

Thesis Title Risk Study of Worker's Exposure to Particulates
 in Friction Product Plants : Respiratory System Focus.
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ABSTRACT

This study aimed to study the concentration of particulates in friction product plants. Scope of this study covered some possible factors which gave effects to worker's respiratory system. A number of 390 workers were selected randomly in order to investigate their lung functions and correlate the tests to 4 kinds of particulate concentration. ie: asbestos fiber, non-asbestos fiber, total dust and respirable dust. Results of this study revealed that the average concentration of asbestos in the office area was 0.15 ± 0.03 fibers per cubic centimeter of air while in the production area was found to be 5.55 ± 0.32 fibers per cubic centimeter of air which were higher than standard of Labor department, ministry of interior. The concentration of non - asbestos forms were not higher than the standard both in office and production areas. Statistical treatment of concentrations between asbestos and non - asbestos, it was found that there was some significant differences. ($p\text{-value} < 0.05$) in blending and

polishing areas. However, there were no differences in mixing, forming and drilling areas. The concentrations of total and respirable dusts in the office and production areas were not exceed the standard and not different statistically among the sections of production areas. Result of lung function tests showed that 141 of the workers were having minor function losses. These losses were found to be correlated with amount of dust, duration of work, smoking habit, height and sex. The researcher had recommened health surveillancce program be provided for this type of work.