

Asset Details

- Asset ID: PMP01
- Asset Name: Water treatment pump 1
- Manufacturer: Ebara
- Model: EVMSL64-5_2-30
- Rated Power: 30 kW
- Rated Voltage: 400 V
- Location: PUB Station Bedok

Performance Summary

- Data Period: 2025-10-01 to 2025-11-30
- Total Power Consumption: 24.5 MWh
- Daily Average Power Consumption: 401.6 kWh

Power Consumption (energy_kwh):

- Average: 23.2 kWh
- Minimum: 22.02 kWh
- Maximum: 28.33 kWh
- Standard Deviation: 1.28 kWh
- Trend: flat

Temperature DE:

- Average: 59.03 °C
- Minimum: 55.0 °C
- Maximum: 72.22 °C
- Standard Deviation: 3.53 °C
- Trend: flat

Temperature NDE:

- Average: 59.32 °C
- Minimum: 55.28 °C
- Maximum: 72.58 °C
- Standard Deviation: 3.55 °C
- Trend: flat

Vibration DE:

- Average: 3.89 mm/s RMS
- Minimum: 3.3 mm/s RMS
- Maximum: 5.55 mm/s RMS
- Standard Deviation: 0.46 mm/s RMS
- Trend: flat

Vibration NDE:

- Average: 3.97 mm/s RMS
- Minimum: 3.37 mm/s RMS
- Maximum: 5.66 mm/s RMS
- Standard Deviation: 0.47 mm/s RMS
- Trend: flat

Operational Status

All monitored signals exhibit flat trends over the observation period. Power consumption remains stable with average 23.2 kWh and low variability (standard deviation 1.28 kWh). Temperature readings at both DE and NDE bearings show stable operation with

minimal deviation from mean values. Vibration levels at both bearing positions demonstrate deviations below 0.5 mm/s RMS. The asset operates continuously with zero missing operational status is stable with no significant fluctuations in key performance indicators.

Risk Assessment

Vibration Assessment (API 610): Average vibration levels of 3.89 mm/s RMS (DE) and 3.97 mm/s RMS (NDE) fall within the Preferred Operating Region (POR: 0.28 to 5.0 mm/s RMS). Maximum recorded vibration values of 5.55 mm/s RMS (DE) and 5.66 mm/s RMS (NDE) exceed the POR threshold and enter the Alert - Allowable Operating Region (AOR: 5.0 to 6.5 mm/s RMS). Recent readings show peaks at 5.44 mm/s RMS (DE) and 5.55 mm/s RMS (NDE), indicating occasional excursions into AOR zone.

Temperature Assessment: Maximum temperatures of 72.22 °C (DE) and 72.58 °C (NDE) are elevated. Recent data shows sustained high temperatures above 70 °C, with peaks reaching maximum recorded values. Elevated bearing temperatures warrant monitoring for potential lubrication or cooling issues.

Power Consumption Assessment: Power consumption shows stable operation within expected range. Low standard deviation of 1.28 kWh indicates consistent load conditions.

Overall Risk: Moderate risk due to intermittent vibration excursions into AOR zone and elevated bearing temperatures approaching maximum observed values. Recommend continued monitoring of vibration trends and investigation of temperature elevation causes.