

## DAFTAR ISI

LEMBAR PENGESAHAN .....	i
LEMBAR PERNYATAAN OTORITAS .....	ii
ABSTRAK .....	i
ABSTRACT .....	ii
KATA PENGANTAR .....	iii
DAFTAR ISI .....	iv
DAFTAR GAMBAR .....	vii
DAFTAR TABEL .....	viii
DAFTAR LAMPIRAN .....	ix
DAFTAR ISTILAH .....	x
DAFTAR SINGKATAN .....	xi
DAFTAR SIMBOL .....	xii
BAB I PENDAHULUAN .....	1
I.1 Latar Belakang .....	1
I.2 Rumusan Masalah .....	3
I.3 Tujuan Penelitian .....	3
I.4 Batasan Penelitian .....	4
I.5 Manfaat Penelitian .....	4
I.6 Sistematika Penelitian .....	4
BAB II LANDASAN TEORI .....	6
II.1 Pengembangan Produk .....	6
II.2 <i>Design for Environment</i> .....	6
II.3 Insinerator .....	7
II.4 Proses Insenerator .....	7
II.5 <i>Sustainability</i> .....	8
II.5 <i>Life-Cycle Assessment</i> .....	8
II.5.1 Goal and Scope Definition .....	10

II.5.2 Life-Cycle Inventory .....	11
II.5.3 Life-Cycle Impact Assessment.....	11
II.5.4 Interpretation .....	11
II.6 Perancangan Produk Rasional .....	12
II.7 <i>Material Selection</i> .....	12
II.7.1 <i>Translate Design Requirements</i> .....	13
II.7.2 <i>Screen Using Constraint</i> .....	13
II.7.3 <i>Rank Using Objective</i> .....	13
II.7.4 <i>Seek Supporting Information</i> .....	14
II.8 Rumus Perhitungan .....	14
BAB III METODOLOGI PENELITIAN.....	15
III.1 Model Konseptual .....	15
III.1 Sistematika Pemecahan Masalah .....	17
BAB IV PENGUMPULAN DAN PENGOLAHAN DATA .....	21
IV.1 Pengumpulan Data .....	21
IV. 2 Data Produk Insinerator .....	21
IV.3 <i>Set DFE Agenda</i> .....	21
IV.3.1 Identifikasi Faktor Eksternal dan Internal.....	22
IV.3.2 Set DFE Goals .....	22
IV.4 <i>Identify Potential Environmental Impacts</i> .....	23
IV.5 <i>Select DFE Guidelines</i> .....	23
IV.6 <i>Apply the DFE Guidelines to the Initial Product Design</i> .....	24
IV.6.1 Menetapkan Kebutuhan dan Karakteristik Produk .....	24
IV.6.2 Memunculkan Alternatif.....	26
IV.6.3 Mengevaluasi Kombinasi Alternatif Konsep.....	27
IV.6.4 <i>Concept Screening</i> .....	28

IV.6.5 <i>Concept Scoring</i> .....	32
IV.6.6 <i>Translate Design Requirement</i> .....	34
IV.6.7 <i>Screen Using Constraint</i> .....	35
IV.6.8 <i>Rank Using Objective</i> .....	35
IV.6.9 <i>Seek Supporting Information</i> .....	36
IV.7 <i>Assess the Environmental Impacts</i> .....	38
IV.7.1 <i>life Cycle Assessment</i> .....	38
IV.7.2 <i>Life Cycle Impacts</i> .....	38
IV.8 <i>Reflect on the DFE Process and Results</i> .....	42
BAB V ANALISIS HASIL.....	44
V.1 Analisis Perbandingan <i>Life Cycle Assessment</i> .....	44
V.2 Analisis Perbandingan Produk Eksisting dan Konsep Usulan.....	44
V.3 Analisis Perbandingan Emisi .....	45
BAB VI KESIMPULAN DAN SARAN .....	46
VI.1 Kesimpulan .....	46
IV.2 Saran .....	46
DAFTAR PUSTAKA .....	47
Lampiran A .....	49
Lampiran B.....	51
Lampiran C.....	53
Lampiran D .....	55
Lampiran E.....	60