**DAFTAR ISI**

LEMBAR JUDUL...................................................................... ............ i LEMBAR PERSETUJUAN TUGAS AKHIR........................................ ii LEMBAR PENGESAHAN .................................................................... iii PERNYATAAN KEASLIAN TUGAS AKHIR..................................... iv PERNYATAAN PERSETUJUAN PUBLIKASI TUGAS AKHIR ....... v ABSTRAK .............................................................................................. vi KATA PENGANTAR ............................................................................ vii DASTAR ISI ........................................................................................... ix DAFTAR GAMBAR .............................................................................. xii DAFTAR TABEL ................................................................................... xiv

BAB I PENDAHULUAN

1.1 Latar Belakang Masalah............................................................. 1

1.2 Rumusan Masalah ...................................................................... 2

1.3 Tujuan ....................................................................................... 2

1.4 Manfaat ..................................................................................... 3

1.6 Batasan Masalah ........................................................................ 3

1.7 Sistematika Penyusunan............................................................. 3

BAB II TINJAUAN PUSTAKA

|  |  |
| --- | --- |
| 2.1 Pengertian Pendingin ................................................................. | 4 |
| 2.2 Jenis-Jenis Sistem Pendingin ..................................................... | 4 |
| 2.2.1 Pendingin Terbuka ............................................................. | 4 |
| 2.2.2 Pendingin Tertutup............................................................. | 5 |
| 2.3 Macam-Macam Sistem Pendingin ............................................. | 7 |
| 2.3.1 Sistem Pendinginan Udara ................................................. | 7 |
| 2.3.2 Sistem Pendinginan Air...................................................... | 8 |
| 2.4 Sifat-Sifat Pendingin yang Baik................................................. | 13 |
| 2.5 Tujuan Pendinginan ................................................................... | 14 |
| 2.6 Gambaran Umum Pembangkit Listrik Tenaga Diesel ............... | 14 |
| 2.7 Pemilihan Lokasi PLTD ............................................................ | 16 |
| 2.8 Kelas SPD .................................................................................. | 17 |
| 2.9 Kelebihan PLTD ........................................................................ | 18 |
| 2.10 Kekurangan PLTD ................................................................... | 18 |

BAB III METODOLOGI

3.1 Tempat dan Waktu ..................................................................... 19

3.2 Jenis Perawatan .......................................................................... 19

3.3 Sumber Data yang Diperlukan ................................................... 19

3.4 Peralatan Kerja SPD (Satuan Pembangkit Diesel)..................... 19

3.5 Pemeriksaan Pada Sistem *Jacket Cooling Water*....................... 20

3.6 Spesifikasi Mesin Pembangkit ................................................... 21

BAB IV PEMBAHASAN

|  |  |
| --- | --- |
| 4.1 Sistem-Sistem Pada Mesin Pembangkit Tenaga Diesel............. | 24 |
| 4.1.1 Sistem Pada Bahan Bakar ................................................. | 24 |
| 4.1.2 Sistem Udara Masuk ......................................................... | 24 |
| 4.1.3 Sistem Pembuangan Gas ................................................... | 24 |
| 4.1.4 Sistem Pelumasan.............................................................. | 24 |
| 4.1.5 Sistem Pendingin............................................................... | 25 |
| 4.2 Sistem Pendingin *Jacket Cooling Water*.................................... | 25 |
| 4.3 Prinsip Kerja *Jacket Cooling Water*........................................... | 26 |
| 4.4 Spesifikasi Sistem *Jacket Cooling Water ..................................* | 27 |
| 4.5 Bagian-Bagian Sistem *Jacket Cooling Water* ............................ | 28 |
| 4.6 *Troubleshooting* Sistem *Jacket Cooling Water* ......................... | 31 |
| 4.7 Perawatan Pada Sistem *Jacket Cooling Water* .......................... | 34 |
| 4.8 Manfaat Jacket Cooling Water................................................... | 34 |

BAB V PENUTUP

5.1 Kesimpulan ................................................................................ 35

5.2 Saran .......................................................................................... 35

DAFTAR PUSTAKA ............................................................................. 36

LAMPIRAN