



**DEVELOPMENT OF AIR POLLUTION MONITORING SYSTEM**

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## **ABSTRACT**

Air Pollution Monitoring System (APMS) is a system that analyzes data to determine the concentration of air pollution at workplace whether it is within safe working environment. The objectives of the study are to determine the design parameter of the air pollution monitoring system in the welding industry using the Quality Function Deployment (QFD) and to evaluate the effectiveness of the air pollution monitoring system. In this study, the data of air pollution were collected at one of the manufacturing factory located at Shah Alam. The data collected will be use as a database for the system to analyze and the data collected during the air pollution monitoring process are toxic gas parameters (i.e. carbon monoxide, carbon dioxide, nitrogen dioxide, sulfur dioxide and ozone). Other information associated with the development of APMS is also collected by using face to face interview to determine the customer requirements on the system parameters. The average values of the air pollution concentration level are used as the database for the system to analyze. The system is being created by using Microsoft Visual Basic while the average values of the air pollution concentration are used for the database by using Microsoft Access. The overall value of the air pollution concentration at the location of interest are calculated to determine the average values and the result indicates that the concentration of air pollution are not exceed the maximum value of concentration level referred to standard by NIOSH and OSHA. There are several characteristics can be improved to enhance the performance of the system.

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