

## DAFTAR ISI

<b>HALAMAN JUDUL</b> .....	<b>Error! Bookmark not defined.</b>
<b>LEMBAR PERSETUJUAN</b> .....	<b>Error! Bookmark not defined.</b>
<b>LEMBAR PENGESAHAN</b> .....	<b>Error! Bookmark not defined.</b>
<b>LEMBAR PENYATAAN</b> .....	<b>Error! Bookmark not defined.</b>
<b>KATA PENGANTAR</b> .....	<b>Error! Bookmark not defined.</b>
<b>ABSTRAK</b> .....	<b>Error! Bookmark not defined.</b>
<b>ABSTRACT</b> .....	<b>Error! Bookmark not defined.</b>
<b>DAFTAR ISI</b> .....	ix
<b>DAFTAR GAMBAR</b> .....	xii
<b>DAFTAR TABEL</b> .....	xiii
<b>DAFTAR LAMPIRAN</b> .....	xvi
<b>DAFTAR RUMUS</b> .....	xvii
<b>BAB I PENDAHULUAN</b> .....	<b>Error! Bookmark not defined.</b>
1.1 Latar Belakang .....	<b>Error! Bookmark not defined.</b>
1.2 Rumusan Masalah .....	<b>Error! Bookmark not defined.</b>
1.3 Tujuan Penelitian .....	<b>Error! Bookmark not defined.</b>
1.4 Manfaat Penelitian .....	<b>Error! Bookmark not defined.</b>
1.5 Batasan Masalah .....	<b>Error! Bookmark not defined.</b>
<b>BAB II TINJAUAN PUSTAKA</b> .....	<b>Error! Bookmark not defined.</b>
2.1 Tata Letak Fasilitas .....	<b>Error! Bookmark not defined.</b>
2.1.1 Pengertian Tata Letak Fasilitas .....	<b>Error! Bookmark not defined.</b>
2.1.2 Tujuan Tata Letak Fasilitas .....	<b>Error! Bookmark not defined.</b>
2.1.3 Manfaat Tata Letak Fasilitas .....	<b>Error! Bookmark not defined.</b>
2.1.4 Jenis-jenis Tata Letak Fasilitas .....	<b>Error! Bookmark not defined.</b>
2.2 <i>Activity Relationship Chart</i> (ARC) .....	<b>Error! Bookmark not defined.</b>
2.3 <i>Material Handling</i> .....	<b>Error! Bookmark not defined.</b>
2.3.1 Pengertian <i>Material Handling</i> .....	<b>Error! Bookmark not defined.</b>
2.3.2 Tujuan <i>Material Handling</i> .....	<b>Error! Bookmark not defined.</b>
2.3.3 Ongkos <i>Material Handling</i> (OMH) .....	<b>Error! Bookmark not defined.</b>

2.4	Pengukuran Jarak Fasilitas .....	<b>Error! Bookmark not defined.</b>
2.5	<i>From To Chart</i> (FTC) .....	<b>Error! Bookmark not defined.</b>
2.6	Algoritma BLOCPLAN ( <i>Block Layout Overview With Layout Planning</i> ).....	<b>Error! Bookmark not defined.</b>
2.7	Algoritma CRAFT ( <i>Computerized Relative Allocation of Facilities Techniques</i> ) .....	<b>Error! Bookmark not defined.</b>
2.8	Penelitian Terdahulu .....	<b>Error! Bookmark not defined.</b>
2.9	Kerangka Pemikiran.....	<b>Error! Bookmark not defined.</b>
<b>BAB III METODOLOGI PENELITIAN .....</b>		<b>Error! Bookmark not defined.</b>
3.1	Waktu dan Tempat Penelitian .....	<b>Error! Bookmark not defined.</b>
3.2	Objek Penelitian .....	<b>Error! Bookmark not defined.</b>
3.3	Prosedur Penelitian.....	<b>Error! Bookmark not defined.</b>
<b>BAB IV HASIL DAN PEMBAHASAN .....</b>		<b>Error! Bookmark not defined.</b>
4.1	Pengumpulan Data .....	<b>Error! Bookmark not defined.</b>
4.1.1	Tata Letak Awal <i>Line Stamping</i> 500 Ton	<b>Error! Bookmark not defined.</b>
4.1.2	Luas Area Fasilitas Produksi <i>Line Stamping</i> 500 Ton.....	<b>Error! Bookmark not defined.</b>
4.2	Pengolahan Data.....	<b>Error! Bookmark not defined.</b>
4.2.1	Perhitungan Jarak Antar Fasilitas Tata Letak Awal .....	<b>Error! Bookmark not defined.</b>
4.2.2	Perhitungan Momen Perpindahan Tata Letak Awal.....	<b>Error! Bookmark not defined.</b>
4.2.3	Perhitungan Total Momen Perpindahan Tata Letak Awal	<b>Error! Bookmark not defined.</b>
4.2.4	<i>Activity Relationship Chart</i> (ARC)	<b>Error! Bookmark not defined.</b>
4.2.5	Perhitungan Ongkos <i>Material Handling</i> (OMH) Tata Letak Awal .....	<b>Error! Bookmark not defined.</b>
4.3	Analisis Data Menggunakan BLOCPLAN	<b>Error! Bookmark not defined.</b>

4.3.1 Perhitungan Jarak Antar Fasilitas Tata Letak Usulan BLOCPLAN .....	<b>Error! Bookmark not defined.</b>
4.3.2 Perhitungan Total Momen Perpindahan Tata Letak Usulan BLOCPLAN .....	<b>Error! Bookmark not defined.</b>
4.3.3 Perhitungan Ongkos <i>Material Handling</i> (OMH) Tata Letak Usulan BLOCPLAN.....	<b>Error! Bookmark not defined.</b>
4.4 Analisis Data Menggunakan CRAFT .	<b>Error! Bookmark not defined.</b>
4.4.1 Perhitungan Jarak Antar Fasilitas Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
4.4.2 Perhitungan Total Momen Perpindahan Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
4.4.3 Perhitungan Ongkos <i>Material Handling</i> (OMH) Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
4.5 Perbandingan Hasil Analisis Data.....	<b>Error! Bookmark not defined.</b>
<b>BAB V KESIMPULAN DAN SARAN .....</b>	<b>Error! Bookmark not defined.</b>
5.1 Kesimpulan .....	<b>Error! Bookmark not defined.</b>
5.2 Saran.....	<b>Error! Bookmark not defined.</b>
<b>DAFTAR PUSTAKA .....</b>	<b>Error! Bookmark not defined.</b>
<b>LAMPIRAN.....</b>	<b>Error! Bookmark not defined.</b>
<b>RIWAYAT PENULIS.....</b>	<b>Error! Bookmark not defined.</b>

## DAFTAR GAMBAR

- Gambar 2.1** Contoh Kode dan Deskripsi Alasan *Activity Relationship Chart* ..... **Error! Bookmark not defined.**
- Gambar 2.2** Contoh *Activity Relationship Chart*..... **Error! Bookmark not defined.**
- Gambar 2.3** Contoh *From To Chart*..... **Error! Bookmark not defined.**
- Gambar 2.4** Kerangka Pemikiran ..... **Error! Bookmark not defined.**
- Gambar 3.1** Prosedur Penelitian..... **Error! Bookmark not defined.**
- Gambar 4.1** Tata Letak Awal *Line Stamping* 500 Ton PT GDM..... **Error! Bookmark not defined.**
- Gambar 4.2** *Activity Relationship Chart (ARC)* *Line Stamping* 500 Ton.. **Error! Bookmark not defined.**
- Gambar 4.3** Langkah Pertama Pengolahan *software* BLOCPLAN ..... **Error! Bookmark not defined.**
- Gambar 4.4** Langkah Kedua Pengolahan *software* BLOCPLAN ..... **Error! Bookmark not defined.**
- Gambar 4.5** Langkah Ketiga Pengolahan *software* BLOCPLAN ..... **Error! Bookmark not defined.**
- Gambar 4.6** Langkah Keempat Pengolahan *software* BLOCPLAN ..... **Error! Bookmark not defined.**
- Gambar 4.7** Langkah Kelima Pengolahan *software* BLOCPLAN..... **Error! Bookmark not defined.**
- Gambar 4.8** Hasil Analisis *software* BLOCPLAN..... **Error! Bookmark not defined.**
- Gambar 4.9** Tata Letak Terpilih *software* BLOCPLAN..... **Error! Bookmark not defined.**
- Gambar 4.10** Tata Letak Usulan BLOCPLAN .... **Error! Bookmark not defined.**
- Gambar 4.11** Langkah Pertama Pengolahan *software* CRAFT..... **Error! Bookmark not defined.**
- Gambar 4.12** Langkah Kedua Pengolahan *software* CRAFT..... **Error! Bookmark not defined.**

**Gambar 4.13** Langkah Ketiga Pengolahan *software* CRAFT **Error! Bookmark not defined.**

**Gambar 4.14** Langkah Keempat Pengolahan *software* CRAFT **Error! Bookmark not defined.**

**Gambar 4.15** Informasi Tata Letak Awal dengan *software* CRAFT ..... **Error! Bookmark not defined.**

**Gambar 4.16** Pemetaan Tata Letak Awal pada *software* CRAFT ..... **Error! Bookmark not defined.**

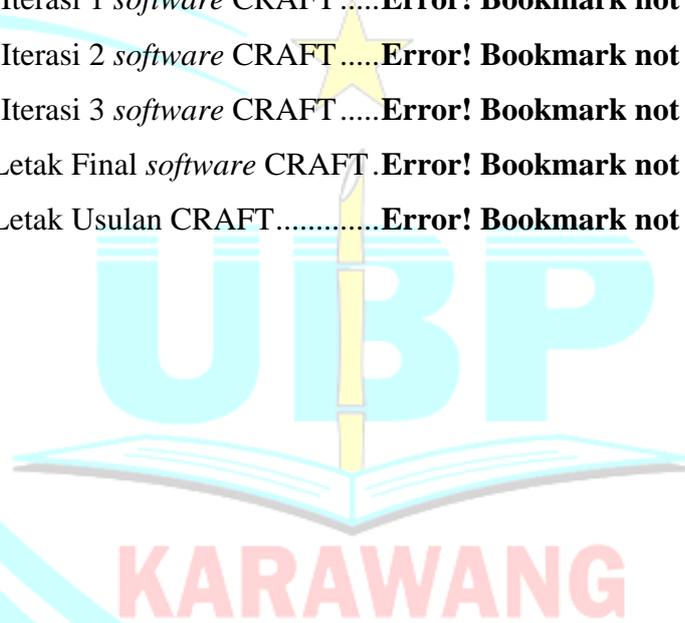
**Gambar 4.17** Hasil Iterasi 1 *software* CRAFT ..... **Error! Bookmark not defined.**

**Gambar 4.18** Hasil Iterasi 2 *software* CRAFT ..... **Error! Bookmark not defined.**

**Gambar 4.19** Hasil Iterasi 3 *software* CRAFT ..... **Error! Bookmark not defined.**

**Gambar 4.20** Tata Letak Final *software* CRAFT. **Error! Bookmark not defined.**

**Gambar 4.21** Tata Letak Usulan CRAFT ..... **Error! Bookmark not defined.**



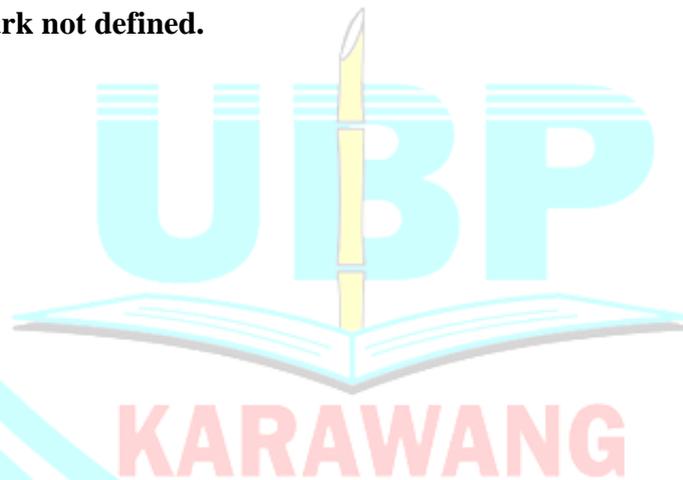
## DAFTAR TABEL

- Tabel 1.1** Jarak Perpindahan Terjauh *Line Stamping* 500 Ton **Error! Bookmark not defined.**
- Tabel 2.1** Standar Derajat *Activity Relationship Chart* **Error! Bookmark not defined.**
- Tabel 2.2** Penelitian Terdahulu ..... **Error! Bookmark not defined.**
- Tabel 2.3** Penelitian Terdahulu (Lanjutan) 1..... **Error! Bookmark not defined.**
- Tabel 2.4** Penelitian Terdahulu (Lanjutan) 2..... **Error! Bookmark not defined.**
- Tabel 4.1** Nama dan Kode Fasilitas Tata Letak *Line Stamping* 500 Ton.... **Error! Bookmark not defined.**
- Tabel 4.2** Luas Area Fasilitas Produksi *Line Stamping* 500 Ton ..... **Error! Bookmark not defined.**
- Tabel 4.3** Luas Area Fasilitas Produksi *Line Stamping* 500 Ton (Lanjutan) ..... **Error! Bookmark not defined.**
- Tabel 4.4** Jarak Perpindahan *Part Outer Panel* Tata Letak Awal..... **Error! Bookmark not defined.**
- Tabel 4.5** Jarak Perpindahan *Part Box Filler* Tata Letak Awal **Error! Bookmark not defined.**
- Tabel 4.6** Jarak Perpindahan *Part Bracket Stabilizer* Tata Letak Awal..... **Error! Bookmark not defined.**
- Tabel 4.7** Jarak Perpindahan *Part Hanger Engine* Tata Letak Awal ..... **Error! Bookmark not defined.**
- Tabel 4.8** Momen Perpindahan *Part Outer Panel* Tata Letak Awal..... **Error! Bookmark not defined.**
- Tabel 4.9** Momen Perpindahan *Part Box Filler* Tata Letak Awal ..... **Error! Bookmark not defined.**
- Tabel 4.10** Momen Perpindahan *Part Bracket Stabilizer* Tata Letak Awal.. **Error! Bookmark not defined.**
- Tabel 4.11** Momen Perpindahan *Part Hanger Engine* Tata Letak Awal ..... **Error! Bookmark not defined.**

- Tabel 4.12** Total Momen Perpindahan *Part Outer Panel* Tata Letak Awal . **Error! Bookmark not defined.**
- Tabel 4.13** Total Momen Perpindahan *Part Box Filler* Tata Letak Awal..... **Error! Bookmark not defined.**
- Tabel 4.14** Total Momen Perpindahan *Part Bracket Stabilizer* Tata Letak Awal .....**Error! Bookmark not defined.**
- Tabel 4.15** Total Momen Perpindahan *Part Hanger Engine* Tata Letak Awal .....**Error! Bookmark not defined.**
- Tabel 4.16** Deskripsi Alasan *Activity Relationship Chart* (ARC)..... **Error! Bookmark not defined.**
- Tabel 4.17** Informasi Alat *Material Handling Line Stamping* 500 Ton..... **Error! Bookmark not defined.**
- Tabel 4.18** Ongkos Tenaga Kerja *Line Stamping* 500 Ton**Error! Bookmark not defined.**
- Tabel 4.19** Perhitungan Ongkos *Material Handling Part Outer Panel* Tata Letak Awal .....**Error! Bookmark not defined.**
- Tabel 4.20** Perhitungan Ongkos *Material Handling Part Box Filler* Tata Letak Awal .....**Error! Bookmark not defined.**
- Tabel 4.21** Perhitungan Ongkos *Material Handling Part Bracket Stabilizer* Tata Letak Awal .....**Error! Bookmark not defined.**
- Tabel 4.22** Perhitungan Ongkos *Material Handling Part Hanger Engine* Tata Letak Awal .....**Error! Bookmark not defined.**
- Tabel 4.23** Hasil Iterasi *software* BLOCPLAN ....**Error! Bookmark not defined.**
- Tabel 4.24** Jarak Perpindahan *Part Outer Panel* Tata Letak Usulan BLOCPLAN .....**Error! Bookmark not defined.**
- Tabel 4.25** Jarak Perpindahan *Part Box Filler* Tata Letak Usulan BLOCPLAN .....**Error! Bookmark not defined.**
- Tabel 4.26** Jarak Perpindahan *Part Bracket Stabilizer* Tata Letak Usulan BLOCPLAN.....**Error! Bookmark not defined.**
- Tabel 4.27** Jarak Perpindahan *Part Hanger Engine* Tata Letak Usulan BLOCPLAN.....**Error! Bookmark not defined.**

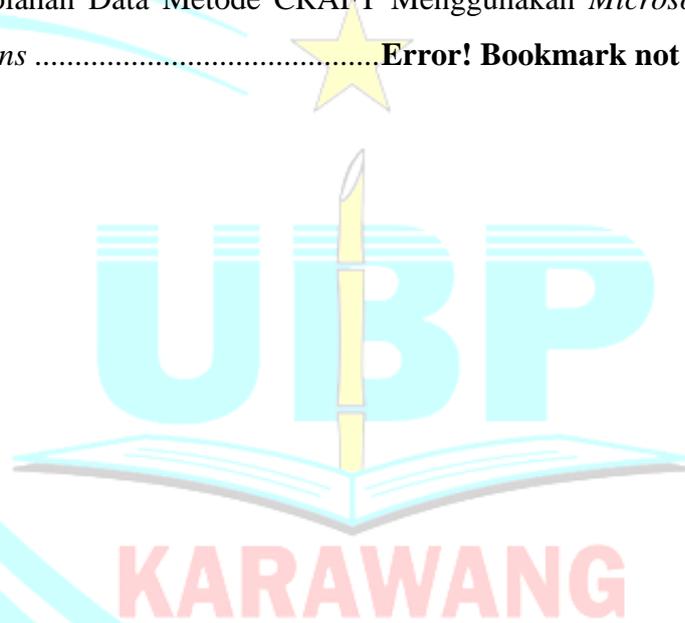
<b>Tabel 4.28</b>	Total Momen Perpindahan <i>Part Outer Panel</i> Tata Letak Usulan BLOCPLAN.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.29</b>	Total Momen Perpindahan <i>Part Box Filler</i> Tata Letak Usulan BLOCPLAN.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.30</b>	Total Momen Perpindahan <i>Part Bracket Stabilizer</i> Tata Letak Usulan BLOCPLAN.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.31</b>	Total Momen Perpindahan <i>Part Hanger Engine</i> Tata Letak Usulan BLOCPLAN.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.32</b>	Perhitungan Ongkos <i>Material Handling Part Outer Panel</i> Tata Letak Usulan BLOCPLAN .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.33</b>	Perhitungan Ongkos <i>Material Handling Part Box Filler</i> Tata Letak Usulan BLOCPLAN .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.34</b>	Perhitungan Ongkos <i>Material Handling Part Bracket Stabilizer</i> Tata Letak Usulan BLOCPLAN .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.35</b>	Perhitungan Ongkos <i>Material Handling Part Hanger Engine</i> Tata Letak Usulan BLOCPLAN .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.36</b>	Penyesuaian 1 ARC.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.37</b>	Penyesuaian 2 ARC.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.38</b>	Jarak Perpindahan <i>Part Outer Panel</i> Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.39</b>	Jarak Perpindahan <i>Part Box Filler</i> Tata Letak Usulan CRAFT..	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.40</b>	Jarak Perpindahan <i>Part Bracket Stabilizer</i> Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.41</b>	Jarak Perpindahan <i>Part Hanger Engine</i> Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.42</b>	Total Momen Perpindahan <i>Part Outer Panel</i> Tata Letak Usulan CRAFT.....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.43</b>	Total Momen Perpindahan <i>Part Box Filler</i> Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>
<b>Tabel 4.44</b>	Total Momen Perpindahan <i>Part Bracket Stabilizer</i> Tata Letak Usulan CRAFT .....	<b>Error! Bookmark not defined.</b>

- Tabel 4.45** Total Momen Perpindahan *Part Hanger Engine* Tata Letak Usulan CRAFT .....**Error! Bookmark not defined.**
- Tabel 4.46** Perhitungan Ongkos *Material Handling Part Outer Panel* Tata Letak Usulan CRAFT.....**Error! Bookmark not defined.**
- Tabel 4.47** Perhitungan Ongkos *Material Handling Part Box Filler* Tata Letak Usulan CRAFT.....**Error! Bookmark not defined.**
- Tabel 4.48** Perhitungan Ongkos *Material Handling Part Bracket Stabilizer* Tata Letak Usulan CRAFT .....**Error! Bookmark not defined.**
- Tabel 4.49** Perhitungan Ongkos *Material Handling Part Hanger Engine* Tata Letak Usulan CRAFT .....**Error! Bookmark not defined.**
- Tabel 4.50** Hasil Perbandingan Tata Letak Awal dan Tata Letak Usulan .... **Error! Bookmark not defined.**



## DAFTAR LAMPIRAN

- Lampiran 1.** *Part Outer Panel* .....**Error! Bookmark not defined.**
- Lampiran 2.** *Part Box Filler*.....**Error! Bookmark not defined.**
- Lampiran 3.** *Part Bracket Stabilizer* .....**Error! Bookmark not defined.**
- Lampiran 4.** *Part Hanger Engine* .....**Error! Bookmark not defined.**
- Lampiran 5.** Rekapitulasi Metode BLOCPLAN Menggunakan *software DOSBox*  
0.74-3.....**Error! Bookmark not defined.**
- Lampiran 6.** Pengolahan Data Metode CRAFT Menggunakan *Microsoft Excel*  
*Add-Ins* .....**Error! Bookmark not defined.**



## DAFTAR RUMUS

(2.1)	.....	<b>Error! Bookmark not defined.</b>
(2.2)	.....	<b>Error! Bookmark not defined.</b>
(2.3)	.....	<b>Error! Bookmark not defined.</b>
(2.4)	.....	<b>Error! Bookmark not defined.</b>
(2.5)	.....	<b>Error! Bookmark not defined.</b>
(2.6)	.....	<b>Error! Bookmark not defined.</b>
(3.1)	.....	<b>Error! Bookmark not defined.</b>
(3.2)	.....	<b>Error! Bookmark not defined.</b>
(4.1)	.....	<b>Error! Bookmark not defined.</b>
(4.2)	.....	<b>Error! Bookmark not defined.</b>
(4.3)	.....	<b>Error! Bookmark not defined.</b>
(4.4)	.....	<b>Error! Bookmark not defined.</b>
(4.5)	.....	<b>Error! Bookmark not defined.</b>
(4.6)	.....	<b>Error! Bookmark not defined.</b>
(4.7)	.....	<b>Error! Bookmark not defined.</b>
(4.8)	.....	<b>Error! Bookmark not defined.</b>
(4.9)	.....	<b>Error! Bookmark not defined.</b>
(4.10)	.....	<b>Error! Bookmark not defined.</b>
(4.11)	.....	<b>Error! Bookmark not defined.</b>