ABSTRACTION

PT. Yamaha Musical Products Indonesia (PT. YMPI), one of the manufacturing company which produces band instruments (one of them is saxophone), wants to make its production system more efficient because seeing the excess of its stations. That is a difficulty in determining the optimal amount of its station, because of the complexity of hard soldering process of saxophone key. For that purpose, first we make a performance analysis of its manufacturing system, that is the work activity from each work station, to know its utility, number of waiting (queue), output, and cycle time.

Simulation method is used because the production system is very complex so that the analysis system is too difficult if we use mathematical analysis. And also we can make some experiments without bothering the production process. In this case, the simulation study is a production process simulation, while the experiments are changing the amount of station and distribution of part on each station.

The final result of experiments is the optimal amount of work station, there are acid pickling (1 st.), flux boiling (1 st.), hand press pressure/HPP (2 st.), pre heat soldering/PHS inspection (1 st.), hard soldering assembly/HSA inspection (1 st.), setting (1 st.), repairing (1 st.), soldering burner (2 st.), and soldering high frequency/HF (8 st.).

Key words: production system, station, simulation, experiment