ABSTRACT

PT Suzuki Indomobil Motor Plant TB II is a major automotive industry in Indonesia. It requires machines that support the car production process. However, if there is a machine that is damaged unexpectedly, the production process will be hampered and can cause money loss for the company. One of the departments that are experiencing this is *welding* department on YL0 production line. Therefore, in order to expedite the production process on the YL0 production line, the effectiveness of machines should beimproved by using Overall Equipment Effectiveness (OEE) or Total Effective Equipment Performance (TEEP) so that the production process can proceed smoothly.

Based on the calculation of OEE, OEE value on the YL0 production line in 2012 for each equipment are *Portable Spot Welder* 62,90% , *Press Numbering* 65,93%, *Hemming Press* 66,07%, *Robot Welder* 66,43%, *JIG*66,71%, *CO2 Arc Welder* 66,92%, *Stationary Spot Welder* 69,18%, and *Stud Welder* 69,88%. This value is very far from the criteria set by the Japan Institute of Plant Maintenance (JIPM), that is 85%. From the results OEE, it can also calculate the total performance effectiveness of machine in one year using the Total Effective Equipment Performance (TEEP) as follows: Portable Spot Welder 47,68%, Press Numbering 49,91%, 49.96% Hemming Press, Robot Welder 50,12%, JIG 50,52%, CO2Arc Welder 50,66%, Stationary Spot Welder 52.32%, and StudWelder 52.61%. COUR for production line YL0 is Rp 603.270.301,00 in 2012.

In this study the root causes can be known from the ineffective of machines on the YL0 production line by using Root Cause Analysis (RCA) based on the six big losses dominant factors, that is idling and minor stoppages, and reduced speed by machine, material, man, and method factors. So the proposal for machines improvement is maximizing the utilization of machines (maximing overalls efectiveness), and autonomous maintenance by operators.

Key words: Maintenance Management, Overall Equipment Effectiveness, Total Effective Equipment Performance, Root Cause Analysis, Cost of Unreliability