

**UNIVERSITI TEKNOLOGI MARA**

**EXPOSURE OF FINE PARTICULATE MATTER  
(PM<sub>2.5</sub>) IN AUTOMOTIVE INDUSTRY AMONG  
FITTING LINE WORKERS AND HEALTH RISK  
ASSESSMENT**

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Project submitted in fulfillment of the requirement for  
the degree of  
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and Safety (Hons.)**

**Faculty of Health Sciences**

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## DECLARATION BY STUDENT

I declare that the work in this project draft is my original work. I, hereby, acknowledged that I have complied with the Academic Rules and Regulations for Post Graduate Research, Universiti Teknologi Mara, Puncak Alam Campus, throughout conducting the conduct of my study and research.

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## ABSTRACT

Welding activity is the main work activity in automotive industry. The disclosure of fine particulate matter (PM<sub>2.5</sub>) from welding fumes to the welders have potential to make them get the adverse health effects. The main objectives of this study were to define the concentration of fine particulate matter (PM<sub>2.5</sub>) from welding fumes besides conduct the Health Risk Assessment to the welders exposed to the welding fumes. The study were focused on welding activity at Fitting Line in automotive industry. The fine particulate matter (PM<sub>2.5</sub>) can enter the human body via inhalation and accumulate at respiratory organ. This can cause health problem especially respiratory problem to welders. The study were conducted by using EVM 7 to collect the data and determine the concentration of fine particulate matter (PM<sub>2.5</sub>) from welding fumes and then the data were analyst. The study show the highest reading of fine particulate matter (PM<sub>2.5</sub>) release from welding fumes exposed to welder. Further inquiry is urged in order to evaluate the real adverse health effect to welders due to exposed to the fine particulate matter (PM<sub>2.5</sub>) from welding fumes.

Keywords: *Fine particulate matter (PM<sub>2.5</sub>), Health Risk Assessment, Welding, Welding fumes*