Etienne van der REST.  
Charles VINCK.

HH. Jean-Jacques BOGAERTS.	HH. Amaury EYBEN.
Fernand BOUCAU.	Alfred POTHEN.
Frans CAUWENBERGH.	Paul SCHRECK.
Marc della FAILLE.	Joseph VAN OVERSTRAETEN.
Joseph DUTORDOIR.	

# Annex 7

## Dividend, Eternit Netherlands<sup>94</sup>

for the year	Dividend in Dutch Guilders (NLG)	percent
1938	3	
1939		9
1946		6
1947	176.470,59	7,5
1948	225.000,00	9
1949	390.000,00	15
1950	705.882,35	15
1951	705.882,35	15
1952	705.882,35	15
1953	941.176,47	20
1954	1.082.352,94	23
1955	1.317.647,06	28
1956	1.317.647,06	28
1957	1.882,352,94	20
1958	1.882,352,94	20
1959	2.823.529,41	
1966	3.520.000,00	
1967	3.947.000,00	
1973	3.300.000,00	

<sup>94</sup> Source: annual reports of Eternit Netherlands and Comagnie Financière Eternit. No annual reports were published after 1959.

for the year	Dividend in Dutch Guilders (NLG)	percent
1974	1.750.000,00	
1976	1.800.000,00	
1977	2.000.000,00	
1979	1.800.000,00	
1980	300.000,00	
1983	4.000.000,00	
1984	3.500.000,00	
1986	13.000.000,00	
1987	4.000.000,00	
1989	3.610.000,00	

No dividend was paid between 1932 and 1937 and between 1940 and 1945. Capitalisation to 1950 was NLG 1.2 million; between 1950 and 1956 NLG 4 million; from 1957, NLG 8 million. Source: Van Oss, Effectenboek, 1960

# Annex 8

## Asbestos cement: the complete life cycle

Eternit companies have long maintained that asbestos cement, through the envelopment of asbestos, renders the material free of danger. To test this assertion, we need to look at the various steps in the mining and use of asbestos.<sup>95</sup>

### *1. Extraction, storage, release of fibres, transport*

Before the asbestos can be enveloped in cement it must be mined. The fibres are fixed in rock and must be released from this. Following extraction they are sorted by size and stored prior to being transported., or in some cases the ore itself is transported and the asbestos extracted later. During transport sacks are on numerous occasions transferred from one vehicle to another, and at these times are vulnerable to damage. Each of these different activities causes fibres to be released which may then be inhaled. The asbestos is collected in specially-designed sacks. For a long time jute sacks have been used, despite a recommendation to use impervious materials. Fibres can be released during the filling of sacks as well as during transport. A wealth of photographs and witnesses show that clouds of dust regularly float around them.

This comes under the responsibilities of mine management personnel who consist in part of representatives of the two biggest Eternit concerns. Eternit Switzerland and Eternit Belgium for a long time held substantial interests in asbestos mines and an Emsens or Schmidheiny would be found among the management. These mines supplied other asbestos firms. Reports of asbestos-related diseases among mineworkers and people living in the neighbourhood of mines began to appear during the 1930s. In 1949, following the publication of a report on asbestosis in mineworkers, a long strike took place in Quebec to demand protection against the dust. This strike affected the supply of asbestos to a number of countries, including the Netherlands.

<sup>95</sup> 28 points at which asbestos dust is exposed to the air during the whole process from mining through to the production of asbestos cement were noted in a detailed account prepared by the Dutch trade union organisations NVV and NKV in 1976. A year later a second report was issued which conceded that Eternit Goor had taken a number of measures in relation to this. Nevertheless, 24 moments of exposure remained.

## 2 Production

During the production of asbestos, sacks must be emptied so that the contents can be added to trays along with watery cement. The water is later pressed out in order to produce asbestos plates, which are then cut to size. In the past much of this was done by hand. Mass production brought machines, but demand remained from builders wanting unique shapes and sizes which could be produced more cheaply by hand. In the earliest years of the industry none of the dust was removed, as was later done by suction, the first suction systems being introduced along with the first dust masks in the 1930s. There was, however, no clear standard and safety was often approached in a sloppy manner, with an eye always to the costs involved. Until late in the 1970s, moreover, workers heard nothing about the risks that they were running. Empty sacks, dust residues and all, were given to employees. Even later than this, when improvements and tightening of standards were at last introduced, cost restriction continued to play a role.

Not until 1975 was the use of brooms forbidden on the shop-floor in factories controlled by the Schmidheiny's and special suction-based dust-removers installed. As for the Netherlands, it was not until then that, at Eternit's plant in Goor, suction-hoods were placed over every machine from which asbestos fibres might disperse.<sup>98</sup>

### Vlissingen

As late as 1969 the Asbestos Corporation made an attempt to acquire a factory in to extract asbestos from ores mined in northern Canada. 300,000 tons of raw material a year was mined, which would produce 100,000 tons of finished product and 200,000 tons of waste.<sup>96</sup> The aim was to ensure the supply of asbestos during periods of the year when Canadian ports are closed due to freezing. The letter containing this proposal was sent to the 'havenschap Vlissingen-Oost' (East Vlissingen Harbour Board or Port Authority) and signed by André Emsens, who was also managing director of Eternit Belgium. The harbour board rejected the request on the advice from Dr Jan Stumphius who had received samples from the Asbestos Corporation. In his report to the harbour board, Dr Stumphius pointed to the health risks, citing his own research at Walcheren and investigations elsewhere, stating that 'Asbestos varieties chrysotile, crocidolite and amosite were shown to be causes (of these risks)'. An analysis of the samples revealed the presence of approximately 500,000 billion breathable fibres per kilo of waste.<sup>97</sup> On the basis of this, the harbour board rejected the request. Following this a factory was opened in the German town of Nordenham near Bremerhaven.

96 Minutes of the meeting of the executive of the Havenschap Vlissingen-Oost (East Vlissingen Harbour Board), 18 September 1969.

97 Letter to the Harbour Board, 21 November 1969. The analysis was conducted by the Instituut voor Gezondheidstechniek TNO (Institute for Health Technology TNO, Delft), werkrapport (work report) F1255, dated 14 November 1969

98 This is according to engineer H.J. van 't Haaff in the periodical *Onderneming*, 8 September 1978. According to Van 't Haaff suction dust removers were already in use as early as 1937 "which, with all their technical limitations, eliminated a great deal of the potential danger." This is a very rosy representation of a state of affairs in which most of the dust in fact floated about and the suction machines then available could not take in small fibres. Handbrushes were still much used, according to the reports published by the trade union organisations NVV and NKV in 1976 and 1977.

Even more importantly, the measures supposed to be taken were often in practice ignored or evaded, and not without reason. The wearing of dust masks and dust-proof clothing is burdensome for the personnel involved and almost impossible in conditions of heat, as countless interviews with (ex)-employees confirm.<sup>99</sup> Painstaking maintaining of cleanliness in relation to the process cost a great deal of time and money. Workers could, under pressure to perform (either to keep their jobs or win promotion) simply ignore the directives. Because checks by bosses or visits from the labour inspectorate were generally announced in advance, things could be cleaned up beforehand. The dirty work was often left to foreign employees (the ‘gastarbeiders’, literally ‘guest workers’). Unannounced visits from Remi Poppe, from 1992 a member of parliament for the Socialistische Partij (SP) and long known as the party’s ‘environmental detective’, revealed that even years later nonchalance was the order of the day in the handling of asbestos dust.

For years, corners were also cut when it came to the overall cleanliness of the factory. Workers went home with dust on their bodies and clothing, with the result that their families and others who shared their living space could also become ill. In Goor this went on until 1979.

Because of the long latency period of asbestos-related diseases, employers could hide behind short contracts. In Switzerland ‘guest workers’ were employed in Eternit factories as early as the 1930s, returning home after a number of years. As nothing is known of what later befell these people, understanding of health risks is distorted. This distortion was more generalised during the period from 1900 to 1945 when more people died relatively early from other illnesses, accidents or as a result of the wars. Dismissals and resignations muddy the waters further. As recently as 1977 Eternit Netherlands stated that it had no data concerning the health of ex-employees.<sup>100</sup>

### *3 What happens to the asbestos after purchase?*

By 2005 we have come to know of many examples of people who have become ill without their ever having worked in an asbestos mine or factory. Their numbers are growing because asbestos cement is so widespread throughout society. A few typical situations:

Asbestos cement plates and corrugated plates were used on a large scale for sheds, particularly on farms. They must be sawn up in situ and screwed to each other, creating clouds of dust around the place of work. It turns out that through the inhalation of asbestos dust anyone involved, even children playing nearby, can become sick. In May 2003 the daughter of a farmer was awarded damages by the court in Almelo because she was exposed to contamination at the age of twenty.

Building workers come repeatedly into contact with asbestos cement on site. Because of the varying nature of their work and of the materials used in building there has in the past been little attention paid to this high-risk group. As a rule they did not work continuously with asbestos cement, but exposure could nevertheless be extensive when sawing and drilling the material.<sup>101</sup>

In various countries housing was built with as much material as possible made from asbestos cement, or at the very least with asbestos cement separation walls within dwellings. Although this material would usually be painted or wallpapered, the inhabitants would nevertheless be living in surroundings

99 These can be found, for example, in reports from the Asbest Projektgroep (Asbestos Project Group) from the 1980s. The first report from the trade union organisations NVV and NKV from 1976 notes under point 26 that there was no obligation whatsoever and that the use of dust-hoods was not possible when the pressure of work was intense. In the 1979 Gresea report it is noted for example that at Eternit Sapele in Nigeria suction-based installations were not well-maintained and that the workers were expected to buy their own dust-masks if they wished to use such. ‘Etude du secteur de l’asbeste-ciment’, p.43.

100 Note from the Directorate-General for Labour to the Minister of Social Affairs, 24 January 1977, for a meeting with the management of Eternit, Goor, scheduled for 26 January 1977.

101 Inventarisatie Asbestcementmaterialen in de bouw, (“Inventory of asbestos cement materials in the building industry”) BGBouw, 1982

in which a relatively high quantity of asbestos dust would be floating about. In particular, dust would be released whenever someone living in one of these houses or apartments wanted to hang something in the wall and tried to screw into it. According to former inhabitants of such housing, this would often not be a success, and instead of the screw being well fixed into the wall the edges of the hole made by it would crumble away.

In other buildings interior walls might contain asbestos cement without anyone knowing about it. Building workers and DIY enthusiasts who many years later drilled into such a wall could find themselves as a result inhaling asbestos dust without being aware of it. As recently as 2003 a trainee electrician of twenty-six turned out to have contracted mesothelioma as a result of having done such work ten years earlier.

#### *What happens to the waste?*

In the factory a great deal of waste is created through breakage of plates, and through sawing, turning and sanding. Waste dust is gathered into sacks by suction, Large fragments from failed sections are crushed in special machines without any protective arrangements for the workers involved or for the environment. In Goor they even had someone who had, in a heavy tractor, to drive back and forth over the fragments in order to crush them. In the 1970s an estimated 15,000 tons of waste per year was

produced, and before that the figure was even higher. Most of the waste was dumped in specially designated sites, but some found its way to illegal dumping grounds where it often lay exposed to the open air and to weathering, through which asbestos fibres could be released into the air. During dumping itself asbestos cement would be crushed, while during transport material could fall from open trucks or blow into the air.

Waste was also made available to local authorities for the paving of roads. Indicative and indeed typical of the lack of concern shown by the employers is first and foremost the fact that a great deal of waste was given away free to private individuals (employees and others) for use in raising the level of ground, filling in holes or paving paths and yards on their own property. Around the Eternit factory in, for example, Goor, tons of fragments and shavings from asbestos cement were used for paving. Many tens of miles of roads were in this way gravely contaminated.<sup>102</sup> Through use the roads and yards more and more pieces of asbestos cement were pulverised, releasing asbestos fibres. This also created victims. In Goor a postman was affected by mesothelioma contracted during his work. Members of farming families have died from asbestosis or mesothelioma.<sup>103</sup> And Goor was no exceptional case; in Harderwijk and in other countries waste was given away.

102 A fuller account of this can be found in Paul Swuste et al "Asbestos in Goor", in Steven P. McGiffen (ed) *The Polluter Pays: Notes from the international conference on asbestos held in Amsterdam in May, 2004* (Hoor: Comité Asbestslachtoffers, 2005) pp. 39-49 and Anke Tiemens, "Eternit in Goor", *ibid.*, pp. 51-54 A fuller account of this can be found in Paul Swuste et al "Asbestos in Goor", in Steven P. McGiffen (ed) *The Polluter Pays: Notes from the international conference on asbestos held in Amsterdam in May, 2004* (Hoor: Comité Asbestslachtoffers, 2005) pp. 39-49 and Anke Tiemens, "Eternit in Goor", *ibid.*, pp. 51-54

103 *ibid.*

#### Queuing for asbestos cement waste

In an interview in March 2003 an ex-worker noted that this practice went on in the entire period of his employment at Eternit, from 1956 to 1989. 'Every Friday long queues formed by the factory grounds to collect free asbestos waste.'

Another said that tons of the stuff was given away every year. The investigatory committee into asbestos at neighbouring Hof van Twente noted that between 1945 and 1974 asbestos cement waste was made available to farmers.

#### *5 Durability, wear and tear, fire, demolition*

Asbestos cement was considered by the Eternit industrialists to be a durable material, as the choice of the name Eternit indicates, as had 'asbestos' itself, being the Greek word for 'non-flammable'. The material was durable above all in the sense that it was extremely resistant to weather, to wind, to the effects of all sorts of chemical substances, and to biological decay. Look, for example, at the handbook for users. This durability was derived from the asbestos rather than the cement, which is itself vulnerable to chemical action, particularly from acids. This was known to Eternit.<sup>104</sup> The mixing of asbestos was for the most part done for the purpose of reinforcement - only in the case of specially developed fire-suppressing plates was non-flammability the most important angle.<sup>105</sup> Constituents of cement could very gradually be released, including, with time, asbestos fibres. Acid rain attacks cement, while mechanical influences could create cracks or cause small pieces to crumble away. Wear and tear then accelerates. Mechanical influences such as knocking, falling or scraping cannot be prevented. Even in the case of underground pipes, accidents can happen. In addition to gradual wear, major accidents can have an effect. Fire in particular can lead to the release of asbestos fibres, as has been shown often enough, and fire is always as likely as any other accident to occur. Finally, buildings are seldom blessed with eternal life. They are renovated or demolished, and at that point asbestos will be released, if strict measures are not taken. This can occur frequently through the simple fact that it is not known that the building contains asbestos, as well as through sloppiness or reasons of economy. Illegal demolition to hold down costs is also a regular occurrence.

The durability of asbestos cement, of which producers made so much, was relative. It was durable compared to other, competing building materials. Its lifespan might be longer, but it was not eternal. This lifespan was important to the users with their eye on the costs of replacement. The durability was the element in asbestos which now turned against the producers and users, for it meant that the growth in its use led to growth in the number of fibres freely floating around in the air.

104 ee, e.g., the German-language Well-Eternit Handbuch, 1959, p.208

105 Eternit Belgium's daughter company Promat had for many years made plates containing asbestos. Additional substances were added for fire-resistance, and alternative fire-resistant materials had long been available.

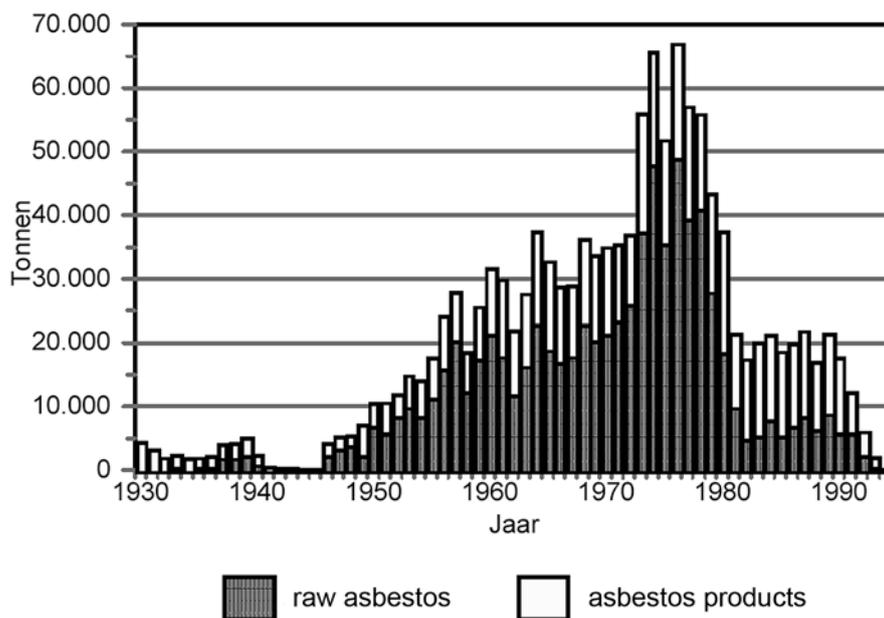
## Annex 9

### Canadian propaganda

In Canada the government has been responsible for a great deal of propaganda for the use of asbestos (chrysotile), because of its importance as an export product. Although cases of asbestosis were spotted very early in its history, and later of cancer, by means of manipulation of epidemiological research during the 1950s it came to be suggested that there was no specifically asbestos-related problem. When the strike in one of the asbestos mines in 1949 was bought off, the priority became the maintaining of a good image for the product. Yet in Canada itself little asbestos was used. Extraction from mines was primarily for export purposes. After asbestos came under attack in the 1970s, the government, or a branch of its diplomatic services, became involved in inviting journalists, scientists and foreign diplomats to come and examine the mine, naturally at the government's expense. In 1984 the 'Asbestos Institute' was established by the industry, the province of Quebec and the national government, and charged with the task of promoting, on a worldwide scale, the 'safe use' of asbestos. At home, meanwhile, strict standards governed exposure to asbestos. The sale of loose asbestos to consumers was forbidden. Yet Canada was unconcerned about whether other countries had such rules. Once the US and Europe moved towards a complete ban, the Canadian government concentrated on exports to countries in other parts of the world, in particular less developed countries where there was less regulation of working conditions and on exposure to dangerous substances in general. Exports continued, though many of the countries involved had never signed an international resolution calling for 'safe contact' with asbestos. When in 1984 Thailand expressed the wish to see a death's head symbol placed on sacks of asbestos, the Canadian government persuaded the Thais to withdraw the idea. When in Brazil a ban was considered, Canadian government officials were immediately knocking on the door to argue against any such move. In 1996 when France announced that asbestos would be forbidden, the country was the subject of a Canadian complaint to the World Trade Organisation (WTO) for transgressing the rules of free trade. Canada's action against France was based principally on fears of what would happen in the latter country's former colonies in Africa. Canada did, after all, take no such action against other European countries which had already adopted a ban. The WTO accepted in 1999 that the justification for the ban rested on health considerations, but export to countries with no ban remains to the present day unaffected.

## Annex 10

### Import of raw asbestos products into the Netherlands between 1930 and 1994 in net tons



Source: Heerings, H. 1999, *Asbestos tot in de vezels van de samenleving* ("Asbestos in the fibres of society"), research report commissioned by Greenpeace Netherlands, p.8

