

## **ABSTRAK**

### **PENGARUH SUHU TERHADAP RUGI-RUGI DAYA PADA MOTOR 3**

#### **FASA 101 JLO SEBAGAI SIRKULASI OLI PLANT P–III**

(2026 : xv + 73 halaman + Daftar Pustaka + Lampiran)

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Motor 3 fasa 101 JLO di PT Pupuk Sriwidjaja Palembang digunakan sebagai penggerak sistem sirkulasi oli Plant P-III yang berperan penting dalam menjaga kelancaran proses produksi. Selama beroperasi, motor mengalami rugi-rugi daya yang menghasilkan panas dan menyebabkan kenaikan suhu. Penelitian ini bertujuan untuk mengetahui besarnya rugi-rugi daya serta menganalisis pengaruh kenaikan suhu terhadap kinerja motor. metode penelitian dilakukan melalui observasi lapangan, pengukuran parameter operasi motor, dan perhitungan rugi-rugi daya berdasarkan data pengukuran. Hasil penelitian menunjukkan bahwa kenaikan suhu menyebabkan peningkatan rugi-rugi daya akibat bertambahnya resistansi kumparan motor. Kondisi tersebut berdampak pada penurunan efisiensi dan kinerja motor. Oleh karena itu, pengendalian suhu dan pemeliharaan motor secara berkala diperlukan untuk menjaga keandalan dan umur pakai motor.

**Kata Kunci :** Motor, Suhu, Rugi, Daya, Efisiensi.

**ABSTRACT**  
**THE EFFECT OF TEMPERATURE ON POWER LOSSES IN 3-PHASE**  
**MOTOR 101 JLO AS OIL CIRCULATION PLANT P-III**  
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*The 3-phase 101 JLO motor at PT Pupuk Sriwidjaja Palembang is used as a driver for the oil circulation system of Plant P-III which plays an important role in maintaining the smooth production process. During operation, the motor experiences power losses that generate heat and cause temperature increases. This study aims to determine the magnitude of power losses and analyze the effect of temperature increases on motor performance. The research method is carried out through field observations, measurements of motor operating parameters, and calculation of power losses based on measurement data. The results show that temperature increases cause increased power losses due to increased motor coil resistance. This condition has an impact on decreasing motor efficiency and performance. Therefore, temperature control and regular motor maintenance are needed to maintain the reliability and service life of the motor.*

**Keywords:** *Motor, Temperature, Losses, Power, Efficiency.*