Thesis Title Effect of Temperature and Relative Humidity of Air on

Car Refinishing

Thesis Credits 9

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ABSTRACT

This study was to examine and compare the effect of different levels of temperature and relative humidity of air on car refinishing. The interested parameters are the relative humidity studied from 60, 70 and 80%, the painting temperature investigated from 25, 30 and 35°C, and finally the baking temperatures of 40, 50 and 60°C. Acrylic lacquer paint was sprayed onto the surface of 243 specimens having dimensions of 1×1-ft. The data expressed as an average percentage of damage of area was carried out using the determination of resistance to water – Water immersion method, the determination of resistance to Gasoline, and the determination of resistance to Diesel Oil. With 3 replicates, the factorial design was used to test the data and then the data was analyzed by SPSS/FW program to find its two way ANOVA. According to the conditions in Thailand, the finding were as follows: (1) the optimum levels of relative humidity was 60-70%, (2) the optimum levels of painting temperature was 25-35°C and (3) the optimum levels of baking temperature was of 60°C.