

## DAFTAR ISI

<b>HALAMAN JUDUL .....</b>	<b>i</b>
<b>PERNYATAAN BEBAS PLAGIARISME .....</b>	<b>ii</b>
<b>HALAMAN PENGESAHAN .....</b>	<b>iii</b>
<b>HALAMAN TUGAS.....</b>	<b>iv</b>
<b>HALAMAN PERSEMBAHAN .....</b>	<b>v</b>
<b>HALAMAN MOTTO .....</b>	<b>vi</b>
<b>UCAPAN TERIMA KASIH .....</b>	<b>vii</b>
<b>KATA PENGANTAR.....</b>	<b>viii</b>
<b>DAFTAR ISI.....</b>	<b>x</b>
<b>DAFTAR TABEL .....</b>	<b>xiii</b>
<b>DAFTAR GAMBAR.....</b>	<b>xiv</b>
<b>INTISARI .....</b>	<b>xvi</b>
<b>ABSTRACT .....</b>	<b>xvii</b>
<b>I. PENDAHULUAN.....</b>	<b>1</b>
I.1. Latar Belakang .....	1
I.2. Perumusan Masalah .....	2
I.3. Batasan Masalah.....	2
I.4. Tujuan Penelitian .....	2
I.5. Manfaat Penelitian .....	3
<b>II. TINJAUAN PUSTAKA .....</b>	<b>4</b>
<b>III.DASAR TEORI .....</b>	<b>9</b>
III.1. Siklus Rankine Organik .....	9
III.1.1. Aplikasi Siklus Rankine Organik Pada Air Panas Buang PLTP .....	10
III.1.2. Komponen Siklus Rankine Organik.....	11
III.1.3. Efisiensi Sistem.....	14
III.1.4. <i>Thermal Oil</i> .....	14
III.1.5. <i>R245fa</i> .....	15
III.2. Bilangan Tak Berdimensi.....	16

III.3.	<i>Heat Exchanger</i> .....	17
III.3.1.	Neraca Energi.....	17
III.3.2.	<i>Overall Heat Transfer Coefficient</i> .....	18
III.3.3.	<i>Log Mean Temperature Difference</i> .....	21
III.4.	<i>Plate and Gasket Heat Exchanger</i> .....	22
III.4.1.	Susunan Aliran Fluida.....	23
III.4.2.	Faktor Koreksi.....	24
III.4.3.	<i>Plate Layout</i> .....	25
III.4.4.	<i>Heat Transfer Coefficient</i> .....	27
III.4.5.	<i>Pressure Drop</i> .....	27
III.5.	Pompa.....	28
III.5.1.	<i>Head Pompa</i> .....	29
III.5.2.	Daya Pompa .....	35
III.5.3.	Putaran Spesifik .....	36
<b>IV.</b>	<b>METODE PENELITIAN</b> .....	<b>37</b>
IV.1.	Alat dan Bahan Penelitian.....	37
IV.1.1.	Alat Penelitian.....	37
IV.1.2.	Bahan Penelitian.....	37
IV.2.	Tata Laksana Penelitian .....	38
IV.3.	Pemodelan Sistem Pembangkit Listrik Berbasis ORC .....	41
IV.4.	Perancangan Sub Unit Suplai Panas .....	48
<b>V.</b>	<b>HASIL DAN PEMBAHASAN</b> .....	<b>50</b>
V.1.	Hasil Pemodelan Pembangkit Listrik Berbasis ORC.....	50
V.2.	Perancangan <i>Plate and Gasket Heat Exchanger</i> .....	56
V.3.	Pompa Air Panas Buang .....	57
V.4.	Pompa <i>Thermal Oil</i> .....	58
<b>VI.</b>	<b>KESIMPULAN DAN SARAN</b> .....	<b>59</b>
VI.1.	Kesimpulan .....	59
VI.2.	Saran.....	60
	<b>DAFTAR PUSTAKA</b> .....	<b>61</b>
	<b>LAMPIRAN A</b> .....	<b>63</b>

<b>LAMPIRAN B .....</b>	<b>64</b>
<b>LAMPIRAN C .....</b>	<b>66</b>
<b>LAMPIRAN D .....</b>	<b>67</b>
<b>LAMPIRAN E .....</b>	<b>68</b>
<b>LAMPIRAN F .....</b>	<b>77</b>
<b>LAMPIRAN G.....</b>	<b>80</b>
<b>LAMPIRAN H.....</b>	<b>83</b>