

A Study on Worker Exposure to Asbestos and Control Measures in Some Asbestos Industries

Se-Min Oh
Industrial Hygiene Laboratory
Industrial Health Research Institute
Korea Industrial Safety Corporation
34-4, Koosan-Dong, Buk-Ku
Inchon 403-120, Korea

- Abstract -

This study was performed to evaluate the asbestos exposure levels and to develop the control measures in textile, brake lining manufacturing and slate manufacturing industries.

For this study, fifteen plants of brake lining manufacturing industry, 7 plants of textile industry, and 3 plants of slate manufacturing industry were selected and surveyed.

Geometric means(GMs) of airborne asbestos concentrations in textile, brake lining manufacturing, and slate manufacturing industries were 1.42 f/cc(0.07-6.10 f/cc), 0.19 f/cc(<0.01-2.67 f/cc) and 0.08 f/cc(0.02-0.67 f/cc), respectively.

In textile industry, overall GMs of airborne asbestos concentrations in plants with less than 50 workers and in plants with more than 50 workers were 1.60 f/cc and 0.3 f/cc, respectively. Therefore, the size of plant showed some difference in the airborne asbestos concentrations. Three out of 7(42.9 %) exceed the Korean standard, 2 f/cc, and every plant exceed the USA standard, 0.2 f/cc of the OSHA-Permissible Exposure Level(OSHA-PEL). Especially, one plant showed the highest average concentration of 2.87 f/cc.

In brake lining manufacturing industry, the plants with less than 50 workers showed 0.22 f/cc. The plants with more than 50 workers showed 0.18 f/cc. All plants showed the exposure level below the Korean standard. Five of 15(33.3 %) were above the OSHA-PEL. One plant showed the highest average concentration of 0.84 f/cc.

In slate manufacturing industry, the average exposure level was 0.08 f/cc, and all of the plants were below the Korean standard and the OSHA-PEL.