

## DAFTAR ISI

LEMBAR PENGESAHAN .....	i
LEMBAR PERNYATAAN ORISINALITAS .....	ii
ABSTRAK .....	iii
<i>ABSTRACT</i> .....	iv
KATA PENGANTAR .....	v
DAFTAR ISI .....	vi
DAFTAR GAMBAR .....	ix
DAFTAR TABEL .....	x
DAFTAR LAMPIRAN .....	xi
DAFTAR SIMBOL .....	xii
DAFTAR ISTILAH .....	xiii
BAB I PENDAHULUAN .....	1
I.1    Latar Belakang .....	1
I.2    Perumusan Masalah .....	3
I.3    Tujuan Penelitian .....	3
I.4    Manfaat Penelitian .....	4
I.5    Batasan Penelitian .....	4
I.6    Sistematika Penulisan .....	4
BAB II TINJAUAN PUSTAKA .....	6
II.1    Pengertian <i>Maintenance</i> .....	6
II.2    Klasifikasi <i>Maintenance</i> .....	6
II.3    Tujuan <i>Maintenance</i> Mesin .....	7
II.4 <i>System Breakdown Structure</i> .....	8
II.5 <i>Failure Mode Effect and Critically Analysis (FMECA)</i> .....	8
II.6 <i>Reliability</i> (Keandalan) .....	8
II.7 <i>Availability</i> (Ketersediaan) .....	9
II.7.1 <i>Inherent Availability</i> .....	10
II.7.2. <i>Operational Availability</i> .....	10
II.8 <i>Maintainability</i> .....	10
II.9 <i>Safety Integrity Level (SIL)</i> .....	10
II.10    Pemilihan Teori Perancangan .....	11
BAB III METODOLOGI PENELITIAN .....	13
III.1    Model Konseptual .....	13
III.2    Sistematika Penyelesaian Masalah .....	14

III.2.1	Tahap Pendahuluan.....	16
III.2.2	Tahap Pengumpulan Data.....	17
III.2.3	Tahap Pengolahan Data .....	17
III.2.4	Tahap Analisis dan Kesimpulan .....	19
	BAB IV RANCANGAN SISTEM TERINTEGRASI .....	20
IV.1	Pengumpulan Data.....	20
IV.1.1	Deskripsi Mesin.....	20
IV.1.2	Data Waktu Antar Kegagalan ( <i>Time to Failure</i> ).....	21
IV.1.3	Data Waktu Antar Perbaikan ( <i>Time to Repair</i> ).....	21
IV.1.4	Data <i>Downtime</i> .....	21
IV.1.5	Penentuan Komponen Kritis Mesin Cup Forming CP 14.....	21
IV.3.1	Pengolahan Data.....	23
IV.3.3.1	Pengujian Distribusi TTF ( <i>Time to Failure</i> ).....	23
IV.3.3.2	Penentuan Distribusi Data <i>Time to Failure</i> .....	24
IV.3.3.3	Penentuan <i>Mean Time to Failure</i> .....	24
IV.3.3.4	Pengujian Distribusi TTR ( <i>Time to Repair</i> ) .....	25
IV.3.3.5	Penentuan Distribusi TTR ( <i>Time to Repair</i> ).....	26
IV.3.3.6	Penentuan <i>Mean Time to Repair</i> (MTTR) .....	26
IV.3.3.7	Pengujian Distribusi Data <i>Downtime</i> .....	27
IV.3.3.8	Penentuan Distribusi Data <i>Downtime</i> .....	28
IV.3.3.9	Penentuan <i>Mean Downtime</i> .....	28
IV.3.2	Perhitungan <i>Reliability</i> , <i>Availability</i> , <i>Maintainability</i> dan <i>Safety</i> (RAMS).....	29
IV.3.1	Permodelan <i>Reliability Block Diagram</i> (RBD).....	29
IV.3.2	Perhitungan Nilai <i>Reliability</i> dengan <i>Analytical Approach</i> .....	29
IV.3.3	Perhitungan Nilai <i>Availability</i> .....	30
IV.3.3.1	<i>Inherent Availability</i> .....	30
IV.3.3.2	<i>Operational Availability</i> .....	30
IV.3.3	Perhitungan <i>Maintainability</i> .....	31
IV.3.4	Perhitungan <i>Safety Integrity Level</i> .....	32
	BAB V ANALISIS HASIL .....	35
V.1	Analisis Penentuan Objek .....	35
V.2	Analisis Uji Distribusi .....	35
V.1.1	Analisis Distribusi <i>Time to Failure</i> .....	35
V.1.2	Analisis Distribusi <i>Time to Repair</i> .....	35
V.1.3	Analisis Distribusi <i>Downtime</i> .....	36
V.3	Analisis <i>Reliability System</i> .....	36

V.4	<i>Analisis Availability System</i> .....	37
V.4.1	<i>Analisis Inherent Availability</i> .....	37
V.4.2	<i>Analisis Operational Availability</i> .....	37
V.5	<i>Analisis Maintainability System</i> .....	38
V.6	<i>Analisis Safety Integrity Level</i> .....	39
V.7	Usulan Kebijakan Pemeliharaan Mesin <i>Cup Forming CP 14</i> .....	39
BAB VI	KESIMPULAN DAN SARAN.....	41
VI.1	Kesimpulan .....	41
VI.2	Saran .....	41
VI.1.1	Saran Bagi Perusahaan .....	41
VI.1.2	Saran Bagi Peneliti Selanjutnya .....	41
DAFTAR	PUSTAKA.....	43
LAMPIRAN	.....	45