

Asset Details

- Asset ID: P001
- Asset Name: Raw Crude Pump
- Maker: Flowserve
- Model: Worthington LNN BB Pump
- Rated Power: 1000.0 kW
- Rated Voltage: 6600.0 V
- Location: Refinery Plant, Abu Dhabi

Performance Summary

- Data Period: 2025-10-01 to 2025-11-30
- Total power consumption: 884.9 MWh
- Daily average power consumption: 14.5 MWh

Parameter	Average	Min	Max	Std Dev
Pump drive end overall vibration velocity RMS	4.11 mm/s RMS	3.8 mm/s RMS	6.05 mm/s RMS	0.45 mm/s RMS
Pump drive end temperature	59.99°C	55.5°C	72.72°C	3.64°C
Pump non drive end overall vibration velocity RMS	4.19 mm/s RMS	3.87 mm/s RMS	6.16 mm/s RMS	0.46 mm/s RMS
Pump non drive end temperature	60.28°C	55.78°C	73.08°C	3.65°C
Pump operating current	75.23 A	70.0 A	90.0 A	4.27 A
Pump operating power	604.41 kW	500.0 kW	899.94 kW	84.85 kW
Pump operating speed	1450.05 RPM	1446.0 RPM	1454.0 RPM	2.63 RPM

Operational Status

All key signals show flat trends with stable operation. Vibration levels at both drive end and non-drive end remain consistent with low standard deviations of 0.45 mm/s RMS and 0.46 mm/s RMS respectively. Temperature readings are stable at both ends with minimal variation. Operating parameters including current, power, and speed demonstrate steady performance within normal operating ranges. The pump maintains continuous operation with no significant fluctuations or anomalies detected.

Risk Assessment

Pump drive end overall vibration velocity RMS shows maximum values of 6.05 mm/s RMS and pump non drive end overall vibration velocity RMS reaches 6.16 mm/s RMS, both exceeding Flowserve warning threshold of 5.6 mm/s RMS but remaining below alert threshold of 7.1 mm/s RMS. According to API 610 standards for this 1000.0 kW pump, vibration levels fall within the Alert - Allowable Operating Region (AOR) zone. Pump drive end temperature peaked at 72.72°C and pump non drive end temperature reached 73.08°C, both exceeding Flowserve warning threshold of 70.0°C but staying below alert threshold of 75.0°C. Close monitoring is recommended as vibration and temperature parameters approach critical thresholds. Plan preventive maintenance to address elevated vibration and temperature conditions before reaching alert levels.