

DAFTAR ISI

ABSTRAK	i
ABSTRACT	ii
KATA PENGANTAR	iii
DAFTAR ISI.....	vi
DAFTAR GAMBAR	x
DAFTAR TABEL.....	xi
DAFTAR LAMPIRAN.....	xii
DAFTAR ISTILAH	xiii
BAB I PENDAHULUAN.....	1
I.1 Latar Belakang	1
I.2 Rumusan Masalah	5
I.3 Tujuan Penelitian	5
I.4 Batasan Penelitian	6
I.5 Manfaat Penelitian	6
I.6 Sistematika Penelitian	6
BAB II TINJAUAN PUSTAKA	8
II.1 Manajemen Perawatan.....	8
II.1.1 Tujuan <i>Maintenance</i>	8
II.1.2 <i>Preventive Maintenance</i>	9
II.1.3 <i>Corrective Maintenance</i>	10
II.1.4 <i>Predictive Maintenance</i>	10
II.2 Pola Kerusakan (<i>Failure Rate</i>)	11
II.3 <i>Life Data Analysis</i>	12
II.4 Uji Anderson- Darling	12
II.5 Penentuan Sistem Kritis Dengan Analisis ABC.....	12
II.6 <i>Reliability, Availability, Maintainability (RAM) Analysis</i>	14
II.7 Reliability	14
II.7.1 Fungsi Keandalan ($R(t)$)	14
II.7.4 Fungsi Laju Kerusakan $\lambda (T)$	15

II.7.5 <i>Mean Time Between Failure (MTBF)</i>	16
II.8 <i>Reliability of System</i>	17
II.8.1 <i>Reliability Block Diagram</i> Sistem Seri	18
II.8.2 <i>Reliability Block Diagram</i> Sistem Paralel	19
II.8.3 <i>Reliability Block Diagram</i> Sistem Seri Paralel	21
II.9 <i>Availability</i>	22
II.9.1 <i>Inherent Availability</i>	22
II.9.2 <i>Operational Availability</i>	22
II.9.3 <i>Maintenance Performance Indicator (MPI)</i>	23
II.10 <i>Availability of System</i>	24
II.10.1 <i>Availability Serial System</i>	24
II.11 <i>Maintainability</i>	26
II.12 <i>Six Big Losses</i>	27
II.13 <i>Overall Equipment Effectiveness (OEE)</i>	28
II.13.1 <i>Availability</i>	28
II.13.2 <i>Performance Efficiency</i>	29
II.13.3 <i>Rate of Quality Product</i>	29
II.14 Pemilihan Metode.....	29
II.15 Studi Literatur.....	31
II.15.1 Perbandingan dengan Penelitian Sebelumnya	31
BAB III METODE PENELITIAN	33
III.1 Model Konseptual	33
III.2 Sistematika Pemecahan Masalah	35
III.2.1 Tahap Identifikasi Masalah.....	36
III.2.2 Tahap Pengumpulan Data.....	37
III.2.3 Tahap Pengolahan Data	38
III.2.4 Tahap Analisis dan kesimpulan.....	43
BAB IV PENGUMPULAN DAN PENGOLAHAN DATA	44
IV.1 Pengumpulan Data	44
IV.1.1 Deskripsi Umum Mesin Murata 310A	44
IV.1.2 Kegiatan Perawatan Eksisting Mesin Murata 310A.....	45
IV.1.3 Pengolahan Penentuan Sistem Kritis Dengan Analisis ABC	45

IV.1.4 Data Waktu Antar Kerusakan (<i>Time Between Failure</i>)	46
IV.1.5 Data Waktu Antar Perbaikan (<i>Time to Repair</i>)	46
IV.2 Pengolahan Data	46
IV.2.1 Penetuan Distribusi yang Mewakili.....	46
IV.2.2 Plotting Distribusi.....	49
IV.2.3 Pendefinisian Sistem Mesin Murata 310A	51
IV.2.4 Pemodelan <i>Reliability Block Diagram</i> (RBD)	51
IV.2.5 Perhitungan <i>Reliability dengan Analytical Approach</i>	52
IV.2.6 Perhitungan <i>Maintainability</i>	53
IV.2.7 Perhitungan <i>Availability</i> dengan <i>Analytical Approach</i>	54
IV.2.8 Perhitungan <i>Overall Equipment Effectiveness</i>	56
IV.2.9 Perhitungan <i>Six Big Losses</i>	59
BAB V ANALISIS	66
V.1 Analisis Pemilihan Sistem Kritis.....	66
V.2 Analisis Distrbusi waktu pada Sistem	66
V.2.1 Analisis Distribusi <i>Time Between Failure</i>	66
V.2.2 Analisis Distribusi <i>Time to Repair</i>	66
V.3 Analisis <i>Reliability Block Diagram</i>	67
V.4 Analisis <i>System Reliability</i>	67
V.5 Analisis <i>Maintainability</i>	68
V.6 Analisis <i>Availability</i>	69
V.6.1 Analisis <i>Inherent Availability</i>	69
V.6.2 Analisis <i>Operational Availability</i>	70
V.7 Analisis <i>Maintenance Key Performance Indicator</i> (KPI)	71
V.7.1 Analisis <i>Leading Indicator</i>	71
V.7.2 Analisis <i>Lagging Indicator</i>	72
V.7.3 <i>Key Performance Indicator</i>	72
V.8 Analisis <i>Overall Equipment Effectiveness</i>	73
V.8.1 Analisis <i>Availability Rate</i>	75
V.8.2 Analisis <i>Performance Rate</i>	75
V.8.3 Analisis <i>Rate of Quality</i>	76
V.9 Analisis <i>Six Big Losses</i>	77

BAB VI KESIMPULAN	80
VI.1 Kesimpulan	80
VI.1.1 RAM Analysis	80
VI.1.2 Key Performance Indicator	81
VI.1.3 Overall Equipment Effectiveness.....	81
VI.2 Saran.....	81
VI.2.1 Saran Bagi Perusahaan	81
VI.2.2 Saran Bagi Penelitian Selanjutnya.....	82
DAFTAR PUSTAKA	83
LAMPIRAN.....	85