



# Mirai E & I Services



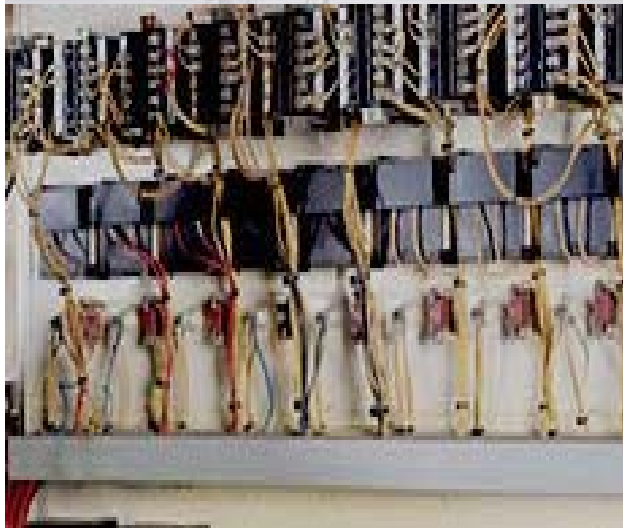
## SCOPE OF SERVICES

We provide our specialized services in all possible contractual roles; as a main contractor , joint venture partner , E & I installation contractor, engineering contractor or subcontractor.



## ENGINEERING

- Process Engineering
- Electrical Engineering
- Instrument and Control Engineering
- Electrical & Instrument calibration
- Loop Testing
- Instrument Cabling Works
- Panel Termination
- Light fitting installation works
- LV / HV cable megger test



# ELECTRICAL & INSTALLATION

## SCOPE OF SERVICES

- ❖ Installations, pre-commissioning, commissioning and start-up activities of electrical and Instrumentation.
- ❖ The installations include lighting system, lightning protection, cabling systems, instrument calibrations & instrument control systems (PLC, DCS, SCADA)

## ELECTRICAL WORKSHOP EQUIPMENT AND TOOLS

The Installation Division has complete electrical workshop equipment and tools for using in the construction of all electrical activities, testing, pre-commissioning and commissioning.

All the mentioned equipment and tools are available in the electrical workshop and owned by Mirai.

Periodic maintenance and calibration are being performed for ensuring the quality and compatibility of the electrical workshop equipment and tools that have always-valid signed certificates from approved authorities

## E&I RESOURCES

E&I Installations division has its own professional / qualified engineers and technicians to perform the installation, pre-commissioning and commissioning activities. All engineers and technicians have the experience in the Marine, oil & gas installation field. Meanwhile, the division has the option of hiring labors and any additional qualified technicians from the local market according to workload and site needs.

The Installation Division has its own sufficient / adequate site temporary facilities to assist in performing the project tasks. Mirai provides site temporary facilities and resources in accordance with every site condition and location.

The Installation Division has the option of purchasing and/or renting the required suitable site temporary facilities, equipment and site accommodation from the local market in case of customer special requirements or to suit specific site conditions.

## WORKSHOPS EQUIPMENT / DEVICES

- ❖ Hi Pot tester
- ❖ Relay test unit
- ❖ Fault locator
- ❖ Transformer test unit
- ❖ Phase sequence indicator
- ❖ Earth tester
- ❖ Oil dielectric test set
- ❖ High-low common adjustable battery charger
- ❖ Tachometer hand held (-3000 RPM)
- ❖ Light intensity meter
- ❖ Variac 0-240 volts
- ❖ Insulation tester
- ❖ Pneumatic operated tools required for work at life plant areas such as drillers, cutters, etc..
- ❖ Construction equipment such as diesel generators, welding m/c's, drillers, grinders, flame cutting equipment, etc..



## INSTRUMENT LABORATORY COMPONENTS

- ❖ HART communicators model 475
- ❖ Portable pressure calibrators (High/Low)
- ❖ Multifunction process calibrators
- ❖ Standard precision test gauges from 0 to 700 BARG
- ❖ Hydraulic pressure hand pumps from 0 to 700 BARG
- ❖ Dry block temperature calibrators from (-30 °C to 670 °C)
- ❖ Digital pressure calibrators
- ❖ Air supply panel regulated pressure ranges: 0 to 2.5 and 0-1 Bar
- ❖ Pneumatic control module regulated pressure range: 0 to 250 Bar
- ❖ Electric vacuum pump, c/w accessories
- ❖ Variable AC power supplies
- ❖ Digital multi meters
- ❖ Fixed DC supply module output: 6-110 VDC
- ❖ DC power supply
- ❖ Pressure and vacuum hand pump
- ❖ Hydraulic hand pump
- ❖ Dry block calibrator temperature (range from - 20 to + 650 °C)
- ❖ Load resistance
- ❖ Dual range DC power supply
- ❖ Resistance box 0.01 OHM to 1 MOHM
- ❖ Glass thermometers
- ❖ Dead weight tester
- ❖ Foundation field bus tool (software)
- ❖ Pre-fabricated mobile workshop container
- ❖ Safety and relief valve test bench

















