



Abu Dhabi Marine Operating Company

The Abu Dhabi Marine Operating Company, is a pioneering oil and gas producer whose operations date back to the 1950s, and are centered in the offshore areas of Abu Dhabi. Over the years, the Company adopted the latest in drilling techniques and technologies, starting with vertical, then deviated and ultimately horizontal drilling. The advancement in drilling is necessitated by the need to optimize oil and gas production.

To keep the company up to date they have requested HPI to update the control panels for three of their Ruston TB5000 based crude oil loading pump sets. The existing controllers will be disconnected and removed by HPI and new PLC based controllers installed. The functionality of the existing controllers will be carried out within Allen Bradley ControlLogix PLC's. This system includes Flex I/O modules and will interface to the existing Turbine and Plant.

The Allen Bradley Controller plus all the terminals, fuses, relays and conduit will be supplied mounted on sub-panels within the new Control Panel. The intention is to minimize the wiring, which is required at site, to the field cable terminations and the minimum of connections between the sub-panels.

In addition a Human / Machine Interface (HMI) will be provided for each turbine system for locating in an air-conditioned main control room. This HMI server is based on Windows 2000 Server OS and interfaces to the control PLC via Ethernet TCP/IP network connectivity. The display is configured to show process conditions. The HMI will indicate measured variables together with alarm and trip settings while also providing indication of active override and machine status.



New seismic vibration probes complete with cables will be supplied and these will be monitored by a Bentley Nevada 1701 Field Monitor system. This will be installed in the control panel and will communicate to the ControlLogix PLC via a dual redundant ControlNet communications link. All the alarm and trip set points will be configured within the PLC. The current values and alarm status of the vibration channels will be displayed on the HMI. Relay trip outputs will be connected directly into a hard-wired ESD daisy chain.

As technological leaders in the supply of turbo-generator services, for both the OEM and retrofit markets, HPI use professional project teams with extensive experience in design of hardware and software, manufacture, testing, installation, commissioning and supporting of turbine systems. Former key VT Controls and HSDE staff with over 150 cumulative years experience in the industry make up the HPI engineering, project, organization and management teams; they have been proven through many years of providing turbine retrofits and are formed of highly qualified personnel who fully understand the demands of this specialized industry.