LAMPIRAN

Lampiran 1 : Pengumpulan Data

Data yang digunakan dalam penelitian meliputi:

1. Data waktu kerja mesin *(Loading Time)*
2. Data downtime mesin
3. Data output jumlah produksi
4. Data produk cacat *(Defect)*
5. Data waktu siklus ideal
6. Data aktivitas maintenance

Tabel data produksi

Periode	***Loading Time*** **(Menit)**	***Downtime*** **(Menit)**	***Output*** **(Unit)**	***Defect*** **(Unit)**
Juli	9.240	1.850	5.100	900
Agustus	9.240	500	7.390	1.300
September	9.240	3.150	3.112	512
Oktober	9.240	2.450	4.843	740
November	9.240	1.550	6.200	823
Desember	9.240	1.350	6.100	800
Total	55.440	10.850	32.745	5.075
Rata-rata	9.240	1.808	5.458	846

Lampiran 2 : Perhitungan OEE dan Six Big Losses

1. Perhitungan OEE

$$\text{Availability} = \frac{Loading\ Time - Downtime}{Loading\ Time} \times 100\%$$

$$performance = \frac{jumlah\ produksi \times waktu\ siklus\ ideal}{Operation\ time} \times 100\%$$

$$Quality = \frac{Processed\ Amount - Defect\ Amount}{Processed\ Amount} \times 100\%$$

$$OEE = Availability\ x\ Performance\ Rate\ x\ Quality\ Rate$$

2. Perhitungan Six Big Losses

1).Perhitungan Breakdown Losses

$$Equipment\ failure\ losses = \frac{Downtime}{Loading\ time} \times 100\%$$

$$Equipment\ failure\ losses = \frac{1.808}{9.240} \times 100\%$$

= 0,195670996

2) Perhitungan Set Up And Adjustment

$$Set\ up\ and\ adjustment\ losses = \frac{set\ up\ time}{Loading\ time} \times 100\%$$

$$Set\ up\ and\ adjustment\ losses = \frac{900}{55.440} \times 100\%$$

= 0,016233766

3) Perhitungan Idling And Minor Stoppage

Waktu siklus ideal= 1,12 menit/unit

$$iding\ and\ minor\ stopping\ losses\ = \frac{\text{Idling and Minor Stoppages } time}{Loading\ time} \times 100\%$$

$$iding\ and\ minor\ stopping\ losses\ = \frac{720}{55.440} \times 100\%$$

=0,012987013

4) Perhitungan Reduce Speed Losses

$$Reduce\ speed\ losses\ = \frac{Operation\ time\ -\ (ideal\ time\ x\ total\ produksi)}{Loading\ time} \times 100\%$$

$$Reduce\ speed\ losses\ = \frac{44.590 -\ (\ 36.674{,}40\ )}{55.440} \times 100\%$$

$$Reduce\ speed\ losses\ = \frac{7.915}{55.440} \times 100\%$$

= 0,142766955

5) Perhitungan DEFECT and rework losses

$$Defect\ losses\ = \frac{ideal\ cycle\ time\ x\ total\ produk\ defect}{Loading\ time} \times 100\%$$

$$Defect\ losses\ = \frac{1{,}12\ x5.684}{55.440} \times 100\%$$

= 0,114828283

6). Perhitungan Reduce Yield

$$Reduce\ Yield\ = \frac{Time\ Yield\ Losses}{Loading\ time} \times 100\%$$

$$Redue\ Yield\ = \frac{507}{55.440} \times 100\%$$

= 0,009145022