ABSTRACT

This study aims to design prototype manufacturing information system (MIS) industry based on Jobshop Production System engineering workshop production unit of PT Astra Honda Motor, which is needed to increase productivity and effectiveness in the work unit.

The design prototype SIM either determined by the role of supply chain management, business process and production planning, which can be defined workflow processes, document flow, and all activities within the system. Design method using a system development life cycle (SDLC) and system design stage using the structural design. Tools for the design of HIPO (Hierarchy plus Input-Process-Output), Flowcharts, data flow diagram (DFD / Data Flow Diagram), Diagram of connection entity (ERD / Entity Relationship Diagram).

The design of the SIM prototype engineering workshop production unit is named SIM Jobshop-pro, which has a base model in the design are: the model-based estimate of demand (demand management), the base model of MPS, MRP model base, the base warehouse inventory models, the base model the sequence job order (scheduling), the model-based quality control, the model-based control of scheduling, the model-based monitoring. Measurement system using PIECES analysis (Performance, Information, Economic, Control, Efficiency, Services) and the results show better gains in aspects of operational cost savings and time savings compared to the old system.

Keywords: Manufacturing Information Systems, Jobshop Production System, System Development Life Cycle, Data Flow Diagram, analysis PIECES

ABSTRAK

Penelitian ini bertujuan untuk merancang *prototype* sistem informasi manufaktur (SIM) berbasis industri *Jobshop Production System* pada unit produksi *workshop engineering* PT Astra Honda Motor, yang diperlukan untuk peningkatan produktivitas dan efektifitas kerja pada unit kerja tersebut.

Perancangan *prototype* SIM ditentukan oleh peran yang baik dari *supply chain management, business process* dan *production planning,* sehingga dapat didefinisikan alur proses, alur dokumen dan semua aktivitas yang ada dalam sistem. Metode perancangan menggunakan *system development life cycle* (SDLC) dengan tahap perancangan sistem menggunakan *structural design.* Alat untuk perancangan yaitu HIPO (*Hierarchy plus Input-Proses-Output*), *Flowchart*, Diagram aliran data (DFD/ *Data Flow Diagram*), Diagram keterhubungan entitas (ERD/ *Entity Relationship Diagram*).

Rancangan *prototype* SIM pada unit produksi *workshop engineering* ini diberi nama SIM *Jobshop-pro,* yang memiliki basis model dalam rancangannya yaitu: basis model perkiraan permintaan (*demand management*), basis model MPS, basis model MRP, basis model *warehouse inventory,* basis model penentuan urutan *job order* (*schedulling*), basis model *quality control,* basis model pengendalian penjadwalan, basis model *monitoring.* Pengukuran sistem menggunakan analisis PIECES (*Performance, Information, Economic, Control, Efficiency, Services*) dan hasilnya menunjukkan keuntungan yang lebih baik dalam aspek penghematan biaya operasional dan penghematan waktu proses dibandingkan sistem lama.

Kata Kunci: Sistem Informasi Manufaktur, Jobshop Production System, System Development Life Cycle, Data Flow Diagram, analisis PIECES