mjr Power & Automation

CASE STUDY:
Marine Installation

Parkol New Build Trawler – Main Switchboards, Automation and Installation

MJR Power & Automation was contracted by Parkol Marine Engineering to design, manufacture, and supply the complete main and auxilary power plant for the 22.2-metre trawler Green Isle.

The project's scope covered main power generation, distribution, and automation integration across the vessel. This delivered a robust, compliant, and fully integrated marine electrical system, supporting efficient vessel operation, safe power management, and seamless synchronisation between onboard and shore power systems.

The vessel required an advanced, robust electrical architecture capable of handling multi-generator operation, onboard automation, and system redundancy, all within the tight footprint and environmental demands of a working trawler.

MJR Power & Automation

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CASE STUDY: Marine Installation

Scope of Work

MJR Power & Automation provided a turnkey electrical switchboard package for the vessel, including the design and manufacture of all main and auxiliary switchboards, as well as control system integration for generators, RSW (refrigerated seawater) systems, and auxiliary equipment.

Main Switchboards

- Dual 400VAC switchboards forming the backbone of the vessel's electrical infrastructure.
- Integrated generator protection relays for overload protection, and system monitoring.
- Modular cubicle design housing generator control, circuit breakers, and interlocked bus-tie sections to allow isolated or parallel operation.
- Synchronisation and no break transfer capability between main generators and shore power.

RSW (Refrigerated Sea Water) Switchboard

- Dedicated control and distribution for the Refrigerated Seawater (RSW) system, serving key components such as the vacuum pump, refrigeration plant and ice machine.
- Housed in corrosion-resistant enclosures, complete with local instrumentation and controls.

Harbour Generator Switchboard

- 40 kVA, 415V/50Hz shore and harbour power interface.
- Full metering suite for voltage, current, and phase monitoring, with interlock-protected changeover between onboard and shore power systems.

Auxiliary Distribution Boards

- 230VAC Galley, Cabin, and Wheelhouse distribution panels for hotel and domestic systems.
- 24VDC Essential and Non-Essential boards supplying emergency lighting, communications, navigation equipment, and fire safety systems.
- Essential and non-essential supply segregation ensuring redundancy and safety.

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CASE STUDY:
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Installation and Commissioning

In addition to design and manufacture, MJR Power & Automation delivered a complete onboard installation and commissioning service, deploying its electrical engineering team to Parkol's Whitby shipyard and the Port of Middlesbrough.

Working in close collaboration with Parkol's production team, MJR Power & Automation carried out:

- **Installation of all switchboards, distribution panels, and control cubicles.**
- **Full cable routing, termination, and identification across the vessel.**
- **Integration of generator protection, RSW, and auxiliary systems.**
- **Functional testing and certification in line with MSO and Bureau Veritas standards.**

The Parkol Green Isle switchboard system demonstrates MJR Power & Automation's ability to deliver end-to-end electrical solutions that meet the high standards of the marine industry.

From concept through to commissioning, MJR Power & Automation's contribution ensured the electrical heart of Green Isle was engineered for long-term performance at sea. A true example of precision power engineering.

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