

## Safety from asbestos exposure in Kosovo

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**Abstract:** Asbestos minerals have very favourable technical properties. They were used in almost all branches of trade and industry. Today they are well recognized as health hazardous materials, and their use is highly regulated by both OSHA and EPA. Since 2005 the use of asbestos is prohibited in Europe. Regulations to control occupational exposure to asbestos in Europe and USA were introduced since 1931, while in Kosovo until now there is a huge gap in legislation framework related to this issue. Most of industrial complexes and buildings in Kosovo are constructed 50-60 years ago, and in that time materials containing asbestos were used in a high range. After the last war, most of industrial buildings were destroyed, leaving everywhere different kind of hazardous construction and other types of waste, for which civilians were not aware. Although in other neighbour countries this material was prohibited, new buildings constructed after war continued to use materials which contain asbestos, for different purposes. The Government of Kosovo was very slow on adapting and preparing specific Laws, Rules and Regulations to restrict and regulate the use of asbestos. Fulfilment of the Legislation gap with adequate technical rules and regulations for asbestos treatment, removal, dumping and asbestos waste is very critical for the industry, employees, and the citizens of Kosovo, in general. This paper identifies the gaps on the legislation framework in Kosovo, treatment of asbestos exposure, and health and safety issues, compared to European and German Standards and legislation. Also, describes the methods and recommendations that came out from the project for asbestos inventory on Kosovo Energy Corporation, which can serve as an example for further development of specific regulations related to this issue.

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### 1. INTRODUCTION

Many employees die, or are injured, on working places as result of their way of work. Many of them suffer the consequences of their working environment in other ways. These risks are not carried only by those workers that are involved directly on high risk potential working places, but their families become part of it, as well. In developed countries, these issues are treated very carefully, since the financial loss due to damage compensation becomes quite a load on their budget. This issue is carefully monitored by Governments to insure that the health and safety of the employees and other involved people becomes a primary issue. Environmental Working Group Action Fund's exclusive analysis finds that exposure to asbestos kills at least 12,000 to 15,000 Americans a year. Sources speak of up to 500,000 asbestos deaths in Europe till now. Asbestos is a naturally occurring silicate mineral with a fibrous structure. There are two types of this mineral, the so-called 'serpentine' and the 'amphiboles'. Chrysotile, the so-called white asbestos, is the most frequently occurring serpentine (Dugolli, 2015).

Amphiboles are subdivided into a number of forms, including crocidolite, referred as blue asbestos; amosite, the so-called brown asbestos; and anthophyllite, the least important asbestos type in terms of product processing. With more than 90% (globally), chrysotile made up the largest portion of asbestos used. Crocidolite has a share of approx. 5%, and was predominantly used as sprayed asbestos, and in high-temperature lagging. In contrast, amosite amounts to less than 2%.

### 2. HEALTH RISK AS RESULT OF EXPOSURE TO ASBESTOS

The catastrophic effects of asbestos fibers released into the air we breathe, have made this dangerous substance the number one killer among occupational death cause diseases in Europe (EC, 2009). Asbestos fibers are too small to be seen and breathing them can cause lung cancer, mesothelioma and other cancers, including the larynx, stomach, bladder, kidney, colon, and rectum, and circulatory disease. According to a Eurogip Report (2006) – these diseases are recognized in all EU countries as occupational diseases.

### 3. THE USE OF ASBESTOS ON THE BUILDINGS

Its favorable technical properties, led in the past to, asbestos being used in almost all branches of trade and industry. Thus asbestos is found in ships, train coaches, airplanes and military vehicles as well as in industrial buildings and private homes. The most important forms of materials containing asbestos are: *Asbestos cement products* (approx. 15%), *Asbestos panels* (5-50 %), *Asbestos papers, cardboards, and gaskets* (50-90%), *Asbestos-containing construction chemical products* (up to 20 %), *Asbestos fabrics, tapes and cords* (highly variable, from 3-90 %), *Sprayed asbestos* (up to 85 %), *Loose asbestos lagging* (up to 100%), *Asbestos-containing floor coverings* (15-90%).

#### 4. LEGISLATION RELATED TO ASBESTOS EXPOSURE PROTECTION IN KOSOVO

Asbestosis was named the disease in British medical journals as early as 1920s, as physicians recognized that exposure to asbestos caused disease (White, 2002). In 1931, the British government began regulating workplace safety in the asbestos industry, monitoring workers for asbestosis, and providing worker's compensation to those who were disabled by it (Tweedale, 2000). On that period, in the U.S. and Canada, the insurance companies stopped selling life insurance to asbestos workers. Three safer substitutes of asbestos were known as early as the 1930s (Castleman, 1996). The "Dresden Declaration on the Protection of Workers against Asbestos" of the European Asbestos Conference 2003, called for a worldwide ban of asbestos. Asbestos is well recognized as a health hazardous material and its use is now highly regulated by both OSHA and EPA. Slovenia, Croatia, Serbia, Montenegro, Macedonia and Bosnia have ratified regulations ILO 162 related to health and safety from asbestos since 1986. In Kosovo, one "Administrative Instruction" approved by the Government treats very superficially the management of waste containing asbestos, which is yet impossible to be applied, since there is no special landfill prepared, or defined for this specific waste, and there are no specific rules applied for any prior steps for treating asbestos as a waste. The prohibition of the products on the market containing asbestos, EU and Germany clearly define it on Chemical Law and regulations, (see Table 1). Kosovo's Chemical Law and the Law for Construction does not mention any specific products that contain asbestos, neither any prohibition for the Kosovo Market.

The protection of the workers who are closely exposed to asbestos, in EU and Germany is highly regulated by Laws and Regulations. In Kosovo, Health and Safety Law, mentions a link to other documents that specify details, but the documents are not written or prepared to be approved by the Government. The comparison between the countries is given on Table 2.

**Table 1. Legal documents that prohibit placing on the market products containing asbestos**

Countries	Legal documents that prohibit placing on the market products containing asbestos
European Union	The Chemicals (Asbestos Articles) Regulations 2011, Article 67 and Annex XVII of the EU REACH Regulation 1907/2006
Germany	Chemical Law (Chemikaliengesetz) Federal Emission Protection Law (Betriebsstättenverordnung) Forbidden Chemical Ordinances (Chemikalienverbotverordnung)
Kosovo	None (Chemical Law does not treat asbestos specifically in any article, Law for construction products doesn't specify asbestos containing materials)

**Table 2. Legal protection of the workers from the risk related to exposure to asbestos at work.**

Countries	Protection of the employees from the risk related to exposure to asbestos at work
European Union	The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulation 2010 (S.I.No 589/2010), Regulations 2,10,11,15,17,25 and 26 of S.I 386 of 2006
Germany	Ordinance for Occupational Medical prevention ArbMedVV Rules for Occupational Medicine Work Safety Law ASiG German Institute for Standards DIN State Construction regulation National building Code Hazard Materials Regulations Occupational Statutory Accident Insurance and Prevention DGUV (TRGS 519)
Kosovo	Law for Health and Safety on working places – Article 6 says that special fields are to be treated separately on other documents - there is no document related to asbestos up to date). Administrative instruction No.10/2011 for classification and systematization of dangerous works – classifies work with asbestos as dangerous, but nothing more.

The people, who are not directly involved in demolition or construction works, but are in risk from inhaling asbestos from others works activities, in EU and Germany are protected with special Articles, Laws and regulations (see Table 3). In Kosovo, Environmental Protection Law specifies that: prior to dumping hazard wastes, it is needed an environmental approval to be taken, but it doesn't separate asbestos from the other hazard wastes, as other countries do. The Administrative Instruction for waste containing asbestos management specifies very superficially the methods on waste management, but there is no landfill specified within the Country, that is prepared to except this waste. And also there is not any description on how other people would be protected from the transport, and dumping activities.

**Table 3. Legal protection of people inhaling asbestos dust from others work activities**

Countries	The risk of people inhaling asbestos dust from others work activities
European Union	The Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 (S.I.No.386 of 2006)
Germany	Hazardous Substances regulations Water Usage Law Recycling and waste Act Technical regulations for Air Purity

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