ABSTRAK

PRIMA DIGNAWAN. NIM: 41616110082. USULAN TATA LETAK AREA PRODUKSI ALUMUNIUM CASTING DI PT. ASTRA HONDA MOTOR. Skripsi. Jakarta: Jurusan Teknik Industri Fakultas Teknik. Universitas Mercubuana. Januari 2018.

PT. Astra Honda Motor merupakan salah satu indutri manufaktur yang bergerak dibidang perakitan sepeda motor. Adanya peningkatan permintaan sebesar 2350 unit/hari dari pasar dalam negeri dan luar negeri menyebabkan PT. Astra Honda Motor harus meningkatan kapasitas plant yang dipunyai, salah satunya penambahan mesin produksi alumunium casting.

Pada penelitian ini dilakukan perancangan ulang tata letak fasilitas dengan menggunakan metode *Systematic Layout Planning (SLP).* Prosedur SLP terdiri dari tiga tahapan yaitu tahap analisis, tahap penyesuaian dan tahap evaluasi. Tahap analisis meliputi analisis aliran material, analisis *activity relation chart (ARC)*, analisis *activity relation diagram (ARD)*, analisis kebutuhan luas area dan luas area yang tersedia. Tahap penyesuaian meliputi perncanaan diagram hubungan ruang dan perancangan alternatif layout. Pada tahap evaluasi dilakukan pemilihan terhadap alternatif-alternatif layout yang di usulkan.

Berdasarkan metode *Systematic Layout Planning (SLP)* dihasilkan usulan penambahan mesin dimana penambahan mesin tersebut sesuai dengan peningkatan kapasitas 2350 unit/hari yang diinginkan oleh PT. Astra Honda Motor khususnya bagian produksi alumunium casting didapatkan penambahan jumlah mesin 2 unit mesin HPDC 650Ton, 4 unit mesin HPDC 800Ton, 3 unit mesin LPDC, 1 unit mesin *port core*, 1 unit mesin *jacket core*, 1 unit mesin *chipping*, dan 1 unit mesin *blasting*. Jumlah yang luas mesin yang dibutuhkan untuk menambah mesin yang ditentukan adalah 1789 m^2 sedangkan area yang disediakan sebesar 4284 m^2. Kedua data tersebut digunakan untuk membuat layout yang optimal dengan tata letak teknologi —pengelompokkan mesin sesuai proses yang ada— sehingga didapatkan layout pada lampiran terkait.

Kata Kunci : Tata Letak Fasilitas, Systematic Layout Planning (SLP), Activity Relationship Chart (ARC), Activity Relationship Diagram (ARD), Perhitungan Kapasitas, Perhitungan Luas.

ABSTRACT

PRIMA DIGNAWAN. NIM: 41616110082. USULAN TATA LETAK AREA PRODUKSI ALUMUNIUM CASTING DI PT. ASTRA HONDA MOTOR. Thesis. Jakarta: Jurusan Teknik Industrial Engineering Department of Engineering Faculty. Mercubuana University. January 2018.

PT. Astra Honda Motor is one of the manufacturing industries engaged in the assembly of motorcycle. The increasing demand of 2350 units/day from domestic and overseas markets led to PT. Astra Honda Motor should increase the capacity of the plant owned, one of which is the addition of aluminum casting machine production.

In this research, the facility layout design was redesigned using Systematic Layout Planning (SLP) method. The SLP procedure consists of three stages: the analysis phase, the adjustment stage and the evaluation stage. Phase analysis includes analysis of material flow, activity relation chart (ARC) analysis, activity relation diagram (ARD) analysis, analysis of area requirement and area of available area. The adjustment stage includes the spatial planning diagram and the alternative layout design. At the evaluation stage, the selection of proposed layout alternatives is proposed.

Based on the method of Systematic Layout Planning (SLP), the proposed addition of machine where the addition of the machine in accordance with the increase in capacity of 2350 units/day desired by PT. Astra Honda Motor, in particular aluminum casting production, has been added 2 HPDC 650Ton machines, 4 HPDC 800Ton machines, 3 LPDC machines, 1 core port machine, 1 jacket core machine, 1 chipping machine and 1 machine blasting. The vast number of machines required to add the specified machine is 1789 m^2 while the area provided is 4284 m^2. Both data are used to make optimal layout with technology layout -grouping machine according to existing process- so get layout in related attachment.

Keyword : Facility Layout, Systematic Layout Planning (SLP), Activity Relationship Chart (ARC), Activity Relation Diagram (ARD), Calculation of Capacity, Calculation of Area