

News from Japan

Japan Association for Working Environment Measurement (JAWE): Training Course for Evaluation of Asbestos in Bulk Materials

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In response to a request from the Ministry of Health, Labour and Welfare, Japan, the Japan Association for Working Environment Measurement (JAWE) developed a curriculum for a training course for Licensed Industrial Hygienists in the field of Working Environment Measurement, in order to develop the skill to analyze the asbestos content in weight, in bulk samples such as construction materials (not to assess airborne asbestos in workplaces), and already started to conduct these training courses.

In order to cope with the recent change of the situation regarding the manufacture, import, transfer, supplying or use of asbestos, as well as the increase of lung cancer, mesothelioma and other occupational diseases due to exposure to asbestos, the Ministry of Health, Labour and Welfare, Japan, amended the "Ordinance on Prevention of Hazards due to Specified Chemical Substances" in February, 2005, and also enacted a new regulation, namely the "Ordinance on Prevention of Hazards due to Asbestos", which will be enforced on 1st July 2005. Moreover, through this amendment, the Ministry of Health, Labour and Welfare, Japan, has proposed to ratify the ILO Convention No.162 - "Convention Concerning Safety in the Use of Asbestos". It should be mentioned that the number of the victims of occupational diseases due to exposure to asbestos, who were compensated by the Workers' Compensation Insurance Act, in Japan, reached 77 and 121, respectively in the fiscal years of 2002 and 2003.

The enactment of the "Ordinance on Prevention of Hazards due to Asbestos" means that the provisions regarding the control of asbestos were transferred from the "Ordinance on Prevention of Hazards due to Specified Chemical Substances" to this new regulation ("Ordinance on Prevention of Hazards due to asbestos"), at the same time adding certain new necessary provisions in order to adequately cope with the change of the situation, in recent years in Japan, as mentioned above. It should be noted that the asbestos regulations, in Japan, have been amended a few times in recent years. In 1995, the manufacture, import, use, transfer or

supplying of amosite (brown asbestos) and crocidolite (blue asbestos), as well as chemicals and other substances containing asbestos, were prohibited by article 55 of the Industrial Safety and Health Law, Japan, as indicated on Table 8-2 of the Enforcement Order of Industrial Safety and Health Law (Cabinet Order No. 318, August 19, 1972, amended in 1995). However, this provision did not apply to substances containing 1% or less of asbestos (amosite and crocidolite) in weight.

Also, in Japan, on 1st October 2004, article 55 of the Industrial Safety and Health Law came into effect prohibiting the manufacture, import, use, transfer or provision of products containing more than 1 % asbestos (including chrysotile) in weight, such as cement cylinders, fibre-reinforced cement plates, clutch lining, brake pads, brake lining, bonding agents, among others (as indicated on table 8-2, amended on 1st October 2004).

Through the enforcement of Cabinet Order No. 318 (19 August 1972, amended on 1st, October 2004), it can be said that, in Japan, asbestos is rarely manufactured, imported, used, transferred or provided. Nevertheless this does not apply whenever appropriate substitute materials for indispensable uses have not yet been developed, for example, certain gaskets (containing more than 1% of asbestos in weight) are still manufactured and used (mainly in chemical industry); this would be an exceptional case in the above-mentioned Table 8-2 of the Cabinet Order.

Therefore, concerning the present (and still) important problem of asbestos in Japan, it can be said that the main target for the prevention of diseases due to asbestos exposure (such as lung cancer and mesothelioma) is the protection of workers in workplaces where the buildings or structures were constructed in the 1970's to 1980's, often using asbestos (for example, in fire fighting materials, slates, cement, insulating materials and other construction materials), particularly whenever these are pulled down because of deterioration, or are demolished. It is expected that workers engaged in such work will be exposed to asbestos, unless strict preventive measures are taken by employers, for example, isolation, use of adequate local ventilation, appropriate personal protective equipment and clothing, personal hygiene, among many others.

So, the main aim of the Ministry of Health, Labour and Welfare, Japan, in enacting this new regulation, is to cope properly with the problem of the above mentioned exposure of workers.

In addition to the provisions regarding control of asbestos, contained in the former "Ordinance on Prevention of Hazards due to Specified Chemical Substances" (amended in February 2005), the new "Ordinance on Prevention of Hazards due to Asbestos" includes several new provisions as follows:

: prior studies must be carried out by concerned employers to establish whether

asbestos was used or not in buildings or structures, which are planned to be pulled down;

- when it is not clear whether asbestos was used or not in such buildings or structures, analysis for the presence of asbestos shall be carried out by the employers concerned, otherwise adequate measures to prevent workers' exposure to asbestos should be taken as if asbestos had been used;
- : notification by the concerned employers, to the Chief of the Labour Standards Inspection Office (with jurisdiction over the workplace in question), concerning their plan for demolishing work to be carried out in any building or structure where asbestos was used, for example, as heat insulation or fire fighting material, on walls, pillars, roofs, etc.

In addition, the Administrative Control Level for airborne asbestos was reduced from 2 fibres/cm³ to 0.15 fibres/cm³ on 1st April 2005 by an amendment of the Working Environment Evaluation Standards (Ministry of Labour Notification No. 79 of 1st September 1988).

In fact, in Japan, for licensed Industrial Hygienists in the field of Working Environment (under the Work Environment Measurement Law), employed in registered Working Environment Measurement Agencies or in organizations that have their own staff to perform working environment measurements, it is a new experience to analyze asbestos content in weight, in materials such as the above mentioned, instead of analyzing airborne asbestos in workplaces.

Last fiscal year (2004), the Ministry of Health, Labour and Welfare, Japan requested the Japan Association for Working Environment Measurement (JAWE), whose Chairman is Mr. KUNIOKI KUBO, Senior Advisor of JFE Holdings, Inc., to develop an appropriate curriculum and conduct the necessary training courses in order to enable these Industrial Hygienists to analyze the content of asbestos in weight (if more than 1% or not) in construction materials, such as heat insulation, fire fighting and other asbestos-containing materials.

In response to this request, JAWE developed the necessary curriculum for a two-day training course and the outline of this curriculum is hereby presented.

Term	Subjects
First day	- Lecture on the present situation regarding asbestos both at the domestic and at the international levels
	- Lecture on a method for the qualitative and quantitative analysis of asbestos content, in weight, in different products
	- Lecture on analysis of asbestos by the X-ray Diffraction Method
	- Lecture on the analysis of asbestos by the Phase-Contrast Optical Microscopy Method using Dispersion Staining and by the Polarizing Microscope Method
Second Day	- Practice on qualitative and quantitative analysis of asbestos content in weight, in bulk samples, such as construction materials, by the X-ray Diffraction Method (including formic acid treatment)
	- Lecture and demonstration on the analysis of asbestos content in weight in serpentine by the Derivative Thermogravimetry Method as well as the X-ray Diffraction Method.
	- Practice on the qualitative and quantitative analysis of asbestos fibres by the Phase-Contrast Optical Microscopy Method using Dispersion Staining
	- Questions and Answers

JAWE, in response to the request from the Ministry of Health, Labour and Welfare, Japan, conducted four of the above-mentioned training courses since last July, in fiscal year 2004 (see Photo showing the practice of Dispersion Staining in one of the courses). Thirty four licensed Industrial Hygienists (in the field of Working Environment Measurement) finished these training courses in fiscal year of 2004.

In the fiscal year of 2005 as well as 2006, under the auspices of the Ministry of Health, Labour and Welfare, Japan, JAWE is conducting more training courses, nationwide, basically following the above-mentioned curriculum.

