

RAO - ABSTRACT

INDIA: The safe use approach of Chrysotile

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India has been using asbestos since 1940's for commercial purposes. In addition to Indian industrial houses, a couple of multinational companies were engaged in manufacture of asbestos cement products to a large extent, asbestos textiles and asbestos friction materials to certain extent. Even though, all the required quantity of chrysotile asbestos was imported, amosite and crocidolite were also imported up to 10% of total imports. Industry stopped using amphiboles in 1980's due to known health hazards. Indian Chrysotile asbestos cement industry produced 2,171,975 metric tons of asbestos cement products in the year 2005-2006. A future projection of 15-20% increase per year is planned for next three years by the industry.

The organized sector of asbestos industry has formed an association "Asbestos Information center (AIC)" in the year 1980. The main aim of AIC is to disseminate state of art information on health and environmental issues to all concerned. This act initiated the concept and commitment of safe use approach of asbestos.

Since then, with active involvement of industry and the government, two study teams were formed in 1984 to understand situation of asbestos industry in India, under the aegis of Director General of Technical developments, Government of India. This is the first authenticated report on asbestos industry with a set of recommendations for safe use of asbestos.

The Bureau of Indian standards has published sixteen recommendations on "Safety in handling and use of asbestos" during 1985-87. A public interest litigation case was filed in Supreme Court in 1986 by an NGO. After the case was heard for over nine years, The Honorable Court's directions to industry and the government have enabled "Safe use approach of Asbestos".

During above period i.e. in 1980's, industry has regulated working conditions, arranged training programs in Occupational Health, Occupational Hygiene and Environment monitoring to professionals from industry and government availing services of national and international experts including from ILO too. This comprised of training hygienists on dust sampling, microscopists using Specific Field Training Slides and Medical Doctors on analyzing Health Surveillance data and diagnosing Asbestos related diseases. Members of industry also participated in quality assurance programs run by Institute of Occupational Medicine, Edinburgh and LHCF in Paris. Industry imposed self-discipline in environment and health surveillance aspects and adopted periodic auditing by a tripartite expert committee. Employees and their representatives were educated on recommended work practices and their role in safe use policy on asbestos.

Members of AIC spared no effort to keep exposure and emission levels to lowest possible levels and supported regulatory agencies in reviewing to lower the permissible exposure

and emission levels. Most of the industries are working on total recycling of solid waste and there is no let out of process effluents.

All the member industries of Asbestos cement products manufacturers association (ACPMA), an association formed exclusively for asbestos cement industry in the year 1985 carryout dust level measurements and health surveillance programs as prescribed by regulatory authorities. Data from Health surveillance records of factories using exclusively chrysotile since 1979 has not shown any Asbestos Related Disease. Occupational Hygiene records also showed work exposure levels around 2 fibres/cc of air in early 1980's, which have been successfully brought down to 0.1 f/cc of air. Directorate General of Factory Advisory Services and Labour Institutes (DGFASLI) has taken up a multi disciplinary national project on occupational health and working environment in asbestos industries in the year 2004. The dust levels measured in various departments of twelve factories were less than 0.13 fibre/ml of air. 620 randomly selected employees of above factories were medically screened for asbestos related diseases. No asbestos related diseases were detected in above employees who are exposed to chrysotile fibre for the last 5 – 20 years.

The regulatory authorities always differentiated between types of fibres while prescribing Permissible Exposure Limit Values (PELV's). Ministry of Labour, Ministry of Environment, Ministry of Health and Ministry of Consumer affairs of Government of India are constantly reviewing /updating regulations/ recommendations for a responsible and safe use approach of Chrysotile. Another national study is in the offing on Health and Environment aspect in asbestos cement industry to be taken up by National Institute of Occupational health (NIOH). The concerted efforts by industry and regulatory cum advisory governmental authorities have laid a perfect path for safe use approach of Chrysotile in India.

It is also worthy to note that the management of occupational issues on other industries will be benefited by the experience gained both by industry and regulators in the case of chrysotile