Wilai Hengwiwattanachai 2009: The Inspection and Design of Local Exhaust
Ventilation from Adhesive Coating Process In Automobile Industry. Master of
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This work aimed to seek the roots of health problems (dizziness, headaches, respiratory irritation, and nausea) which employees, working in the adhesive coating process (comprising manual spraying ang painting process) in an automobile plant, faced daily. The workplace was in a bluiding; a closed room was situated therein. The painting process was carried out in the closed room whereas the spraying outside the room. At each work position, air quality and the local exhaust ventilation system were examined. The results showed lower exposure concentrations of volatile organic solventes (xylene, toluene and methyl isobutyl ketone) than what were stated by Thai regulations and OSHA standard. The local exhaust ventilation system in the adhesive coating process were, however, found not to abide by the ACGIH guidelines and cost comparisions of different designs illustrated that for the manually-spraying workplace, the current fan and its motor should have been replaced by a backward inclined blade fan and a motor of 2 hp (1.492 kW) whereas for the other process, the piping and the hood type should have been change in order to order to reduce the air flow resistance and still maintain the capture velocity.

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