



MECTRON ENGINEERING PTE LTD
Engineered Systems & Solutions for Marine & Offshore

COMPLETE PUMP SERVICE CENTRE

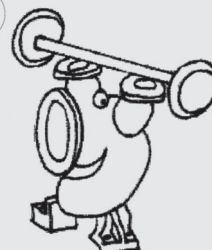


PUMP OVERHAUL FACILITY

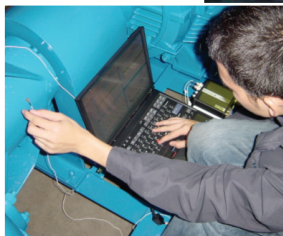
SITE DIAGNOSTIC MONITORING

PUMP PERFORMANCE TESTING CENTRE

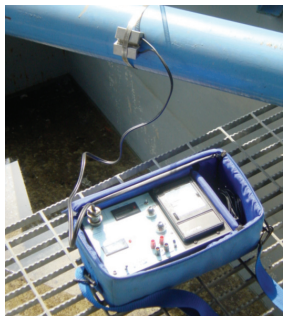
Mectron keeps
pumps pumping!



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Vibration Analyser Brüel & Kjaer
Pulse Lite 3560L FFT Analyser



Non-Invasive Doppler Flowmeter
AURORA DDF - 4M / R240

PUMP SERVICE CENTRE

Mectron provides complete overhaul and repair capabilities of pumping systems. Our services include :

- Scheduled maintenance
- Pump overhaul
- Pump retrofit and upgrade
- On-site repair of pumps
- Site installation of pumps
- Field commissioning
- Performance testing of pumps
- Hydrostatic testing

Mectron pump centre is housed in our 1,404 sqm factory and is fully equipped with the necessary tools and fixtures to handle the overhauling of pumps in the correct procedure.

A pump performance test can also be ordered after the repair and overhaul of the pump unit.



Power Analyser
SKYLAB 9032
1kW to 1,000kW

ON SITE SERVICES

Ensuring installed pumps are running in the optimal condition and in accordance with prescribed operation instructions will ensure a smooth and trouble-free operation. Our site team is technically trained and equipped with all the necessary diagnostic tools to provide the proper start-up and commissioning including condition monitoring.

This includes :

- Pump and driver alignment
- Measurement of flow rate
- Pressure measurement
- Power measurement

Diagnostic Instruments at disposal by on-site team :

- Pump alignment equipment

- Vibration Analyser
Brüel & Kjaer Pulse Lite 3560L FFT Analyser
- Power Analyser
SKYLAB 9032 1kW to 1,000kW
- Non-Invasive Doppler Flowmeter
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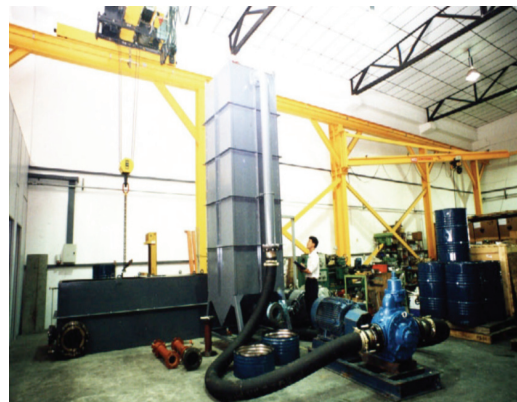




PUMP TESTING CENTRE

Our clients have used and seen the benefits of our pump testing centre.

String testing including controllers, drivers and pumps are constantly being tested at our pump testing centre to ensure proper matching of equipment and assurance of pump performance as a complete aggregate.



TEST RIG FOR WATER

Housed in our facility is a testing centre employing WEIR / CHANNEL Test Rig built according to ISO 1438/1 – 1980.

Pump performance test can be conducted to ISO 9906, BS 5316 or Hydraulic Institute.

- Rectangular WEIR 500mm and 1,500mm
- Maximum flow measurement :
500 mm WEIR : 3,100 m³/hr
1,500 mm WEIR : 11,400 m³/hr
- Below Ground Storage Tank
8.0 m x 5.0 m x 3.75 m = 150 m³
- Frequency Invertor Drive 200kW

TEST RIG FOR VISCOUS OIL

A volumetric test rig is also available for testing of pump performance in viscous oil handling. The volumetric test rig is constructed in accordance with VDMA 28284 Article 4.1.

- 2 x calibrated tanks of 3,000 litres
- maximum flow rate : 500 m³/hr
- Performance tests to VDMA 28284 or Hydraulic Institute



MEASUREMENT FACILITIES / EQUIPMENT

The test rig is commanded from our testing control centre where the motor control and data acquisition is housed.

All field parameters, flow, pressure and levels are remotely wired back to the control centre.

The measurement facility consists of :

- 200 kW Frequency Invertor
- Data Acquisition
Endress and Hauser Visual data memo graph RSG10 – 8 channel recorder
- Flow measurement channel
 - WEIR A 500 mm - 3,100 m³/hr Accuracy : ± 1%
 - WEIR B 1,500 mm - 11,400 m³/hr Accuracy : ± 1%
- Electro Magnetic Flow meter
Endress + Hauser DN 300 Promag 30F
0 to 2,100 m³/hr
- Ultrasonic Flow meter (for oil)
DANFOSS Sono 3300 D150
0 to 200 m³/hr

Pressure :

- Pressure Transducer
Endress + Hauser Cerabar M PMC 41 0 to 10 bar Accuracy : ± 0.2%
- Pressure Transducer for suction
Endress + Hauser Cerabar M PMC 41 -1bar to +1 bar Accuracy : ± 0.2%
- Mercury Level Gauge
- Hydraulic Pressure Gauge Calibrator
Accuracy : ± 0.2%

Temperature :

- Endress + Hauser TST RTO Thermometer

Level Sensors :

- Endress + Hauser FMU 230E
Ultrasonic Level Measurement
Accuracy : ± 0.25%

DANFOSS SONOLEV Ultrasonic Sensor
Accuracy : ± 1%

Torque Meters :

- Vibrometer
 - TM 213/011 0 to 1000 N-m Accuracy : ± 0.1%
 - TM 214/011 0 to 2000 N-m Accuracy : ± 0.1%