2. Asbestos-Related Legislations and Regulations

2-A-a. Asbestos-Related Legislation of Korea

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Two main governmental agencies regulate asbestos and asbestos-containing materials in Korea: the Ministry of Employment and Labor (MOEL) and the Ministry of Environment (MOE).

The Occupational Safety and Health (OSH) Act started to regulate asbestos as a chemical that can only be used with permission of MOEL in 1990, and prohibited crocidolite and amosite in 1997 and anthophyllite, tremolite, and actinolite asbestos in 2003. The occupational exposure limit of asbestos was reduced from 2 f/cc for chrysotile, 0.5 f/cc for amosite, 0.2 f/cc for crocidolite and 2 f/cc for other types of asbestos to 0.1 f/cc for all types of asbestos. In 2009, MOEL made major revision for the protection of asbestos construction workers by mandating the asbestos surveying of buildings and the abatement of asbestos by designated contractors. MOEL also prohibited the manufacture, import, transfer, offer and use of asbestos-containing products in 2007. In April 2011, MOE issued the Safe Asbestos Control Act to protect human health and the environment from asbestos and this Act will be put into force in April 2012. In addition to the Acts controlling current and future asbestos exposure, MOE issued the Asbestos Victim Compensation Act in March 2010 to provide financial compensation for victims suffering from asbestos-related diseases. The following fact sheets briefly describe the major provisions of the asbestos-related legislation in Korea.

Reference

1. Korean Ministry of Employment and Labor. Occupational safety and health (OSH) act. 2009 Dec. [In Korean]

2. Korean Ministry of Environment. Safe asbestos control act. 2011 Apr. [In Korean]

3. Korean Ministry of Environment - Asbestos victim compensation act. 2010 Mar. [In Korean]

4. Korean Ministry of Environment. Hazardous chemical control act. 2010 Mar. [In Korean]

5. Korean Ministry of Environment. Waste control act. 2010 Mar. [In Korean]

6. Korean Ministry of Knowledge Economy. Quality management and safety control of industrial products act. 2010 Feb. [In Korean]

1. Ministry of Employment and Labor (MOEL). Occupational safety and health (OSH) act. December 2009.

Background: The purpose of this Act is to maintain and promote the safety and health of workers by preventing industrial accidents and creating comfortable working environments through establishing OSH standards and clarifying the location of responsibility.

Objective: This Act covers prohibition and permission of manufacturing, asbestos survey of buildings, abatement of asbestos by designated contractors and detailed mandatory standard work practices designed to protect employees from asbestos exposure.
According to this Act, a notification to prohibit the manufacture, import, transfer, offer and use of asbestos-containing products was issued by MOEL in 2007 and products containing all types of asbestos were totally banned in 2009. The occupational exposure limit of asbestos was set at 0.1 f/cc for all types of asbestos in Korea.

Asian Context: For Asian countries that continue to manufacture and use asbestos products, the primary concern is worker exposure in occupational environments because workers can be exposed to very high concentrations of airborne asbestos. The regulation of asbestos in occupational settings should take into account asbestos workers in both general industries and the construction industry.

Critical Appraisal: This Act also specifies the evaluation, instruction and education of asbestos investigation institutions and designated contractors.

2. Ministry of Environment (MOE). Safe asbestos control act. April 2011.

Background: The purpose of this Act is to protect and improve public health by regulating the safe control of asbestos.

Objective: This Act covers national asbestos control plan, prohibition and control of asbestos-containing materials, control of naturally occurring asbestos, asbestos in buildings and peripheral areas of asbestos abatement sites that are not covered by existing Acts in Korea. This Act was legislated in April 2011 and will come into force in April 2012. Subordinate regulations are under legislation by the MOE.

Asian Context: The various sources of asbestos exposure include asbestos in workplaces, general environments, buildings and soils. For Asian countries, this Act provides an example of legislation on the control of asbestos in various situations and media.

Critical Appraisal: Several Acts related to asbestos have been introduced by different ministries of the Korean government. This Act clarifies the relationship among these Acts and covers asbestos controls that were not covered by existing Acts

3. Ministry of Environment (MOE). Asbestos victim compensation act. March 2010.

Background: The purpose of this Act is to compensate asbestos victims and their families by prescribing the regulations necessary for quick and fair financial compensation.

Objective: This Act covers classification and amount of compensation, detailed process on application and recognition of compensation, operation of a fund and other matters that are required to compensate victims suffering from asbestos-related diseases and their families. This Act was legislated in March 2010 and came into force in January 2011.

Asian Context: The control of current and future exposure to asbestos and the compensation for past exposure to asbestos are both important. The aim of this Act is to provide compensation for actual expenses incurred for the cure of and due to the loss of asbestos victims, and not to provide financial insurance. This Act can be an example of asbestos compensation Acts that can be applied to Asian developing countries in the future.

Critical Appraisal: The asbestos compensation Act of Korea referred to the similar Act in Japan. Victims of occupational exposure to asbestos are compensated by workers' compensation insurance in Korea.

4. Ministry of Environment (MOE). Hazardous chemical control act. March 2010.

Background: The purpose of this Act is to enable citizens to live in a healthy and comfortable environment by preventing any harm to people's health and environment caused by chemicals and by properly controlling toxic chemicals.

Objective: This Act prohibits amosite, crocidolite, anthophyllite, tremolite and actinolite asbestos and all substances containing 1% or more of these types of asbestos. The importation of chrysotile and substances containing 1% or more of these types of asbestos is also regulated under the permission of various government agencies in Korea.

Asian Context: This Act gives an example of provisions regulating asbestos as a toxic chemical in the environment.

Critical Appraisal: The kinds of prohibited asbestos and their concentrations that are regulated by this Act are closely related with those of the OSH Act in Korea.

5. Ministry of Environment (MOE). Waste control act. March 2010.

Background: The purpose of this Act is to contribute to environmental conservation and enhance citizens' quality of life by minimizing the production of wastes and ensuring the proper disposal of all generated wastes.

Objective: Wastes containing 1% or more of all types of asbestos are classified as controlled waste in this Act. Strict requirements such as obtaining permission for discharge and use of contractors licensed for treatment of controlled wastes are applied in this Act.

Asian Context: Asbestos and asbestos-containing materials should be disposed safely and not be recycled. This Act gives an example of national planning for the safe disposal of asbestos and asbestos-containing wastes.

Critical Appraisal: This Act provides detailed provisions specifying asbestos waste control. The kinds of prohibited asbestos and their concentrations that are regulated by this Act are closely related with those of the OSH Act and Hazardous Chemical Control Act in Korea

6. Ministry of Knowledge Economy. Quality management and safety control of industrial products act. February 2010.

Background: The purpose of this Act is to enhance business competitiveness and profit and ensure consumer safety by specifying the quality management and safety control of industrial products.

Objective: This Act requires that industrial products should not contain more than 0.1% of asbestos. Industrial products, especially those for children, must not contain any contents of asbestos.

Asian Context: Asbestos can be found in industrial products for children such as baby powders, toys, and bicycle brake pads. This Act gives an example industrial products that may contain asbestos for Asian countries.

Critical Appraisal: This Act provides detailed items that should be tested for asbestos. This Act mandates the use of Korean Standard (KS) testing methods in the testing for asbestos.

2-C. Asbestos Related Guideline

1. SLIC – Senior Labour Inspectors Committee (2006). A practical guide on best practice to prevent or minimise asbestos risks in work that involves (or may involve) asbestos: for the employer, the workers and the labour inspector. EUROPEAN COMMISSION Employment, Social Affairs and Equal Opportunities.

Background: The European Asbestos Conference in 2003 produced the "Dresden Declaration on the Protection of Workers against Asbestos", which recommended that the European Commission and the SLIC should produce practical guidelines to support the 2006 Asbestos Inspection Campaign. The guide is focused on practical prevention, and it covers a wide range of types of work that involve, or may involve, asbestos.

Objectives: The purpose of the guide is to provide practical advice on how to eliminate and minimize exposure to airborne asbestos, with the following more specific objectives.

1. To help employers, workers and labour inspectors identify asbestos and asbestos products during use, maintenance and servicing of plant, equipment and buildings and raise awareness of their presence;
2. To describe good practice on how to remove asbestos (inter alia by dust suppression, enclosure and protective equipment) and how to handle asbestos-cement products and wastes;
3. To encourage an approach to protective equipment and clothing which takes into account human factors and individual variability.

Asian Context: Only a few countries in Asia have banned the use of asbestos, and even for them, the practical problem of preventing exposure to asbestos in the course of removal, demolition, servicing and maintenance activities remains. This guide should be a useful reference for Asian countries when dealing with the elimination of asbestos-related diseases (ARDs)

Critical Appraisal: The Guide adopts a systematic approach and provides a quite comprehensive coverage of applications under 3 different exposure scenarios: expected, low and high exposures, and for 3 groups: employers, workers and labour inspectors. It was prepared by the Senior Labour Inspectors Committee of the European Commission, and the contents should reliable and authoritative. The bookmarks of the pdf file allow quick and easy access to the various sections and subsections that provide information relevant to individual users. The guide is written in easily understandable plain English, as well as providing good photos and diagrams for illustration. The definition of notifiable works with asbestos may be different in different Asian countries, but the EU Directive provides a good reference.

Available from: http://osha.europa.eu/fop/czechrepublic/en/topics/files/final_guide_en.pdf (Accessed June 2011).

2. European Agency for Safety and Health at Work (2004). Asbestos in Construction (Facts 51).

Background: This factsheet was produced to support the European Week for Safety and Health at Work 2004.

Objectives: This factsheet explains what asbestos is, its health effects, who is at risk, and where it may be found. The factsheet gives some basic good practice, but cannot provide detailed guidance.

Asian Context: Asbestos is still frequently being used in the construction industry in Asian countries and the list of typical places or materials in buildings where asbestos is present, as well as the list of trades at risk should be useful.

Critical Appraisal: The simple factsheet highlighted important information on asbestos in 2 pages, but did not provide detailed guidance on good practices. The two listings of typical places (and materials) where asbestos could be found and the trades at risk should be particularly useful in raising the awareness of workers and contractors involved in construction. The Factsheet is written in easily understandable plain English. It was produced by the European Agency for Safety and Health at Work, and the contents should reliable and authoritative.

Available from:
http://osha.europa.eu/en/publications/factsheets/51 (Accessed June 2011).

3. Safe maintenance – asbestos in building maintenance. European Agency for Safety and Health at Work - E-fact 48: Safe maintenance – asbestos in building maintenance (26.04.2010)

Background: Despite the banning of asbestos use in many European countries and a relevant European Union directive in 2005, asbestos is still present in many buildings and other structures. Building maintenance workers are at a high risk of coming into contact with the fibres when working on insulation in buildings and industrial installations such as pipes, roofs, walls, etc.

Objectives: This E-fact will help building maintenance companies and workers become more aware of the risks of asbestos, and develop the knowledge and skills to avoid exposure to the hazardous fibres.

Asian Context: Asbestos is still being used in building materials in many Asian countries. Even for the few countries that have banned asbestos, past use means a lot of asbestos is present in older buildings, and building maintenance work can result in the release of asbestos fibers originally locked in with the building materials. Furthermore, urban development and re-development in many developing economies are associated with the rapid turn-over of buildings, with demolition of many building that hold asbestos-containing materials.

Critical Appraisal: The Factsheet gives quite detailed information on areas of the building where asbestos may be found, which should raise alert to people concerned with building maintenance. It emphasizes a structured approach to maintenance work and makes reference to the "Best Practice Guide" issued by SLIC. Good examples of applications of guidelines from some EU countries are provided.
The Guide is published by the European Agency for Safety and Health at Work, and the contents should reliable and authoritative. The bookmarks of the pdf file allow quick and easy access to the various sections and subsections that provide information relevant to individual users.

Available from: http://osha.europa.eu/en/publications/e-facts/efact48

4. International Labour Organization: ILO Codes of Practice on Safety in the use of asbestos, 1984.

Background: In accordance with the decisions taken by the Governing Body of the ILO at its 219th (February-March 1982) Session, a meeting of experts was convened in Geneva from 11 to 20 October 1983 to draw up a code of practice on safety in the use of asbestos.

Objectives: The practical recommendations of this code of practice are intended for the use of all those who have responsibility for safety and health in the use of asbestos.
The objects of this code are:

(a) to prevent the risk of exposure to asbestos dust at work;
(b) to prevent harmful effects on the health of workers arising from exposure to asbestos dust; and
(c) to provide reasonably practicable control procedures and practices for minimizing occupational exposure to asbestos dust.

Asian Context: Although the Code was published in 1984, its recommendations are applicable today in Asian countries. The General Part A covers duties of the competent authority, employers and workers; exposure limits; monitoring in the workplace; preventive methods; personal protection; cleaning of premises and plant; packaging, transport and storage; disposal of asbestos waste; supervision of the health of workers; as well as information, labeling, education and training. Part B provides guidance for control of asbestos exposure in specific activities such as mining and milling; asbestos cement; textiles; encapsulation or removal of friable thermal and acoustic insulation; friction materials; handling of asbestos fiber in ports and container terminals; and construction, demolition and alteration work.

Critical Appraisal: The Code provides a very comprehensive coverage regarding the safety in use of asbestos both in the public and in the private sectors. Details on some technical aspects are given in Appendices. The bookmarks in the PDF file allow quick and easy access to the various sections and subsections that provide information of interest to individual users.

5. United States Environmental Protection Agency - The ABCs Of Asbestos In Schools. Revised August 2003.

Background: United States Congress passed the Asbestos Hazard Emergency Response Act (AHERA) in 1986 to protect school children and school employees from exposure to asbestos in school buildings. This pamphlet describes key parts of these federal asbestos requirements for schools. The Environmental Protection Agency (EPA) was releasing this updated document in conjunction with the National Parent Teacher Association (PTA) and the National Education Association (NEA) due to an ongoing concern about asbestos in elementary and secondary schools nationwide.

Objectives: This pamphlet helps parents and teachers answer questions and learn the facts about asbestos in schools. It also outlines the responsibilities of school boards and other school officials to protect school children and employees from possible exposure to asbestos.

Asian Context: Asbestos is most likely present in many school buildings in Asian countries and schoolchildren and employees (teachers and others) are potentially exposed. Essential information about asbestos in schools will help raise awareness among parents and teachers.

Critical Appraisal: The pamphlet provides in simple English very concise information on where asbestos is likely present inside schools, when asbestos would be a problem, and the proper methods for managing asbestos. Other information is more related to the system in the US.

6. United States Environmental Protection Agency - Current Best Practices for Preventing Asbestos Exposure among Brake and Clutch Repair Workers. March, 2007.

Background: The United States Occupational Safety and Health Administration's (OSHA) regulations require employers of most professional automotive shops to implement mandatory measures for automotive brake and clutch inspection, disassembly, repair, and assembly operations.

Objectives: This pamphlet helps professional automotive technicians and home mechanics who repair and replace brakes and clutches to deal with asbestos properly.

Asian Context: Automotive brake and clutch maintenance work is common in Asian countries, and the demand is ever increasing with the economic growth. As the rural areas become more and more accessible by automobiles, brake and clutch maintenance work, not infrequently for older vehicles, in less well established workshops is now a common scene. Essential information about asbestos in automotive brake and clutch maintenance work will help raise awareness among workshop owners and workers and help prevent the spread of asbestos dust and waste into the environment.

Critical Appraisal: The pamphlet suggested two work practices for professional automotive technicians (Negative-Pressure Enclosure/HEPA Vacuum System Method and Low Pressure/Wet Cleaning Method), but unfortunately no details (especially photos or illustrations) are given to provide guidance on adopting such practices. Lists of Dos and Don'ts for home mechanics are also given, and these can serve as guiding principles when faced with asbestos in automobile brake and clutch maintenance work.
References are made to a number of US regulations and standards, which may not be applicable to Asian countries.

7. United States Environmental Protection Agency. Managing Asbestos in Place - A Building Owner's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials. July 1990; revised 2003.

Background: The publication of this guidance document was US EPA's most extensive effort to carry out the recommendation made by her Administrator to US Congress in February 1988 of enhancing the nation's technical capability in asbestos by helping building owners better select and apply appropriate asbestos control and abatement actions in their buildings.

Objectives: The guide's purpose is two-fold. First, it offers building owners the more detailed and up-to-date instruction they need to carry out a successful operations and maintenance (O&M) program. Second, it informs building owners, lenders, and insurers that a properly conducted O&M program can in many cases be as appropriate an asbestos control strategy as removal.

Asian Context: An Operations and Maintenance (O&M) program can be defined as a formulated plan of training, cleaning, work practices, and surveillance to maintain asbestos-containing materials in good condition. This guide explains in some detail, in-place management does *not* mean "do nothing." It means having a program to ensure that the day-to-day management of the building is carried out in a manner that minimizes release of asbestos fibers into the air, and ensures that when asbestos fibers are released, either accidentally or intentionally, proper control and cleanup procedures are implemented.

Asbestos is most likely present in many buildings in Asian countries and building owners and managers would find the contents useful.

Critical Appraisal: The guide provides some details on an O&M program, including objectives, scope, preparatory steps, implementation and management, work practices, record keeping and training, as well as related US federal regulations in different chapter. A useful feature is the Chapter Summaries, which can be used as a quick reference before reading the details. The chapter on US regulations would not be useful to other countries.

8. Health and Safety Executive (HSE),UK (2011). Asbestos Essential: Advice to managers and sole traders on ‘Asbestos essentials’ - Introduction to task sheets for non-licensed work.

Background: Large amounts of asbestos were used in new and refurbished buildings before 2000 when most use of asbestos was banned in the UK. This is the introductory sheet providing advice to managers and sole traders to help them comply with the Control of Asbestos Regulations 2006. It also helps duty holders, clients, trade union and employee safety representatives know how work should be done. A total of 38 asbestos essentials task sheets and 10 Equipment and Method sheets are listed for readers to identify the relevant ones to read for specific work activities.

Objectives: Asbestos essentials covers work that will not need a license (involving‘sporadic and low intensity exposure’) if carried out just as the sheets describe. Each sheet describes ‘good practice’ for a particular task and covers the action needed to reduce exposure to an adequate level.

Asian Context: It is expected that more and more Asian countries are going to ban asbestos in the near future, but asbestos containing materials used in various buildings and industrial plants in the past will continue to act as a potential source of asbestos affecting workers and people staying in or nearby these buildings. The advices given in these task sheets and equipment and method sheets are highly relevant for similar work activities in Asian countries.

Critical Appraisal: This introductory task sheet provides a general overview with succinct information on asbestos and asbestos-related diseases, and the appropriate ways to deal with potential asbestos containing materials, especially for the less professional small contractors or sole traders. The two lists on asbestos essential task sheets and Equipment and Method sheets would enable access to more specific information for different processes in dealing with asbestos containing materials.

Available from: http://www.hse.gov.uk/asbestos/essentials/index.htm (Accessed March 2012).

9. Health and Safety Executive (HSE),UK (2006). Asbestos: The licensed contractors' guide.

Background: This book replaces most earlier HSE guidance on licensed asbestos removal work, and covers work with asbestos, which requires a license under the UH Asbestos (Licensing) Regulations 1983 (as amended 1998).

Objectives: It is aimed at businesses holding a licence to work with asbestos, either repairing or removing asbestos-containing materials (ACMs), supervising such work, holding an ancillary licence or providing training on asbestos. Employers who carry out work with asbestos insulation, asbestos coating, and asbestos insulating board using their own employees on their own premises, who are exempted from the requirement to hold a licence, also benefit this guidance. It will also be useful to people awarding contracts for such work or who have other asbestos management duties.

Asian Context: This book consists of 8 chapters. Apart from Chapter 2, which deals mainly with licensing requirements and procedures under UK legislation, the other 7 Chapters should have universal applications. Many countries have requirements for licensed contractors in carrying work with asbestos containing materials, and these contractors should find this book useful.

Critical Appraisal: The book consists of 8 Chapters: 1) An introduction to working with asbestos-containing materials (ACMs); 2) Licences; 3) Risk assessments, plans of work and notifications; 4) Training for employees, supervisors and others; 5) PPE; 6) Enclosures; 7) Controlled techniques for the removal and repair of ACMs, including waste disposal; 8) Decontamination. Succinct summaries are given at the beginning of each chapter, and various box texts highlight salient points to attract attention of the users. Flow-charts are also provided to guide practical applications. Photos and diagram are included to illustrate various aspects of asbestos work. In general, the book provides very useful information and practical guidance on working with asbestos containing materials.

Available from: http://www.hse.gov.uk/pubns/books/hsg247.htm (Accessed March 2012).

10. Health and Safety Executive (HSE),UK (2009). A short guide to managing asbestos in premises

Background: This short guide was prepared by HSE to assist persons who have a duty to manage asbestos in non-domestic premises or shared common parts of domestic premises under the Control of Asbestos Regulations 2006.

Objectives: The purpose of the guide is to provide practical advice on managing risk of asbestos in premises. It provides guidance on how to identify, assess and manage any asbestos-containing materials (ACMs) on premises. The guidance is particularly useful for small or less complex premises such as a shop or a farm building.

Asian Context: The guide offers practical advice on managing asbestos risk in small premises, which should be of high relevance to many Asian countries, disregarding the frequent reference to applicable UK legislation.

Critical Appraisal: The Guide is written in simple English, with photos illustrating high risk and low risk ACMs commonly present in premises. Highlighted boxes summarize the most important points for quick reference.

Available from: http://www.hse.gov.uk/pubns/indg223.pdf (Accessed March 2012)

11. Humanitarian Health Action, Asbestos - hazards and safe practices for clean up after earthquake, World Health Organization (WHO) and United Nations Environment Programme (UNEP), 2008

Background: The May 12, 2008 earthquake in Sichuan, China, destroyed many buildings including hospitals, schools, government offices and private homes. The external walls, roofs, window awnings and bathrooms in many of these buildings had been made using asbestos cement sheets – commonly known as "fibro" or "fibro cement". The earthquake broke the fibro into many small pieces, releasing fine fibres of asbestos at the broken edges. During clean up operations, there is the risk of liberating substantial quantities of asbestos fibres, particularly if heavy plant and equipment are used to demolish damaged structures and load rubble into vehicles. These asbestos fibres are a significant risk to public health.
Main messages: Principles of safe handling, ways to dispose asbestos-containing materials, suggested actions for protecting workers, etc. are provided as lists.

Asian context: Only a few countries in Asia have banned the use of asbestos, and even for them, the practical problem of preventing exposure to asbestos in the case of clean up and safely dispose of asbestos waste remains. This guide should be a useful reference for Asian countries as the region is often affected by earthquakes and tsunami.

Critical Appraisal: After the 2008 Sichuan earthquake, clean up of asbestos waste emerged as a problem in the region. In response, the World Health Organization and the United Nations Environment Programme issued a joint statement, and provided a guideline on how to control the risk of the clean up and to safely dispose of asbestos waste areas affected by the earthquake. Thus the document has good relevance to earthquake-prone areas of Asia.

Available from:
http://www.who.int/hac/crises/chn/asbestos/en/index.html (Accessed 27 June, 2012)

12. Emergency Preparedness and Response; South-East Asia Earthquake and Tsunami, Asbestos - hazards and safe practice for clear-up after tsunami, Regional Office of South East Asia (SEARO), World Health Organization (WHO), 2006

Background: Asbestos is widely used throughout the world, particularly in building and insulation materials. Damage to asbestos-containing material (e.g. tsunami) can result in the release of small asbestos fibres that become airborne and are readily inhaled. These fibres can remain in the lungs for long periods and can cause serious lung disease.

Main messages: Principles of safe handling, ways to dispose asbestos-containing materials, suggested actions for protecting workers, etc. are provided as lists.

Asian context: Only a few countries in Asia have banned the use of asbestos, and even for them, the practical problem of preventing exposure to asbestos in the case of cleanup and safely dispose of asbestos waste remains. This guide should be a useful reference for Asian countries as the region is often affected by earthquakes and tsunami.

Critical Appraisal: This statement by the SEARO, WHO provides information about exposure to asbestos and asbestos-related diseases (ARDS) and also guideline on how to control the risk of the clean up and to safely dispose of asbestos waste in the areas affected by tsunami or earthquake. Thus the document has good relevance to earthquake or tsunami-prone areas of Asia.

Available from:
http://www.searo.who.int/en/Section1257/Section2263/Section2310/Section2320_12504.htm
(Accessed 27 June, 2012)