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From Miracle Mineral to first-rate Carcinogen

Asbestos – yesterday, today
and tomorrow

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Asbestos – yesterday, today and tomorrow

From “Miracle Mineral” to first-rate CARCINOGEN

Ministerialdirigent Gerd Albracht

In 1898, an English factory inspector warned of the hazards of asbestos. Since then, lethal asbestos dust has killed millions of people worldwide. Even the ancient Greeks and Romans were amazed at the properties of asbestos. Marco Polo also reported on his journeys about an amazing fabric that did not burn even when woven as a cloth and thrown into the fire. Asbestos, therefore, has a long tradition and is -as it turned out later – unfortunately relevant to this day.

photo: © ILO

Catastrophic working conditions and an exorbitant rise in the asbestos consumption in India

Asbestos is a term, collectively used for fibrous, crystalline silicate minerals. The Greek word „asbestos“ stands for the most important property of the fiber, its non-combustibility. It can even survive under extreme heat of up to 1500 C°. Apart from this, it insulates against heat, cold and moisture; it is elastic, tensile and weather-resistant and it is also inexpensive and available in large quantities in many parts of the world. With the mining of the great asbestos deposits in Canada, the history of its industrial exploitation began in 1877 with ever-new possible uses. Asbestos was referred to as „the mineral with 1000 possibilities“ and was used in over 3000 industrial applications, handicrafts and home and leisure sectors. Its uses range from asbestos-containing brakes and clutch linings to heat protective clothing, paints, varnishes, floor and road surfaces. In the case of war ships and in tanks, the material was used for fireproofing. Until the end of the 1960s, asbestos insulation was also used on passenger ships.

The big industrial breakthrough for the asbestos fiber came in 1900. The Austrian Ludwig Hatschek developed the wet machine procedure in Vienna: for the first time, he mixed asbestos fibers with ce-

ment and produced plates from them. Since 1903, his asbestos cement plates were protected by patent law in Germany under the name Eternit (from the Latin actemus = eternal, imperishable). After the Second World War, asbestos cement products conquered the construction sites of the world. Cut-off grinder cut the plates and construction workers were usually exposed to dense dust clouds in this process. Yet in 1984, the Swiss billionaire and asbestos monopolist Max Schmidheiny declared that the building material was „not dangerous because the fibers are embedded in the cement.“ An error with grave consequences, that soon became apparent.

Asbestos—a deadly hazard

The consequences of asbestos were documented early on. Already in 1898, the Royal Chief Inspectorate of factories had warned in London in his annual report: „A microscopic examination reveals the sharp, glassy, jagged nature of the particles. Wherever they are in the air, regardless of the extent to which they are exposed, the consequences are harmful.“ (Deane, 1898). At the time, the Italian

doctor L. Scarpa described the death of 30 asbestos mine and spinning mill workers. He treated them from 1894 to 1906 as tuberculosis sufferers, but they all succumbed to their lung diseases, as did 16 workers of a French company, whose medical reports had already been published in 1906.

In 1900, on the basis of a first clear finding, asbestosis was discovered by the pathologist M. Murray, after he had autopsied a body of a worker, whose lungs were filled with asbestos needles and not with the fatal traces of tuberculosis. The British pathologist W. E. Cooke named the disease “asbestosis” in 1924. Still no one suspected that this disease is the least harmful among asbestos-related diseases. In the 1920s, American scientists reported that asbestos leads to a scarred transformation of the lung tissue (Pancoast et al. 1918). The first occupational disease of asbestos workers was described in the extensive monograph by Hoffmann (Hoffmann, 1918).

The fine asbestos fibers penetrate deeply into the lungs through all the filter systems of the respiratory tract. They inflame the tissue – it causes scarring of the lungs. Difficulty in breathing and coughing are

the result. However, with the degeneration of the tissue, it results in carcinoma in many cases. The tumor formation is a possibility with, as well as without, silicosis when asbestos fibers are inhaled.

Yet it was not the managers in charge of the companies or politicians who drew the initial conclusions from this but insurance companies. The Prudential Insurance Company in the United States refused to provide life insurance in 1918 for asbestos workers. In Germany, it was not until 1936 that asbestosis became recognized as an occupational disease. In the 1930s, the concurrences on the combination of lung asbestosis and lung cancer increased. In 1932, physicians documented the fact that workers in the asbestos factory Turner & Newill often suffered conspicuously from tumors. In 1938, the German physician M. Nordmann published a study on asbestos workers and came to the conclusion: The asbestos fiber causes lung cancer (Nordmann, 1938). Asbestos dust is a hazardous carcinogen with an average latency period for lung cancer of 15 to 20 years. Conclusions were then drawn in Germany from this: For example, in 1942, lung cancer was recognized as an occupational disease for as-

bestos workers, but only in connection with asbestosis.

However, the most malignant asbestos tumor diseases, including mesothelioma, remained in the dark for decades to come. There was an increase in occurrences in the early 1950s. The first description of a disease of the pleural mesothelioma in connection with an asbestos action took place in 1938. The epidemiological confirmation for the mesothelioma diseases was made by J. C. Wagner and co-workers in South Africa. In 1954, he examined the workers in the asbestos mines, where catastrophic working conditions prevailed; witnesses speak of large blue dust clouds over their faces

And where asbestos was extracted from the stone, women did handicraft work with babies on their back. Huge dumps of asbestos fibers were blown away by the wind.

Wagner studied 33 cases of rib cell carcinoma, and he could prove the relationship between asbestos and this cancer in 1960 (Wagner, 1960). This results were explosive as only 8 of the 33 patients had worked in the factory. The others lived as youth in the vicinity of the mine and inhaled the deadly dust. The report made me-

dical history because "it changed the understanding of asbestosis and for the first time made the link between work, environment and cancer (McCulloch, J., Twedale, G., 1981).

These findings indicate that mesothelioma diseases are apparently expected in the neighborhood of asbestos emission, where the fiber concentrations are lower than those in the workplaces. Research by the work group of Professor E. Hain confirmed a remarkable incidence of mesothelioma deaths in the vicinity of Hamburg asbestos companies in 1969 (Bohlig et al., 1970). It was thus clear that it was not only the workers, but also their families, who were exposed to the asbestos fibers entrapped in their hair and clothing. Only in 1977 was asbestos-induced mesothelioma of the rib and abdomen peritoneum recognized as an occupational disease in the Federal Republic of Germany.

The falsehood of safe handling of asbestos

Despite the clear toxicological and medical findings, it was not the employees and the population, but rather the asbestos in-



The human face of an asbestos epidemic

Photo: © International Ban Asbestos Secretariat (IBAS)

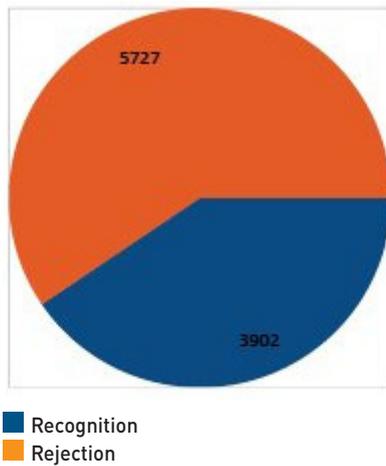


Fig. 1: High discrepancy between 9629 asbestos-related BK-indications and 3902 BK-recognitions

dustry that was protected for very long time. In spite of knowing the deadly dangers, asbestos consumption in the Federal Republic of Germany doubled between 1958 and 1968 and lay at around 180,000 tonnes/year. Until 1990, 18 million tonnes of construction material were produced and used in Germany, accounting for around 6 percent of highly asbestos-containing building materials. While the warnings of trade union specialists (Partikel, 1980) and independent scientists, above all, Irving Selikoff (Selikoff, 1976) from the USA and Hans-Joachim Woitowitz (Woitowitz, 1972) from Germany became ever louder, the worldwide annual production of asbestos and processing grew to a record high of 5.5 million tonnes. Everyone could obtain knowledge about the time bombs that ticked in the factories and the handicraft companies in the English- and German-speaking trade press. The former Hessian Minister of Social Affairs, Armin Clauss, stated at the first symposium on the Long-Term-Damages of Asbestos in 1985, „that occupational safety and health policy in the Federal Republic almost completely failed in this area until well into the 1960s. This criticism is directed in equal measure at companies, social accident insurance association and state labour inspectorates“ (Albracht et al., 1985).

The social accident insurance association gave the companies only very non-binding initial recommendations on the reduction of asbestos exposures in the early 1960s. The first technical reference concentration value (TRK value) for asbestos was published in 1973.

As a result of intensified efforts by the

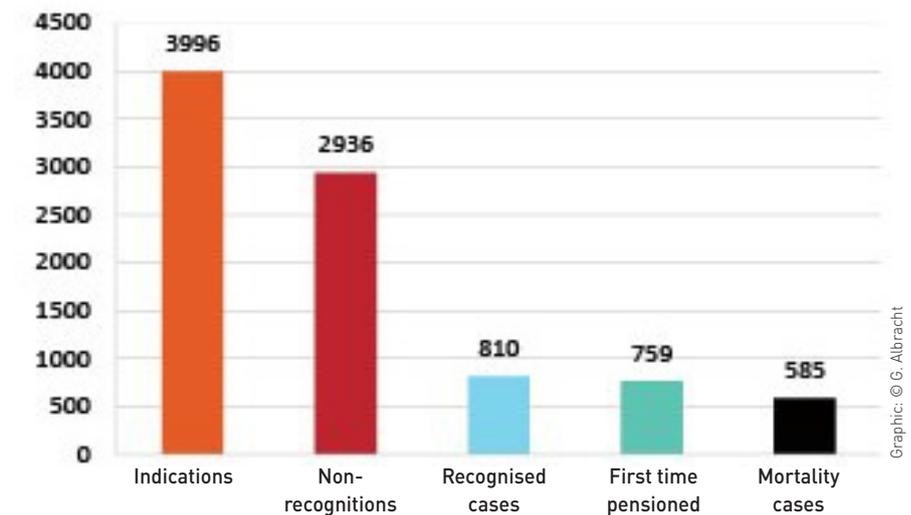


Fig. 2: Asbestos-related BK 4104 in 2012

State Labour Inspectorate and the social accident insurance association in the 1970s, a substantial reduction in the asbestos dust load at the workplace could be achieved. At last with the inclusion of the occupational disease “Asbestosis associated with lung cancer“ it was certain that asbestos is a carcinogenic substance. However, it was only 40–50 years after the discovery of this health hazard that State bodies and the social accident insurance association started to react in any significant way.

The International Asbestos industry – a cartel of silence

The asbestos industry ignored and concealed the lethal hazard of asbestos for decades. In order to enforce its interests, an effective organisation, the Asbestos International Association (A.I.A.) was established in the 1970s. It created a lobby network with global operations of asbestos promoters, manufacturers and processing industries with the main objective of keeping the worldwide asbestos consumption high (A.I.A., 1970). A.I.A coordinated its interests in more than 35 countries. A core task was to spread the slogan of safe handling of asbestos (safe-use). In light of a hundred thousand asbestos deaths every year worldwide, it sounds almost inhuman when George McCammon, the former President of the Institute said, “We protect the poor with asbestos, it would be immoral to refuse them” (Albracht, Schwerdtfeger, 1991).

The laboratory experiments by the US researcher Leroy Gardner, the Director of the New York Saranac Institute for re-

search of occupational Diseases, confirmed M. Nordmann’s significant findings (asbestos causes lung cancer). 80 percent of the laboratory mice that had inhaled asbestos dust fell sick. However, the explosive results were never published.

Also, the 1989 Berlin-based Federal Health Office (BGA) did not vote for the protection of health, but sided with the interests of the asbestos industry. This led to a bitter fight between experts and progressive trade unionists, the Federal Environmental Agency and some scientists from the German Research Foundation (DFG). The environmental risk posed by asbestos corresponds to “ten cigarettes per year” according to the statement of the top German Federal health custodians at that time. The preliminary report of the Federal Court of Audit of 1989 (Bundesrechnungshof, 1989) shows how the asbestos lobby maintained its economic interests. According to this report, the industry, above all Eternit, had provided high donations to the institute of the Federal Health Office (BGA) that is responsible for the investigations of asbestos in drinking water over the years. (The Spiegel, 1989).

The annual report of 1979 of the Trade Association, Asbestos e.V (Wirtschaftsverband Asbest e.V) depicts how the asbestos lobby applied its propaganda of safe handling of asbestos as it describes the uninterrupted efforts of the asbestos associations to convince the ministries, state labour inspectorates and social accident insurance associations that bans or categorical substitution orders while handling asbestos are harmful for the economy and a risk to the existence of the asbestos in-

dustry and workplaces. Particular emphasis is laid on the former prevention of the classification of asbestos into risk group 1 (highly hazardous) of the working material regulation. In 1980, the A.I.A commented on the European Union (EU): The EU's legislative approach is very realistic and lengthy...the EC-officials are pragmatic and I am sure that the industry can live with the results. The circumstance described here was a decisive reason as to why only a general asbestos ban became effective in the EU in 2005.

Trade unions and the UBA – Initiators for the asbestos ban

The long latency period makes asbestos-related cancer a time bomb. Yet, the asbestos lobby managed to conceal the death epidemic and maintained an illusion of “safe use” for decades. In the Federal Republic of Germany, January 1981 marked the beginning of the phase out of asbestos, which according to the Swiss journalist Maria Roselli, triggered “the biggest industrial catastrophe in history” (Roselli, 2007).

At the same time, the Swiss industrialist Schmidheiny, the leader of the largest European asbestos cartel, still obtained 90% of his profit from asbestos. But the trade unions, in particular the IG Chemie and the German Trade Union Federation (DGB) and the international trade union organizations reacted in close cooperation with the Federal states to the efforts of the asbestos industry with an asbestos ban strategy. Simultaneously, the Federal Environmental Agency (UBA) worked on preparing a report with extensive use restrictions for the use of asbestos. At this time, about 25,000 workers from the field of IG Chemie-Papier- Keramik were engaged in the production of asbestos and according to the estimates of DGB, up to 1 million workers were exposed to asbestos dust permanently or temporarily. The hazards of asbestos and other chemical scandals led to the decision of the IG Chemie executive board to establish a new department called “work environment” and to engage professionals in it. The topic of

asbestos became a major topic for the executive board of IG Chemie and a scientific/technical network of political representatives and independent experts from all relevant fields was set up. Thus, it became possible to present the decision-makers and the responsible people in charge of the trade union at all levels with independent scientific knowledge and to counter the permanent lobby work of the asbestos industry.

In 1981, the breakthrough came about via a conference of IG Chemie with all the work councils of the asbestos producing and processing companies as well as IG Metall, the ÖTV, the IG Bau-Steine-Erden and others. The core message from the IG Chemie Chairman Karl Hauenschild at that time struck like a bomb: Carcinogenic workplaces are also not worthy of defense by trade unions! (Hauenschild, 1981). On 19th January 1981, the Interior Minister Gerhart Baum (FDP) published the UBA Report 7/80 “Environmental pollution by asbestos and other fibrous fine dusts (UBA, 1981) and announced: “The Federal Government will restrict the use of asbestos and ban it completely in certain areas”. An unclear attitude is apparent by a quote by the Federal Minister of Labour, Blüm (CDU). He informed: “At a speaker's conference at the Federal Chancellery, the representatives of all Ministers with the exception of the

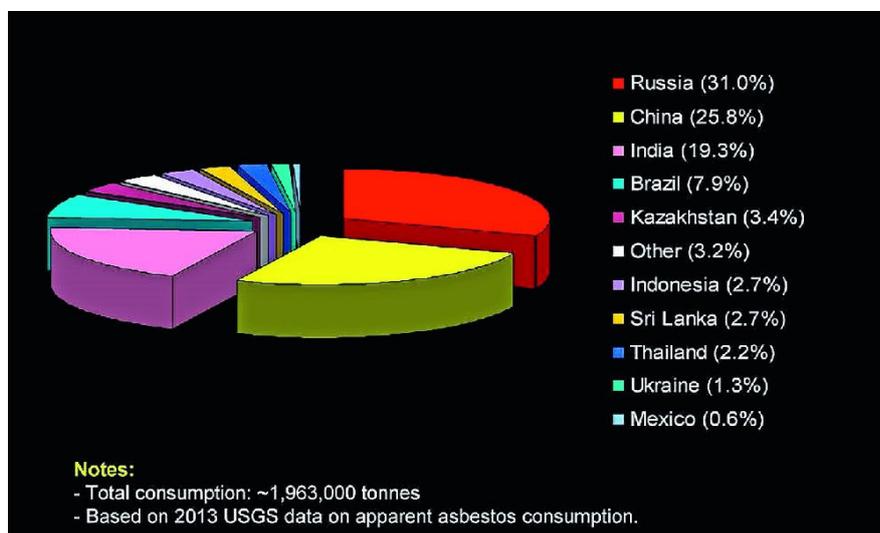


Symptoms of mesothelioma disease

authorized representatives of the Federal Ministry of Interior and the President of the Federal Environmental Agency (UBA) voted against a ban or a serious restriction of the industrial application of asbestos”. (Woitowitz, 1983)

Core pillar of the subsequent asbestos ban

The uniform position of the DGB (DGB 1981), IG Chemie (IG Chemie 1981), IG Metall, the ÖTV, the IG Bau-Steine-Erden as well as the UBA to a gradual ban of as-



Worldwide asbestos consumption in 2014

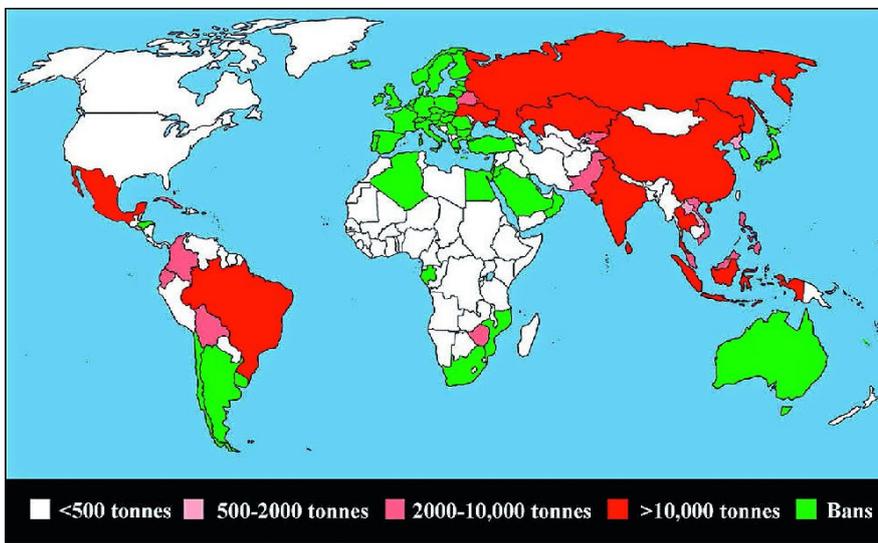


Fig. 4: Asbestos consumption and asbestos bans worldwide from 2000 to 2014

bestos has not failed to create its effect on the asbestos cement branch. At the beginning of 1982, the asbestos cement industry, which at that time had about 80 percent of the asbestos consumption, voluntarily prepared to reduce this consumption gradually. Acclaimed as a successful environmental cooperation principle, the so-called “innovation program” was not a voluntary commitment, but a reaction to the asbestos phase-out policy of the trade unions and the report of the UBA as well as the asbestos-critical coverage in the media. The quick submission of a ten-volume asbestos substitute catalogue (Albracht, 1984) by the Committee on Hazardous substances, the results of which were immediately directed to the work councils and the employers, considerably accelerated the actual phase-out of asbestos in the Federal Republic of Germany, even though the ban on asbestos first came into force in 1993.

The ILO (International Labour Organization) assumes 100 000 people die each year worldwide due to the effects of asbestos dust. Today, Europe pays a high price for the unrestricted use of asbestos. According to research results published in 2015, 47,000 asbestos-related deaths are expected in the 28-Member states of the EU, three times higher than previously predicted. In 2016, Laurie Kazan-Allen the from International Ban Asbestos Secretariat in London (IBAS) reported in her lecture “The Global Asbestos Panorama” in Newcastle, that “between 1994 and 2008, half of the worldwide asbestos-mesothelioma deaths originated from Europe”.

A few years back, a commission of the

Council of Europe presented a projection, according to which up to half a million people would die of asbestos-related deaths by 2030 (Roselli, 2010). In Great Britain alone, 5000 asbestos-related deaths are registered every year. Besides employees, the victims include many people in schools, those doing repair work or those who are exposed to the clothes of another asbestos worker. In France, over 3000 people die each year from the effects of asbestos and in Germany, the number of deaths lies at about 1500 every year.

Reversal of the burden of proof is required

In 1970, only two asbestos-related deaths were reported in the Federal Republic of Germany and the surviving relatives were compensated. In 1975, the number was 15 and in 2002, the mortality rate went beyond the 1000 mark. In the last three years, almost a constant of 1500 lethal asbestos-related occupational diseases have been registered in Germany. However, the number of compensated cases is up against multiple asbestos-related tumors. The publication of M. Butz on occupationally caused cancer diseases (1978 to 2010) provides a comprehensive status of occupational cancer in Germany (Butz, 2012). Of a total of 40,555 reported occupational cancer diseases, 30271 cases are caused by asbestos. (74.64 percent). The way in which asbestos related diseases are recognized was never based on scientific evidence and the arbitrary number of 1000 asbestos fibres to recognize asbestosis receives massive criticism (Albracht, 2013: The long and winding road

to an asbestos free workplace, CLR Studies 7, Page 85–86). This “cut-off criterion” was applied to a total of several 10,000 social accident insurance association evaluations. In the meantime, in the field of social accident insurance association, the register of mesothelioma got a monopoly, when it comes to verifying the justification of an occupational disease (BK) with the help of the exclusion criterion “asbestos bodies”, even if the diagnosis is secured and the operational pre-requisites for the recognition of asbestosis or of an asbestos-related lung cancer have already been determined by a technical report.

The non-recognition of a minimal asbestosis is the frequent cause for the rejection of a BK 4103 “asbestosis” and in particular, for the rejection of BK 4104 “asbestosis” in connection with lung cancer. In Germany, at least 800 to 1000 cases of asbestos related lung cancer are insufficiently recognized as occupational diseases on the basis of the generally accepted medical standards (Woitowitz in Eurogip, 2006). In 2014, 5727 victims were rejected by the entrepreneur liability of DGUV against 9627 suspected cases of asbestos-related occupational diseases. Accordingly, the rejection rate for BK 4104 (asbestosis in connection with lung cancer) amounts to over 80 percent (see Fig 1 and 2).

The BK-statistics represent only the tip of the iceberg. The scientifically undisputed high number of unreported occupational diseases and the systematic use of predictable false negative asbestos-body counts have been completely disregarded for years. By extreme long latency periods of up to 50 years, this problem area corresponds to an extremely high priority (Takala, 2015).

A research group led by H.J. Woitowitz currently deals with the “socio-political problem in the medical assessment of lethal occupational diseases”, which fundamentally identifies the core elements inurgent need of socio-political action. It requires the sole competence of the regulatory authority for specifying the dose limits or other “cut-off criteria”, a cons-

cientious, professional safety – related official investigation as well as prioritized, independent, if required, sworn safety-related technical experts in the judicial office. In view of the need for reform that has been represented in detail, it demands social and socio-political consequences from the Federal Government, namely, “the establishment of an impartial, extrajudicial arbitration board for an Ombudsmann-Woman-procedure” as well as “the amendment of § 9 Para 3 SGBVII with the result of a reversal of burden of proof in favor of the insured and his surviving relatives”. So that “the legislature obtains the necessary direct, independent insight in the legal practice of the user against the background of Article 2, Para 2, GG” (Basic Law), it suggests “the establishment of a representative for lethal occupational diseases of the German Bundestag” (Woitowirz, Heilmann and Baur, 2016)

Initiative of the European Parliament Asbestos – free Europe 2028

Despite the overly late general ban issued on asbestos in Europe in 2005, millions of tonnes of asbestos have been installed in public buildings.

On 14th March 2013, the European Parliament, based on a report by its member Stephen Hughes, passed a resolution with an overwhelming majority that provided for a complete abolition of asbestos in Europe by 2028 (Resolution of the European Parliament, 2013). Exactly one week before the resolution was passed, one of the buildings of the European Parliament in Strasbourg had to be closed, since asbestos was found in the renovation work. The Parliament calls on the European Commission to support an EU-Network of asbestos victims and demands not to impose on them a burden of proof in the recognition procedure for occupational diseases (Hughes in Albracht, 2013). The campaign “Asbestos-free Europe –2023” of the European Federation of Building and Woodworkers (EFBWW) as well as expertise of the social partners were the significant pre-

requisites for the report and the subsequent resolution.

Poland was the only EU country to already implement a program “Asbestos-free Poland 2032” even before the resolution of European Parliament, which was a role model with the establishment of publicly accessible asbestos registries. However, in various cases, the experts criticize the measures provided therein after being admitted to the asbestos register.

Through the increased power of the European Parliament, the international agreements today require the approval of the Parliament. “This has already led, in the run-up to the free trade agreement with Canada, to the withdrawal of support of the Canadian asbestos mines” (Hughes in: Albracht, 2013). This pressure was crucial, which ended the asbestos production in Canada in 2012.

Optimal protection for maintenance and renovation workers

Following the EU-wide asbestos ban, there was a lethal silence with regard to the risks posed by asbestos. In 2006, the European asbestos campaign, “Asbestos is a dead-serious matter – Exposure should definitely be avoided” was launched on the initiative of the committee of the high EU-officials. (European Commission, Employment, Social Affairs and Integration, 2006) In the course of its monitoring action, massive implementation deficits were determined with regard to the compliance with asbestos regulations in demolition, renovation and maintenance work in almost all the member states. The practical guidelines provided about the optimal processes to minimize asbestos – related risks was helpful for all involved in the campaign.

Today, the major hazards are: unrecognized and underestimated asbestos exposures, lack of information for workers, self-employed persons regarding their asbestos risk, unjust compensation for asbestos victims, and lack of support for the asbestos victim associations in Germany, insufficient recording and provision of maintenance and renovation workers,

inadequate and uncontrolled quality standards for technical equipment and personal protective equipment, downsizing of supervisory bodies as well as missing, publicly accessible asbestos registries.

What is the approach in France?

France, for example, has developed one of the world’s most demanding regulations for protection against asbestos exposures. (Audie, 2016). Modern technical systems for the reduction of exposure possibilities have been developed (IRNS, 2014). Thus David Chauvin designed a street map for the Department of Haute Savoie indicating the asbestos content of the building materials used. In parallel, systems were also developed in co-operation with machine manufacturers that ensure fresh air – supported driver cabs and a collection of used water during the digging up of the roads.

The new French asbestos regulations are based on scientific proposals by ANSES* from the year 2009, relating to the toxicity of short and fine asbestos fibers and at the same time, on limits and recommendations from INRS (Institut National de Recherche et de Securite) and the results of the national campaigns for building site measurements. The decree with five measures to improve the health protection of the employees was adopted in 2012. The core elements of the new regulations are exposure controls by means of META methods (IRNS, 2015), reducing the OEL-value from 100 f/L to 10 f/L. A distinction is made between removal of asbestos and encapsulation work (SS3) and interventions in which asbestos fibers can be emitted (SS4). The collective protection measures and personal protective equipment measures are defined according to the three levels of regulations (level 1 < 100 f/L, level 2 < 6 000 f/L, level 3 < 25 000 f/L). Work with dust exposures > 25 000 f/L are prohibited, corresponding with the upper limit of the capacity of the respiratory unit with air supply. A national action plan serves the harmonization of asbestos regulations across all regions and sectors. With a budget of 20 mil-

lion Euros, the research work initiated in 2015 on the new processes for asbestos removal as well as encapsulation will continue. The industries and companies should be supported by measurement and information campaigns, training and risk assessment. Generally a certification is necessary for the removal of asbestos. INRS estimates the number of workers to be 90, 0000 who still encounter the disease provoking asbestos fibers during maintenance, renovation or manual work in France today. The World Health Organization (WHO) assumes that there are 125 million people worldwide who still handle lethal asbestos today. A great danger lies in the fact that many workers, self-employed people and entrepreneurs today still have no idea that they come into contact with the dangerous asbestos fibers during maintenance and renovation work. Therefore, a database was developed in France, which all the affected parties could access.

Typical places where asbestos is often located can be found by a click in a virtual "Asbestos house". Detailed protective measures and guidelines are laid down appropriately for all categories of manual skills.

The European "Safety and Health Asbestos Campaign" of the European Fede-

ration of Building and Wood Workers (EFBH Campaign 2013) is also very successful with social partner seminars on the European Asbestos-Guideline and Asbestos Information-Modules (EFBH Asbestos Information-Module 2013).

Missing asbestos registers – Problem during major fires and natural disasters

"The introduction of a substance-related building pass is a first priority of health preventive measure, the creation of a comprehensive asbestos register is the first step in the direction", stated by the author together with O. A. Schwerdtfeger already in 1991, and they formulated fundamental criteria for an asbestos register (Albracht and Schwerdtfeger, 1991). For example, the firefighters and the people affected due to major fires in warehouses or other buildings containing asbestos, are exposed to extreme danger. The Dutch town of Roermond had to be sealed off with an emergency ordinance because of a major fire in a shipyard, whose roofs were filled with asbestos. The residents were not allowed to leave their houses for several hours and the asbestos-contaminated dust had to be removed from the houses and cars in an intensive decontamination effort.

In the European Parliament Resolution of 14 March 2013 (Asbestos-free Europe-2028), the member states are recommended to develop and use asbestos registers. The European Federation of Building and Wood Workers launched an EU-funded project on "Asbestos Registries" in December 2016. The objective is to form trade union capacities in the construction industry with regard to health protection, prevention and safety at work. The first step is to compile a guide with the asbestos registers, which are available or developed in the EU-28 countries, with experts and various institutions. In the second phase of the project, the guide is then tested and evaluated in five European regions for the practical implementation of the workers' councils (EFBWW Asbestos Registries, 2017).

Transfer of Asbestos tragedy to emerging and developing countries

When asbestos bans emerged in Europe, many companies in the asbestos industry moved to emerging and developing countries. Over 30 years after replacement fibres had entered the market and substituted asbestos products, and despite the decrease in its annual global production from 5.3 million tonnes to barely 2 million tonnes, the exorbitant rise in asbestos consumption in 2014, mainly in Russia and in emerging countries like India, China and Brazil, is saddening (See Fig. 5).

Today, India is the world's largest importer of asbestos: According to IBAS, India consumed an average of 375,000 tonnes/year between 2011 and 2013. 90 percent of the production was asbestos – cement corrugated sheets for roofs, asbestos panels and pipes. In India, 300,000 people are at risk as a result of their employment in asbestos-producing companies and millions of workers are insufficiently or not at all protected against these lethal fibers. Figure 4 clearly shows the shift to the Asian countries. Even though China produces asbestos itself, there is an additional rise of 53 percent and even in India of 163 percent. From 2000 to 2014,

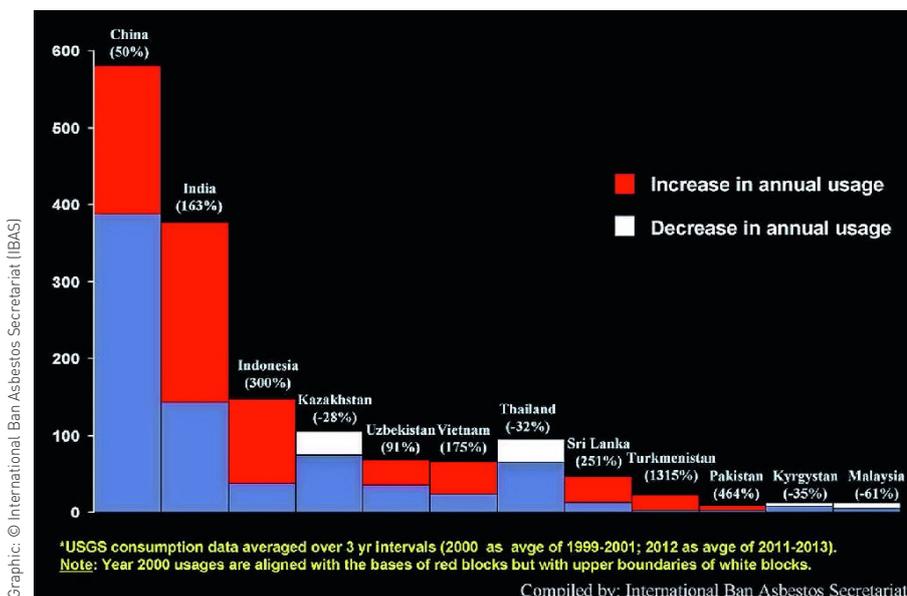


Fig. 5: Worldwide asbestos consumption (2000 – 2012) and asbestos use by region (2000 – 2012)



Major fire in a boatyard of the Dutch town of Roermond with massive leakage of asbestos fibers

Photos: © G. Jungmann

there was around a 64 percent reduction in the countries dealing with asbestos, a three-fold increase in countries that have imposed an asbestos ban, and an exorbitant shift in asbestos consumption from industrialized countries to emerging and developing countries. In 2010, only 18 countries had an asbestos ban. Today, there are 57 countries that prohibit the import, usage and handling of asbestos.

This development constitutes a ticking bomb for the public health in countries without asbestos bans for the next decades. Stark increases in the use of asbestos, often none-existent or insufficient provisions for occupational safety and health, non-existent limit values and the lack of enforcement and control by authorities result in an explosion of the number of asbestos related diseases and consequent mortality rates.

The ILO "Convention 162 on Safety in the Use of Asbestos" from 1986 (came into force in 1989), which has only been ratified by fewer than 30 countries to date, is increasingly proving to be a blunt sword and lags decades behind in scientific-medical knowledge acquisition. It serves more as an alibi for unrestricted asbestos usage for the companies and governments in the emerging and developing countries, and not as a demand to provide active protection to the employees and the people. Consequently, the convention should be reconsidered and a political and economic strategy for a "worldwide discontinuation of the use of asbestos" should be strongly advocated together with the WHO, WTO, employers and governments. To justify the reality of the situation in all countries, international or-

ganizations and national governments should work closely together and promote the victims' associations.

Literature

- AIA-Asbestos International Association (1971) Vertrauliches Protokoll der International Conference of Asbestos Information Bodies, London, 24-25 November 1971.
- AIA-Asbestos International Association (1980) The Industry's viewpoint concerning Asbestos. Survey of the Asbestos Scene, London.
- Albracht, G. (1984), G. Albracht führte in Zusammenarbeit mit E. Hoffmann für den 10-bändigen Asbestersatzstoff-Katalog zahlreiche Hearings u.a. mit Vertretern aus den Gewerkschaften, der staatlichen Behörden, der Berufsgenossenschaften und den Industrien, die Asbest, asbesthaltige Produkte oder Ersatzstoffe verarbeiten, durch. Der Katalog wurde entsprechend den Beratungen im Unterausschuss Verwendungsbeschränkungen/Ersatzstoffe im Ausschuss für gefährliche Stoffe im Dezember 1984 verabschiedet und im Rahmen des Battelle-Forschungsprojekts „Erhebung über im Handel verfügbare Substitute für Asbest und asbesthaltige Produkte“ von Poeschel, E. und Köhlinga, A. durch das Umweltbundesamt veröffentlicht. Zur Unterrichtung an alle Arbeitgeber veröffentlichte 1985 der Hauptverband der gewerblichen Berufsgenossenschaften einen Nachdruck des Asbest-Ersatzstoffkatalogs ebenfalls in seiner Schriftenreihe.
- Albracht, G. (2013) Trade unions and the Federal Environment Agency – in-

vestigators of an asbestos ban in Germany. In: The long and winding road to an asbestos free workplace, editors Rolf Gehring und Jan Cremers, CLR Studies p. 85-86. European Institute for Construction Labour Research, 2013. ISBN 978 90 5727 106 9

- Albracht, G. (2013) Gewerkschaften und Umweltbundesamt – Initiatoren für Asbestverbot in Deutschland, Sicherheitsingenieur 3/ 2013; Asbestfreies Europa, Sicherheitsingenieur 5/ 2013
- Albracht, G. and O. A. Schwerdtfeger (1991) Herausforderung Asbest, Universum Verlagsanstalt, Wiesbaden. ISBN 3-923221-06-1
- Albracht, G., Bolm-Audorff, U., Woitowitz, H.-J. (1985) Asbestspätschäden, Hrsg: Der Hessische Sozialminister
- ARD-RBB (2005) Rechtlos und hilflos – Wie Todgeweihte mit ihren Ansprüchen an die Berufsgenossenschaften scheitern, TV-Sendung vom 14. April 2005.
- Audic, A. (2016) French asbestos regulation among the most demanding in the world : evolution and implementation . SLIC – Thematic Day, May 17th 2016, Amsterdam Detaillierte Informationen in: <http://travail-emploi.gouv.fr/sante-au-travail/prevention-desrisques/amiante/article/amiante>
- Bohlig, H., Dabbert, A.F., Dahlquien, P., Hain, E., Hinz, I. Epidemiology of malignant mesothelioma in Hamburg. A preliminary report. In: Environm. Res. 3 (1970), S. 365-372
- Bundesrechnungshof (1989) Zwischenbericht vom 13. März 1989 und Fassung vom 9. Mai 1989 zur Einflussnahme der Industrie auf Entscheidungen des Bundesgesundheitsamtes. vgl. dazu:

- Die erpaptten Kontrolleure. DIE ZEIT, 28.04.1989, Nr. 18 sowie Deutscher Bundestag, Drucksache 11/5365 v.10.10.1989.
- Butz, M. (2012) Beruflich verursachte Krebserkrankungen, eine Darstellung der im Zeitraum 1978 bis 2010 anerkannten Berufskrankheiten, BK-DOK, DGUV Berlin.
 - DER SPIEGEL (1989) 37/1989
 - Deane, L (1898) Report on the health of workers in asbestos and other dusty trades. In: HM Chief Inspector of Factories and Workshops, 1898, Annual Report for 1898, S. 171f., HMSO London
 - DGB (1981) 17-Punkte-Programm gegen Asbestkrebs in der Arbeitswelt. In: DGB Nachrichtendienst 12.02.1981.
 - EFBH Campaign (2013) Safety and Health asbestos Campaign der EFBH www.efbww.org/default.asp?Issue=SafetyandHealthAsbestosCampaign&Language=EN
 - EFBH Asbestinformations-Module (2013) Asbestinformationsmodule, Folder, Leaflet und das „Asbesthaus – hier könnte sich Asbest im Haus verbergen!“: www.efbww.org/default.asp?Issue=Asbestos&Language=EN
 - EFBWW Asbestos Registries, (2017) Trade Union Guide on using Asbestos: www.efbww.org/default.asp?Issue=EUProjects&Language=EN
 - Entschließung des Europäischen Parlaments vom 14. März 2013 www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA2013-0093+0+DOC+XML+V0//EN3
 - Europäische Kommission, Beschäftigung, Soziales und Integration 2006
 - Die EU lanciert eine Kampagne zur Vermeidung von Asbestexpositionen. <http://ec.europa.eu/social/main.jsp?catId=89&langId=de&newsId=152&furtherNews=yes>, siehe auch Ergebnisse der SLIC-Kampagne www.arbeitsschutzdigital.de/SIS.11.2007.516
 - Hauenschield, K. (1981) Interview in der DGB-Wochenzeitung Welt der Arbeit, 29.01.1981.
 - Hayek Engineering (1981) Produkt- und unternehmensstrategische Studie für den Vorstand der Eternit AG. Zürich
 - Hoffmann, F.L. (1918) Mortality from respiratory diseases in dusty trades. Inorganic dusts. Bull. Of the U.S. Bureau of Labour Statistics No 231 (Industrial Accidents and Hygiene series: No. 17). Washington, D. C. June 1918
 - Horbach, L. and H. Loskant (1981) Berufskrebsstudie der Deutschen Forschungsgemeinschaft, Harald Boldt Verlag Boppard.
 - IG CHEMIE – PAPIER – KERAMIK (1981) Asbestgefahren verstärkt bekämpfen! IG Chemie fordert Ersatz von Asbest durch ungefährliche Stoffe. Pressedienst des Hauptvorstandes. Vgl. Stellungnahme zur Gesamtproblematik „Asbest“ des Geschäftsführenden Hauptvorstandes vom 23.02.1981
 - INRS 2015 META-Kampagne (2015) www.inrs.fr/inrs/recherche/etudes-publications-communications/doc/communication.html?refINRS=NOETUDE%2FC2013-118
 - INRS 2014 Des recommandations pour le recyclage de revêtements routiers. Bonnes pratiques de prévention dans les travaux routiers. www.inrs.fr/actualites/prevention-revetement-routier.html
 - McCulloch, J., Tweedale, G.(1981) Defending the Indefensible – The Global Asbestos Industry and its Fight for Survival . Oxford University Press, 1981
 - Nordmann, M. (1938) Der Berufskrebs der Asbestarbeiter. T. Krebsforsch. 47, 288 (1938)
 - Nordmann, M. and Sorge, A. (1941) Lung Cancer from Asbestos Dust in Animal Experiments. Z. Krebsforsch. 51 (1941) S. 168 – 182
 - Pancoast, H. K., Miller, T. G., Landis, H. M. (1918) A roentgenologic study of the effects of dust inhalation upon the lungs, Amer. J. Roent. 5 (1918) S. 129 –138
 - Partikel, H. (1980) Krebsrisiko am Arbeitsplatz. Nur die „Spitze des Eisberges.“ In: Der Gewerkschafter 6/80.
 - Umweltbundesamt (1980) Luftqualitätskriterien – Umweltbelastung durch Asbest und andere faserige Feinstäube. UBA-Bericht 7/80.
 - Roselli, M. (2007) Die Asbestlüge – Geschichte und Gegenwart einer Industriekatastrophe, Rotpunktverlag ISBN-10: 3858693553, Zürich 2007
 - Roselli, M. (2010) Lebensgefahr Asbest. „Das ist eine immense Tragödie.“ In: Süddeutsche Zeitung, 17 Mai 2010
 - Selikoff, I. J. (1976) Asbestkrankheiten in den Vereinigten Staaten von 1918–1975, IGM-Arbeitssicherheits-Information Nr. 8/1976; Ergebnisse der IMB-Weltkonferenz über Gesundheitsschutz und Arbeitssicherheit in der Metallindustrie.
 - Takala, J. 2015 Eliminating occupational cancer in Europe and globally. Working Paper, 2015.10. Brussels 2015. ISBN 1994-4446 (print version), ISBN 1994-4454 (electronic version)
 - Wagner J.C., Sleggs,C.A., Marchandt,P. (1960) Diffuse pleural mesothelioma in the North-West Cape Province. In; Brit. J. Industr. Med. 17 (1960), S.260–271.
 - Weitowitz, H.-J. (1972) Arbeitsmedizinisch-epidemiologische Untersuchungen zu den unmittelbaren Gesundheitsgefahren durch Asbest. In: Arbeit und Gesundheit, Schriftenreihe des BMA, Heft 86 n. F. (1972)
 - Weitowitz H. J. et al. (1983) Allgemein anerkannte arbeitsmedizinisch-toxikologische Erkenntnisse bezüglich Asbest. In: Sonderdruck aus Die BG Heft 5/83, Erich Schmidt Verlag, Bielefeld.
 - Weitowitz in EUROGIP (2006) 24/E Enquiry Report, European Forum of the Insurance against Accidents at Work and Occupational Diseases
 - Weitowitz,H.-J., Heilmann, J., Baur, X. (2017) Sozialpolitische Problematik bei der medizinischen Begutachtung (Teil 2) was geändert werden sollte, Soziale Sicherheit 1/2017, S. 34 – 38

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The International Association of Labour Inspection (IALI)

Global professional association for labour inspection



The International Association of Labour Inspection (IALI) was established in 1972, and currently has over one hundred members worldwide.

The main aims of IALI are:

- To promote the professionalism of its members in all aspects of labour inspection, so as to enhance their impact and effectiveness;
- To hold international and regional conferences and similar events at which members can exchange ideas and experience about how best to promote compliance with labour law and good practice;
- To provide information to its members about professional issues through the Association's website, newsletters, reports and other publications;
- To promote closer collaboration between its members, through regional networking and activities.

IALI has always worked in close partnership with the International Labour Office and other international or regional organizations.

Membership of IALI is open to any group or association of Labour inspectors, and the Labour Ministry or department of any state (or any region of a Federal state) that is responsible for directing or planning labour inspection.

The day-to-day business of IALI is administered by its Executive Committee, members of which are appointed for 3-year terms. Once every 3 years, IALI also holds a Congress and General Assembly, at which its past and future plans are openly discussed with all members, decisions are taken about the future direction of the Association and a new Executive Committee is elected.

Professionalism, Partnerships and Performance are cornerstones of IALI for delivering effective labour inspection worldwide. A key theme of the last IALI-Congress 2014 was Partnership. The congress explored joint opportunities for partnerships to further develop our joint tri-

partite agenda for promoting the interests of safe, healthy, fair and decent work globally.

The cooperation with the social partners in the construction sectors – the EFBWW – FIEC Project in the field of combating asbestos hazards is an example of tripartite working in practice.

The much needed worldwide ban of asbestos is not the end of a hazardous story. It is one of the necessary steps that needs to be taken to protect workers and citizens against the fatal consequences of the use of the former miracle mineral which turned out to be the lethal and ubiquitous carcinogen we now know.

The ban needs to be complemented with pro-active inspection, identification and mapping of contamination. Training and qualification are decisive steps for a controlled and responsible phasing out of asbestos containing products and buildings. More information about IALI's past and future activities, its partnerships and about how it is organised can be found on its website

<http://www.iali-aiit.org>

EFBWW Asbestos Campaign

“Europe 2023 – Asbestos Free”

European Federation
of Building
and Woodworkers



Following the 2005 ban on asbestos in the EU, the problem of exposure to existing sources of asbestos in buildings and

elsewhere had been by and large neglected by legislators in the EU and its Member States, which on average have done too little to protect workers and the general public from this significant health threat that continues to linger in homes and workplaces. This is why the European Federation of Building and Woodworkers (EFBWW) launched its campaign “Europe 2023 – Asbestos Free” in March 2010. Given the broad scope of the issue at

hand, the campaign has focussed on various aspects of the fight against asbestos over the years, building networks with a wide range of stakeholders including policy makers, victim support groups, and especially labour inspectorates. The campaign has five different areas of action that include 1. Registration, notification and medical surveillance, 2. Safer working conditions, 3. Training of workers, 4. The recognition of as-

bestos related diseases and 5. Recognition procedures and compensation of asbestos related diseases.

Trade Union guide on using asbestos registries

The latest initiative of the campaign is a project funded by the European Commission to map existing registries for asbestos and other harmful substances in Europe and to use this information to develop a trade union guide on how to access these registries as a preventive health and safety tool, as well as to promote or strengthen a preventive health and safety culture in companies.

Many Member States already feature registries for harmful substance at different levels (state, regional or local; e.g.

national asbestos registry in Poland, and local government project Hafenkante in Hamburg, Germany), and many providers offer expert services for the assessment and lab analysis of harmful substances in buildings. Currently company and trade union representatives often lack awareness of these instruments and knowledge of where to find this information and how to access it the project should help to fill this knowledge gap. The goal of the project is to further develop trade union capacities to tackle health and safety threats in the construction sector with regard to asbestos and other harmful substances. The project was designed in close cooperation with labour inspectors, who are also represented in the project steering group. In addition the researchers

surveying the 28 Member States of the EU rely on the support of the SLIC and IALI networks to collect reliable data.

The results of the research will be compiled in a guide on different asbestos registration models in Europe including practical information on how to access and use information and expert services. Last but not least the mapping exercise of existing registries in Europe can become a basis for policy makers at EU and Member State level to compare and develop solutions in order to establish registries, where they do not already exist, as well as to use them more effectively to facilitate national asbestos removal strategies.

Stephen Schindler,
policy adviser, EFBWW

An asbestos free Europe by 2028

Stephen Hughes was a member of the European Parliament for the British Labour Party from 1984–2014. From 1994–1997 he chaired the committee for social affairs and employment and from 1997–1999 the committee for employment and social affairs. He was vice president of the group of socialists and democrats (S&D) in the European Parliament and responsible for economic, social affairs, the internal market equality and culture.

Stephen Hughes presented an important report that contributed to the eradication of asbestos to the European Parliament in Strasburg. On 14th March 2013, the European Parliament, based on a report by its member Stephen Hughes, passed a resolution with an overwhelming majority that provided for a complete abolition of asbestos in Europe by 2028 (Resolution of the European Parliament, 2013).

Exactly one week before the resolution was passed, one of the buildings of the European Parliament in Strasbourg had to be closed, since asbestos was found in the renovation work. The Parliament calls on the European Commission to support an EU-Network of asbestos victims and demands not to impose the burden of proof on them in the recognition procedures for occupational diseases (Hughes in: Albracht, 2013).

The campaign "Asbestos-free Europe –2023" of the European Federation of Building and Woodworkers (EFBWW) as well as expertise of the social partners were the significant pre-requisites for the report and the subsequent resolution. „The campaign of the EFBWW was an important component in the preparation of my report and I have drawn extensively on the expertise of the social partners, especially that of the EFBWW. The social partners and labour inspectorates are cru-

cial in order to implement the goal of eradicating asbestos. It is important to strengthen the labour inspectorates instead of weakening them. It is not possible without labour inspectorates“ says Stephen Hughes.

Through the increased power of the European Parliament, the international agreements today require the approval of the Parliament. “This has already led, in the run-up of to the free trade agreements with Canada, to the withdrawal of support of the Canadian asbestos mines“ (Hughes in: Albracht, 2013). This pressure was crucial, which ended the asbestos production in Canada in 2012.

„We are not just obliged to do something for the economy and the banks. We have to design a Europe for the people, we have to take them along into a better future. This includes eradicating asbestos“.

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