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Switchboards and Power Management for Marine and Shipbuilding Offshore Applications by CMR Group

Article published on December 27th 2011 | Technology

Supplying electrical power to offshore and marine applications reliably and efficiently is achieved through custom manufactured switchboards, electronic monitors and automation solutions.These power management systems are especially designed to for marine and industrial applications in harsh environmental conditions. Custom programmable control systems using both programmable logic control and distributed control systems allow for complete control of data acquisitions. These electronic switchboards utilize advanced technologies that provide great benefits to most industrial and offshore operations. The integrated systems are designed to manage and distribute low and medium voltage electrical current on semi-submersible, jack-up platforms, and marine vessels used for oil and gas exploration, production, extraction and offshore support. Other components of the system include medium and high voltage switchgears, motors, transformers, AC variable speed drive, DC switchboards, alarm monitoring and control automation. Control panels and junction boxes house these electronic switchboards. Manufactured to comply with CE, IEC, NEMA, CSA and other standard protocols,the control panels largely are used for input, outputs, splices, engine monitoring, controls and engine electricity generator (gensets). The engine system interface is prototyped with flexible wiring harness, cables, interconnects, pipes and conduit.

The intelligent wiring harness is designed to feature important sensors that will promote efficiency of the gensets. Sensors will continuously measure elements in engine including temperature, pressure, speed,levelness,rudder angle, etc. The system allows owners and operators to monitor these parameters transmitted via a controllerâ€“area network (CAN) network. This allows communication of the devices without a host computer. Displayed on a LCD color screen electrical system processes up to 600 analog channels per device. Each analog channel can track designated data as well as graphically display the results as bar graphs, dial type and digital indicator. In addition to monitoring, the systems offer recording and storage functions.The local display unit (LDU) has been developed to perform two main functions: alarm report and responsibility transfer. These features are mandatory to operate in an Unattended Machinery Space (UMS).The LDU is mechanically designed to have a minimal overall dimension in order to be housed in a bulkhead or an electrical cabinet. Usually, alarms are grouped to be sent in a compact form in the various facilities. With the requirements in the control panels and electrical system interface of the application, itâ€™s important to find a professional engineering company that utilizes the latest protocols and high quality electronics.

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Article Keywords:
Marine Engine Solutions, Engine Management Systems, Electrical Control Panels, Marine Engine Controls, Industrial Motor Controls

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