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Lean manufacturing is to achieve the reduction of total production cost by eliminating possible waste, or *Muda* in production lines. Under the global competition in manufacturing systems of concurrent engineering, not only the profit but also various perspectives, such as global supply chain, environmental issues, human factors, etc. are required to be considered in manufacturing systems. However, it is not easy to share the status of process after this consideration in manufacturing systems among various people.

This study focuses on visualization of effectiveness by lean tools in concurrent engineering-based manufacturing systems which can be achieved by collaboration among various people. Designing and implementing a process simulation model of a manufacturing system, a software agent is under study for implementation in the model. The agent is designed to monitor the *Muda* level of the manufacturing process and to visualizes it during simulation. Since *Muda* cannot be judged just by the idle time only, the combination of historical data with time series of running data is used for the calculation of *Muda* level. The figure shows how the visualization of *Muda* level is presented in a prototype system.

Keywords: modeling, simulation, visualization

E-mail: tito@tokushima-u.ac.jp

Tel. +81-88-656-2150

Fax: +81-88-656-2150

