

DAFTAR ISI

LEMBAR PENGESAHAN	i
LEMBAR PERNYATAAN ORISINALITAS	ii
ABSTRAK.....	iii
<i>ABSTRACT</i>	iv
KATA PENGANTAR	v
DAFTAR ISI.....	vii
DAFTAR GAMBAR.....	xi
DAFTAR TABLE.....	xii
DAFTAR SINGKATAN	xiii
DAFTAR ISTILAH	xiv
DAFTAR LAMPIRAN.....	xv
BAB I PENDAHULUAN.....	1
I.1 Latar Belakang.....	1
I.2 Perumusan Masalah.....	6
I.3 Tujuan Penelitian.....	6
I.4 Batasan Penelitian.....	6
I.5 Manfaat Penelitian.....	7
I.6 Sistematika Penelitian.....	7
BAB II TINJAUAN PUSTAKA	9
II.1 Manajemen Pemeliharaan	9
II.1.1 <i>Preventive Maintenance</i>	9
II.1.2 <i>Corrective Maintenance</i>	9
II.2 <i>Risk Based Inspection</i>	10
II.3.1 <i>Consequence of failure</i>	10
II.3.2 <i>Likelihood</i>	12
II.4 Tipe kuantitatif RBI	13
II.4.1 <i>probability of failure</i>	13

II.4.2 Frekuensi Kegagalan	14
II.4.3 Faktor kerusakan	15
II.4.4 <i>Management System Factor</i>	15
II.5 Remaining Life (RL)	16
II.5.1 Penentuan Ketebalan Minimum	17
II.5.2 Corrosion Rate (CR).....	17
II.6 <i>Risk Matrix</i>	18
II.7 <i>Interval</i> inspeksi	18
II.8 <i>Reactor Urea</i>	19
II.9 <i>Corrosion</i>	20
II.10 <i>Multi Attribute Value</i> (MAV).....	20
II.11 <i>Portofolio Decision Analysis</i>	22
II.12 Makalah Ilmiah Terkait	22
II.13 Posisi Penelitian dan Makalah Ilmiah Acuan	28
BAB III METODOLOGI PENELITIAN	29
III.1. Model Konseptual	29
III.2. Sistematika Pemecahan Masalah	30
III.2.1 Tahap identifikasi masalah.....	32
III.2.1.1 Studi Lapangan	32
III.2.1.2 Studi pustaka	32
III.2.1.3 Latar Belakang	32
III.2.1.4 Perumusan Masalah	32
III.2.1.5 Tujuan Penelitian	33
III.2.1.6 Batasan Penelitian	33
III.2.2. Tahap pengumpulan data	33
III.2.2.1 Pengumpulan Data	33
III.2.2.2 Penentuan <i>Risk Matrix</i>	33
III.2.2.3 <i>Remaining Life</i>	33
III.2.3 Tahap analisis.....	33
III.2.4 Tahap kesimpulan	34

BAB IV PENGUMPULAN DAN PENGOLAHAN DATA	42
IV.1 Pengumpulan Data.....	42
IV.2 Deskripsi Peralatan	42
IV.3 Penentuan Sub-sistem Kritis.....	45
IV.4 Risk Assesment.....	46
IV.5 Decision Tree.....	47
IV.6 Kegiatan Inspeksi	48
IV.6.1 Ketebalan <i>Actual Shell</i>	48
IV.7 Perhitungan Sisa Umur Pakai Lining.....	49
IV.7.1 Data Pengukuran <i>Initial Thickness</i>	49
IV.7.2 Penentuan Ketebalan Minimum.....	50
IV.7.3 Penentuan <i>Corrosion Rate</i>	51
IV.8 <i>Portfolio Decision</i>	52
IV.9 Perhitungan RBI Reactor Urea	55
IV.9.1 RBI Kualitatif	55
IV.9.2 Perhitungan RBI Kuantitatif	56
IV.10 Penentuan <i>Risk Matrix Reactor</i>	60
IV.11 Penentuan Usulan Interval Inspeksi.....	61
BAB V ANALISIS	62
V.1 Analisis Subsistem Kritis.....	62
V.2 <i>Decision Tree Analysis</i>	63
V.3 Analisis Risk Assesment.....	63
V.4 Analisis Perhitungan Umur Sisa Lining <i>Reactor Urea</i>	63
V.4.1 Analisis <i>Design Shell Thickness Lining</i>	64
V.4.2 Analisis <i>Corossion Rate</i>	64
IV.4.3 Analisis <i>Remaining life Lining</i>	65
V.4.4 Analisis Portofolio decision	66
V.5 Analisis RBI Kualitatif.....	67
V.5.1 Analisis <i>Consequences</i>	67
V.6 Analisis RBI Kuantitatif.....	68

V.6.1 Analisis <i>Management System Factor</i>	68
V.6.2 Analisis <i>Generic Failure Frequency</i>	68
V.6.3 Analisis <i>Thining Damage Factor</i>	69
V.6.4 Analisis <i>Likelihood</i>	69
V.7 Analisis <i>Risk Matrix</i>	69
V.8 Analisis Usulan Interval Inpeksi	70
V.9 Kelebihan Dan Kekurangan Penelitian	70
V.10 Perbandingan Penelitian	70
V.11 Saran penelitian selanjutnya	71
BAB VI KESIMPULAN DAN SARAN	72
VI.1 Kesimpulan	72
VI.2 Saran	72
VI.2.1 Saran Untuk Perusahaan	72
VI.2.2 Saran Untuk Peneliti Selanjutnya	73
Daftar pustaka	74
LAMPIRAN	76