

KINGDOM OF THAILAND

Silicosis Among Workers in Nakhonsawan 2541 (1998)

Abstract

Since Thailand has been developed from an agriculturally based economy to an industrial one, several constructions are available in the country, all Of which need stone as a major component. Stone bursting, stone breaking and so on are found somewhere in Nakhonsawan. There are about 40 crush stone factories Nakhosawan.

According to the report of OPD at Sawanpracharak hospital in 1995–1997 , the most common illness were respiratory disease (16.02%). Occupational medical service, Sawanpracharak hospital emphasized importance of this event, so a project was made to find the prevalence rate of silicosis among the workers who work related to stone bursting as well as stone crusher in order to prevent unsick workers from silicosis. Among the workers who work related to stone bursting as well as stone crusher in order to prevent unsick workers from silicosis.

The patient with lung disease or silicosis will be referred to the Specialist for proper treatment. The study started with walk-through survey under the procedure of Department of Health, Ministry of Public Health; and followed by interviewing of health status, medical history, physical examination, pulmonary function testing, chest X-ray and audiometry. According to the survey (during December 1, 1998–February 28, 1999), 11 factories with 537 workers, most of which were about 10 years running the jobs.

Most of the workers were employed temporarily (illegal employment) especially the ones who get the risky jobs such as stone bursting and stone drilling etc., all of whom the subcontractors employed. The workers have no medical check-ups before and during working. They have no medical social welfare, health insurance and standard for safety working. They have use of equipment for self-protection while working with hazards e.g. dust and load noise (98.5%). On the measurement of quantity of silica in the atmosphere, it is found to be below standard level. But the noise level from stone bursting, stone crusher and driving vehicles at worksite are more than standard. Mostly the workers are male (83.2%) labor age (20–40 years old) are 54%; all married; educational level, 65% completed primary school, but 2% uneducated, and 26% obtained bachelor degree.

Mostly income is over minimum-standard level. About health status, 15.6% suffering from work-related diseases e.g. dullness. Work accidents in the recent year are found 18.6% due to stone dropping to foot and/or hand. Smoking is found 47.3%; alcohol drinking is 25%; and 0.7% use habit forming drugs. As for workers who are exposed to silica, 56.8% of them are in this exposure less than 10 years; only 12.5% have signs and symptoms of lung diseases and/or infected with lung diseases.

Speaking of Occupational hearing loss, dullness is found 10.8%, sensorineural impairment is 42%. On the correlation among noise level above standard, dullness and sensorineural hearing loss; it is statistically significant ($P\text{-Value} < 0.01$).

The results of lung function test are mostly normal. Only 4% are abnormal, mostly are restrictive type. Chest X-ray results are likely to be pulmonary tuberculosis 3.8%; are similar to silicosis 2.1%.

For the relation between duration of exposure to silica and silicosis; it is statistically significant ($P\text{-value} 0.0001$).

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