

Daftar Isi

| | |
|---|------|
| Halaman Judul..... | i |
| Nomor Persoalan | ii |
| Halaman Pengesahan | iii |
| Lembar Pernyataan | iv |
| Motto..... | v |
| Lembar Persembahan..... | vi |
| Kata Pengantar..... | vii |
| <i>Abstract</i> | ix |
| Intisari | x |
| Daftar Isi..... | xi |
| Daftar Gambar | xiii |
| Daftar Tabel..... | xiv |
| BAB I PENDAHULUAN | 1 |
| 1.1 Latar Belakang..... | 1 |
| 1.2 Batasan Masalah..... | 2 |
| 1.3 Tujuan..... | 3 |
| 1.4 Manfaat..... | 3 |
| 1.5 Metode Pengumpulan Data | 3 |
| 1.6 Sistematika Penulisan Laporan..... | 4 |
| BAB II DASAR TEORI | 5 |
| 2.1 Prinsip Dasar <i>Steam Turbine</i> | 5 |
| 2.2 Instalasi Pembangkit Listrik Tenaga Uap di <i>Plant</i> PT. Gresik Power Indonesia | 6 |
| 2.2.1 Proses Pembuatan Air Demin..... | 7 |
| 2.2.2 Deaerator | 9 |
| 2.2.3 <i>Heat recovery steam generator</i> (HRSG)..... | 10 |
| 2.2.4 <i>Combustion Turbine</i> | 13 |
| 2.2.5 <i>Steam Turbine</i> | 15 |
| 2.2.6 Kondenser..... | 16 |
| 2.2.7 <i>Cooling Tower</i> | 16 |

| | |
|---|----|
| 2.3 Spesifikasi Steam Turbin di PT. Gresik Power Indonesia | 20 |
| 2.3.1 Prinsip Kerja <i>Multi Stages, Single Cylinder, Condensing Turbin</i> | 21 |
| 2.3.2 Prinsip Kerja <i>Revolving field, Cylindrycal pole type brushless type, synchronous generator</i> | 21 |
| 2.3.3 Prinsip Kerja <i>Single helical, Single Reduction gear with forced lubrication and turning device</i> | 22 |
| 2.4 Klasifikasi Kerugian Turbin | 22 |
| 2.5 Efisiensi Pemakaian Energi Uap..... | 26 |
| BAB III ANALISA HASIL AUDIT ENERGI | 27 |
| 3.1 Perhitungan Efisiensi <i>Steam Turbine Terhadap Output Generator</i> | 28 |
| 3.2 Analisa Hasil..... | 31 |
| BAB IV PEMBAHASAN..... | 35 |
| 4.1 Kondisi Operasi Turbin Uap..... | 35 |
| 4.2 Kerja Turbin Kapasitas Maksimum | 36 |
| 4.3 Kondisi Uap Pada Tingkatan Turbin | 37 |
| BAB V KESIMPULAN DAN SARAN | 45 |
| 5.1 Kesimpulan..... | 45 |
| 5.2 Saran..... | 45 |
| DAFTAR PUSTAKA | 47 |
| GLOSARIUM | 48 |
| LAMPIRAN | 50 |