

Operator Efficiency Study for Assembly Line Optimization at Semiconductor Assembly and Test

Authors : Rohana Abdullah, Md Nizam Abd Rahman, Seri Rahayu Kamat

Abstract : Operator efficiency aspect is gaining importance in ensuring optimized usage of resources especially in the semi-automated manufacturing environment. This paper addresses a case study done to solve operator efficiency and line balancing issue at a semiconductor assembly and test manufacturing. A Man-to-Machine (M2M) work study technique is used to study operator current utilization and determine the optimum allocation of the operators to the machines. Critical factors such as operator activity, activity frequency and operator competency level are considered to gain insight on the parameters that affects the operator utilization. Equipment standard time and overall equipment efficiency (OEE) information are also gathered and analyzed to achieve a balanced and optimized production.

Keywords : operator efficiency, optimized production, line balancing, industrial and manufacturing engineering

Conference Title : ICIPE 2015 : International Conference on Industrial and Production Engineering

Conference Location : Istanbul, Türkiye

Conference Dates : March 23-24, 2015