

DAFTAR ISI

TUGAS AKHIR.....	Error! Bookmark not defined.
LEMBAR PENGESAHAN TUGAS AKHIR.....	Error! Bookmark not defined.
LEMBAR PENETAPAN PANITIA PENGUJI.....	Error! Bookmark not defined.
LEMBAR PERNYATAAN KEASLIAN TUGAS AKHIR	Error! Bookmark not defined.
LEMBAR PERNYATAAN PERSETUJUAN PUBLIKASI...	Error! Bookmark not defined.
ABSTRAK	Error! Bookmark not defined.
ABSTRACT	Error! Bookmark not defined.
KATA PENGANTAR	Error! Bookmark not defined.
UCAPAN TERIMA KASIH	Error! Bookmark not defined.
DAFTAR ISI	i
DAFTAR GAMBAR	v
DAFTAR TABEL	vii
DAFTAR LAMPIRAN	xi
BAB I PENDAHULUAN	Error! Bookmark not defined.
1.1 Latar Belakang	Error! Bookmark not defined. A
1.2 Rumusan Masalah	Error! Bookmark not defined.
1.3 Tujuan Penelitian.....	Error! Bookmark not defined.
1.4 Batasan	Error! Bookmark not defined.
1.5 Asumsi.....	Error! Bookmark not defined.
1.6 Manfaat Penelitian.....	Error! Bookmark not defined.
BAB II TINJAUAN PUSTAKA.....	Error! Bookmark not defined.
2.1 Tata Letak Fasilitas	Error! Bookmark not defined.
2.1.1 Pengertian tata letak fasilitas.....	Error! Bookmark not defined.
2.1.2 Tujuan perencanaan dan pengaturan tata letak pabrik	Error! Bookmark not defined.

2.1.3	Prinsip-prinsip dasar tata letak fasilitas.....	Error! Bookmark not defined.
2.1.4	Macam/tipe tata letak dan dasar pemilihan	Error! Bookmark not defined.
2.1.5	Ciri-ciri tata letak yang baik.....	Error! Bookmark not defined.
2.1.6	Tipe-tipe pola aliran	Error! Bookmark not defined.
2.1.7	Tipe Layout	Error! Bookmark not defined.
2.2	Pemindahan material	Error! Bookmark not defined.
2.2.1	Tujuan Material Handling	Error! Bookmark not defined.
2.2.2	Faktor Yang Memengaruhi Material Handling	Error! Bookmark not defined.
2.2.3	Jarak Antar Departemen.....	Error! Bookmark not defined.
2.3	Ongkos Material Handling	Error! Bookmark not defined.
2.3.1	Pertimbangan Menggunakan Material Handling....	Error! Bookmark not defined.
2.3.2	Mengurangi Ongkos Material Handling.....	Error! Bookmark not defined.
2.3.3	Indeks Perhitungan Ongkos Material Handling	Error! Bookmark not defined.
2.4	Analisa produk dan proses manufaktur	Error! Bookmark not defined.
2.4.1	Analisa produk	Error! Bookmark not defined.
2.4.2	Analisa aliran proses produksi	Error! Bookmark not defined.
2.4.3	Peta proses (Process chart).....	Error! Bookmark not defined.
2.4.4	Operation process chart	Error! Bookmark not defined.
2.5	Perhitungan Fasilitas dan kapasitas.....	Error! Bookmark not defined.
2.5.1	Multiple part process chart.....	Error! Bookmark not defined.
2.5.2	From To Chart (FTC).....	Error! Bookmark not defined.
2.6	Model	Error! Bookmark not defined.
2.6.1	Kegunaan Model	Error! Bookmark not defined.
2.6.2	Contoh Model.....	Error! Bookmark not defined.
2.7	Sistem.....	Error! Bookmark not defined.

2.8	Simulasi.....	Error! Bookmark not defined.
2.8.1	Kelebihan dan kekurangan Simulasi ..	Error! Bookmark not defined.
2.8.2	Kegunaan simulasi	Error! Bookmark not defined.
2.9	Flexsim.....	Error! Bookmark not defined.
2.9.1	<i>Fixed Resources</i>	Error! Bookmark not defined.
2.9.2	Task Excutor	Error! Bookmark not defined.
2.9.3	Koneksi Port Objek	Error! Bookmark not defined.
2.9.4	Flowitem.....	Error! Bookmark not defined.
2.9.5	Label.....	Error! Bookmark not defined.
2.9.6	Experfit.....	Error! Bookmark not defined.
2.9.7	Langkah Pembuatan Model.....	Error! Bookmark not defined.
2.10	Depresiasi	Error! Bookmark not defined.
2.11	Penelitian Terdahulu	Error! Bookmark not defined.
BAB III METODELOGI PENELITIAN		Error! Bookmark not defined.
3.1	Tempat dan Waktu Penelitian	Error! Bookmark not defined.
3.1.1	Tempat Pelaksanaan	Error! Bookmark not defined.
3.1.2	Waktu Pelaksanaan	Error! Bookmark not defined.
3.2	Alat dan Bahan.....	Error! Bookmark not defined.
3.3	Metode Penelitian.....	Error! Bookmark not defined.
3.3.1	Model Konseptual	Error! Bookmark not defined.
3.3.2	Pengumpulan data	Error! Bookmark not defined.
3.3.3	Metode From To Chart.....	Error! Bookmark not defined.
3.3.4	Perancangan Layout	Error! Bookmark not defined.
3.3.5	Pengembangan Model Simulasi Diskrit.....	Error! Bookmark not defined.
BAB IV HASIL DAN PEMBAHASAN		Error! Bookmark not defined.
4.1	Pengumpulan dan Pengolahan Data.....	Error! Bookmark not defined.
4.1.1	Layout awal dan alur produksi	Error! Bookmark not defined.
4.1.2	Jumlah dan Luas Fasilitas Produksi ..	Error! Bookmark not defined.
4.1.3	Operation Process Chart.....	Error! Bookmark not defined.

4.1.4	Perhitungan Kapasitas dan Jumlah Mesin.....	Error! Bookmark not defined.
4.1.5	Multi Product Process Chart (MPPC)	Error! Bookmark not defined.
4.1.6	From to Chart (FTC)	Error! Bookmark not defined.
4.1.7	Pembuatan layout usulan.....	Error! Bookmark not defined.
4.1.8	Perhitungan Material Handling	Error! Bookmark not defined.
4.1.9	Perhitungan Ongkos Material Handling Produk	Error! Bookmark not defined.
4.2	Analisa perbandingan Hasil Layout Awal dan Layout Usulan	Error! Bookmark not defined.
4.2.1	Layout usulan 1	Error! Bookmark not defined.
4.2.2	Layout Usulan 2	Error! Bookmark not defined.
4.2.3	Perbedaan Layout Usulan.....	Error! Bookmark not defined.
4.2.4	Grafik Perbanding Layout awal dan Usulan	Error! Bookmark not defined.
4.2.5	Pengembangan Model Simulasi	Error! Bookmark not defined.
BAB V KESIMPULAN DAN SARAN		Error! Bookmark not defined.
5.1	Kesimpulan	Error! Bookmark not defined.
5.2	Saran.....	Error! Bookmark not defined.
DAFTAR PUSTAKA		Error! Bookmark not defined.
LAMPIRAN.....		Error! Bookmark not defined.
BIOGRAFI.....		Error! Bookmark not defined.

DAFTAR GAMBAR

- Gambar 1. 1 Produk yang dihasilkan oleh UD.Gajah Delta **Error! Bookmark not defined.**
- Gambar 1. 2 Layout Pabrik UD.Gajah Delta **Error! Bookmark not defined.**
- Gambar 2. 1 Aliran material pola straight line **Error! Bookmark not defined.**
- Gambar 2. 2 Aliran material pola S..... **Error! Bookmark not defined.**
- Gambar 2. 3 Aliran material pola U..... **Error! Bookmark not defined.**
- Gambar 2. 4 Aliran material pola circular..... **Error! Bookmark not defined.**
- Gambar 2. 5 Aliran material pola old angle **Error! Bookmark not defined.**
- Gambar 2. 6 Mengukur jarak fasilitas **Error! Bookmark not defined.**
- Gambar 2. 7 Modul Fixed Resources..... **Error! Bookmark not defined.**
- Gambar 2. 8 Modul Task Executors..... **Error! Bookmark not defined.**
- Gambar 2. 9 Port Input/Output..... **Error! Bookmark not defined.**
- Gambar 2. 10 Center Port..... **Error! Bookmark not defined.**
- Gambar 2. 11 Window Properties Label..... **Error! Bookmark not defined.**
- Gambar 2. 12 Window Properties Expertfit..... **Error! Bookmark not defined.**
- Gambar 3. 1 Model Konseptual **Error! Bookmark not defined.**
- Gambar 3. 2 Operation Process Chart **Error! Bookmark not defined.**
- Gambar 3. 3 Operation Process Chart **Error! Bookmark not defined.**
- Gambar 3. 4 Tabel Perhitungan Kebutuhan Bahan Baku dan Mesin..... **Error! Bookmark not defined.**
- Gambar 3. 5 Software Arena..... **Error! Bookmark not defined.**
- Gambar 3. 6 Penggambaran Model layout awal **Error! Bookmark not defined.**
- Gambar 3. 7 Import model layout pada Flexsim..... **Error! Bookmark not defined.**
- Gambar 3. 8 Plotting Resource pada Layout..... **Error! Bookmark not defined.**
- Gambar 3. 9 Pengisian panel Flexsim **Error! Bookmark not defined.**
- Gambar 3. 10 mengisi waktu proses dan kapasitas output..... **Error! Bookmark not defined.**
- Gambar 3. 11 mengisi kapasitas angkut MH **Error! Bookmark not defined.**
- Gambar 4. 1 Operation Process Chart Produk Rantang **Error! Bookmark not defined.**
- Gambar 4. 2 Operation Process Chart Produk Panci. **Error! Bookmark not defined.**
- Gambar 4. 3 Operation Process Chart Produk Dandang Nasi.. **Error! Bookmark not defined.**

Gambar 4. 4 Operation Process Chart Produk Dandang Bakso **Error! Bookmark not defined.**

Gambar 4. 5 Layout Usulan pertama **Error! Bookmark not defined.**

Gambar 4. 6 Layout Usulan Kedua..... **Error! Bookmark not defined.**

Gambar 4. 7 Grafik Perbandingan Layout awal dan usulan berdasarkan Total Jarak **Error! Bookmark not defined.**

Gambar 4. 8 Grafik Perbandingan Layout awal dan usulan berdasarkan Total OMH **Error! Bookmark not defined.**

Gambar 4. 9 Simulasi Layout Awal **Error! Bookmark not defined.**

Gambar 4. 10 Layout Usulan **Error! Bookmark not defined.**

DAFTAR TABEL

Table 1. 1 Tabel dimensi Departemen UD.Gajah Delta.....	Error! Bookmark not defined.
Table 1. 2 Grafik Kapasitas Produksi.....	Error! Bookmark not defined.
Table 1. 3 Tabel kapasitas Produksi.....	Error! Bookmark not defined.
Table 2. 1 Tabel simbol ASME.....	Error! Bookmark not defined.
Table 2. 2 Tabel From to Chart.....	Error! Bookmark not defined.
Table 2. 3 Fungsi dan kegunaan Modul basic process	Error! Bookmark not defined.
Table 2. 4 Fungsi dan Kegunaan Task Excuters	Error! Bookmark not defined.
Table 2. 5 Penelitian Terdahulu	Error! Bookmark not defined.
Table 3. 1 Waktu pelaksanaan penlitian.....	Error! Bookmark not defined.
Table 3. 2 Alat dan bahan melakukan penelitian	Error! Bookmark not defined.
Table 3. 3 Data Dimensi Departemen	Error! Bookmark not defined.
Table 3. 4 Data Dimensi Mesin/Fasilitas	Error! Bookmark not defined.
Table 3. 5 Tabel kebutuhan Mesin dan bahan baku ..	Error! Bookmark not defined.
Table 3. 6 Tabel Multi Produk Process Chart	Error! Bookmark not defined.
Table 3. 7 Analisa from to chart.....	Error! Bookmark not defined.

- Table 4. 1 Tabel Ruang Produksi 1 dan Departemen/Fasilitas **Error! Bookmark not defined.**
- Table 4. 2 Tabel Ruang Produksi 2 dan Departemen/Fasilitas**Error! Bookmark not defined.**
- Table 4. 3 Tabel Ruang Produksi 3 dan Departemen/Fasilitas**Error! Bookmark not defined.**
- Table 4. 4 Tabel Gudang jadi dan Departemen penunjang**Error! Bookmark not defined.**
- Table 4. 5 Grafik Kapasitas Produksi UD.Gajah Delta.....**Error! Bookmark not defined.**
- Table 4. 6 Perhitungan Kapasitas Produk Rantang ... **Error! Bookmark not defined.**
- Table 4. 7 Perhitungan Kapasitas Komponen Tutup Rantang .**Error! Bookmark not defined.**
- Table 4. 8 Perhitungan Kapasitas Komponen Wadah Sambal Rantang..... **Error! Bookmark not defined.**
- Table 4. 9 Perhitungan Kapasitas Komponen Badan Rantang.**Error! Bookmark not defined.**
- Table 4. 10 Perhitungan Kapasitas Komponen Circle Rantang **Error! Bookmark not defined.**
- Table 4. 11 Perhitungan Kapasitas komponen Handle Rantang **Error! Bookmark not defined.**
- Table 4. 12 Perhitungan Kapasitas komponen Spacer Handle Rantang **Error! Bookmark not defined.**
- Table 4. 13 Perhitungan Kapasitas dan Jumlah Mesin Produk Panci **Error! Bookmark not defined.**
- Table 4. 14 Perhitungan Kapasitas dan Jumlah Mesin Produk Dandang Nasi . **Error! Bookmark not defined.**
- Table 4. 15 Perhitungan Kapasitas dan Jumlah Mesin Produk Dandang Bakso**Error! Bookmark not defined.**
- Table 4. 16 Tabel Multi Product Process Chart **Error! Bookmark not defined.**
- Table 4. 17 Data Volume Material Handling Rantang.....**Error! Bookmark not defined.**
- Table 4. 18 Flow Squence Produk Rantang **Error! Bookmark not defined.**
- Table 4. 19 Data Volume Material Handling Produk Panci.....**Error! Bookmark not defined.**
- Table 4. 20 Flow Squence Produk Panci.....**Error! Bookmark not defined.**
- Table 4. 21 Data Volume Material Handling Produk Dandang Nasi..... **Error! Bookmark not defined.**
- Table 4. 22 Flow Squence Produk Dandang Nasi..... **Error! Bookmark not defined.**

Table 4. 23 Data Volume Material Handling Produk Dandang Bakso	Error! Bookmark not defined.
Table 4. 24 Flow Squence Produk Dandang Bakso ..	Error! Bookmark not defined.
Table 4. 25 Tabel Tabulasi Material Handling UD.Gajah Delta....	Error! Bookmark not defined.
Table 4. 26 From To Chart Awal	Error! Bookmark not defined.
Table 4. 27FTC Trial 1.....	Error! Bookmark not defined.
Table 4. 28FTC Trial 2.....	Error! Bookmark not defined.
Table 4. 29FTC Trial 3.....	Error! Bookmark not defined.
Table 4. 30FTC Trial 4.....	Error! Bookmark not defined.
Table 4. 31FTC Trial 5.....	Error! Bookmark not defined.
Table 4. 32FTC Trial 6.....	Error! Bookmark not defined.
Table 4. 33FTC Trial 7.....	Error! Bookmark not defined.
Table 4. 34FTC Trial 8.....	Error! Bookmark not defined.
Table 4. 35FTC Trial 9.....	Error! Bookmark not defined.
Table 4. 36FTC Trial 10.....	Error! Bookmark not defined.
Table 4. 37FTC Trial 11.....	Error! Bookmark not defined.
Table 4. 38FTC Trial 12.....	Error! Bookmark not defined.
Table 4. 39FTC Trial 13.....	Error! Bookmark not defined.
Table 4. 40FTC Trial 14.....	Error! Bookmark not defined.
Table 4. 41FTC Trial 15.....	Error! Bookmark not defined.
Table 4. 42FTC Trial 16.....	Error! Bookmark not defined.
Table 4. 43FTC Trial 17.....	Error! Bookmark not defined.
Table 4. 44FTC Trial 19.....	Error! Bookmark not defined.
Table 4. 45FTC Trial 19.....	Error! Bookmark not defined.
Table 4. 46FTC Trial 20.....	Error! Bookmark not defined.
Table 4. 47FTC Trial 21.....	Error! Bookmark not defined.
Table 4. 48FTC Trial 22.....	Error! Bookmark not defined.
Table 4. 49FTC Trial 23.....	Error! Bookmark not defined.
Table 4. 50FTC Trial 24.....	Error! Bookmark not defined.
Table 4. 51FTC Trial 25.....	Error! Bookmark not defined.
Table 4. 52 Perhitungan Ongkos Material Handling Rantang .	Error! Bookmark not defined.
Table 4. 53 Lanjutan Perhitungan OMH Rantang.....	Error! Bookmark not defined.
Table 4. 54 Perhitungan Ongkos Material Handling Panci.....	Error! Bookmark not defined.
Table 4. 55Perhitungan Ongkos Material Handling Dandang Nasi	Error! Bookmark not defined.
Table 4. 56 Lanjutan Perhitungan OMH Dandang Nasi	Error! Bookmark not defined.

Table 4. 57 Table 4. 30Perhitungan Ongkos Material Handling Dandang Bakso
..... **Error! Bookmark not defined.**

Table 4. 58 Lanjutan Perhitungan OMH Dandang Bakso.....**Error! Bookmark not defined.**

Table 4. 59 Layout usulan 1 Produk Rantang **Error! Bookmark not defined.**

Table 4. 60 Layout Usulan 1 Produk Panci..... **Error! Bookmark not defined.**

Table 4. 61 Layout Usulan 1 Produk Dandang Nasi. **Error! Bookmark not defined.**

Table 4. 62Lanjutan Layout Usulan 1 Produk Dandang Nasi..**Error! Bookmark not defined.**

Table 4. 63 Layout usulan 1 Produk Dandang Bakso**Error! Bookmark not defined.**

Table 4. 64Lanjutan Layout usulan 1 Produk Dandang Bakso **Error! Bookmark not defined.**

Table 4. 65Layout usulan 2 produk Rantang **Error! Bookmark not defined.**

Table 4. 66Lanjutan Layout usulan 2 produk Rantang**Error! Bookmark not defined.**

Table 4. 67Layout Usulan 2 Produk Panci..... **Error! Bookmark not defined.**

Table 4. 68Layout Usulan 2 Produk Dandang Nasi .. **Error! Bookmark not defined.**

Table 4. 69Lanjutan Layout Usulan Produk Dandang Nasi.....**Error! Bookmark not defined.**

Table 4. 70Layout Usulan2 Produk Dandang Bakso **Error! Bookmark not defined.**

Table 4. 71Lanjutan Layout Usulan 2 Produk Dandang Bakso **Error! Bookmark not defined.**

Table 4. 72Perbedaan Layout Usulan **Error! Bookmark not defined.**

Table 4. 73 Perbandingan Layout awal dan usulan (jarak)**Error! Bookmark not defined.**

Table 4. 74 Perbandingan Layout awal dan usulan (OMH)....**Error! Bookmark not defined.**

DAFTAR LAMPIRAN

- Lampiran 1 Alur Awal Produk Rantang **Error! Bookmark not defined.**
- Lampiran 2 Alur Awal Produk Panci **Error! Bookmark not defined.**
- Lampiran 3 Alur Awal Produk Dandang Nasi **Error! Bookmark not defined.**
- Lampiran 4 Alur Awal Produk Dandang Bakso **Error! Bookmark not defined.**
- Lampiran 5 Alur produksi layout usulan 1 produk Rantang...**Error! Bookmark not defined.**
- Lampiran 6 Alur produksi layout usulan 1 produk Panci**Error! Bookmark not defined.**
- Lampiran 7 Alur produksi layout usulan 1 produk Dandang Nasi **Error! Bookmark not defined.**
- Lampiran 8 Alur produksi layout usulan 1 produk Dandang Bakso **Error! Bookmark not defined.**
- Lampiran 9 Alur produksi layout usulan 2 produk Rantang...**Error! Bookmark not defined.**
- Lampiran 10 Alur produksi layout usulan 2 produk Panci**Error! Bookmark not defined.**
- Lampiran 11 Alur produksi layout usulan 2 produk Dandang Nasi..... **Error! Bookmark not defined.**
- Lampiran 12 Alur produksi layout usulan 2 produk Dandang Bakso **Error! Bookmark not defined.**
- Lampiran 13 Gambar Teknik Produk Rantang **Error! Bookmark not defined.**
- Lampiran 14 Gambar Teknik Produk Panci..... **Error! Bookmark not defined.**
- Lampiran 15 Gambar Teknik Dandang Nasi **Error! Bookmark not defined.**
- Lampiran 16 Gambar Teknik Produk Dandang Bakso**Error! Bookmark not defined.**
- Lampiran 17 Kegiatan Pengambilan Data dan Dokumentasi Penelitian..... **Error! Bookmark not defined.**
- Lampiran 18 Kartu Bimbingan **Error! Bookmark not defined.**
- Lampiran 19 Surat Balasan Izin Penelitian **Error! Bookmark not defined.**
- Lampiran 20 Lembar Revisi Tugas Akhir..... **Error! Bookmark not defined.**