

HMAS Cerberus MEDB Training Facility Woodward EasYgen3400 and LS5 Controllers provide superior control as part of the Navy's latest power management training simulator



Background

The 1517-hectare facility at HMAS Cerberus in Western Port Bay, Victoria Australia, is the Navy's premier training establishment and trains over 6000 personnel annually. As part of the Navy's commitment to training, Department of Defence issued a general tender to engineer and build a simulator that would provide students operator training, fault simulation and diagnosis and practical training in power management principles in a "live" real-time environment. The simulator is fitted at the Marine Engineering Demonstration Building (MEDB) on campus.

MOLEC Electrical Contractors Pty Limited contacted PM Control Australia requesting for a solution that would provide seamless synchronization and load control over all the required interconnections and in all scenarios. MOLEC is an electrical contracting company which is registered to perform electrical works in Victoria, Queensland, New South Wales, ACT and South Australia, and has been servicing the industry for over 20 years.

Solution

PM Control advised, supplied and assisted with the commissioning of following products:

- Woodward EasYgen 3400 generator controllers
- Woodward LS5 remote breaker controller

This latest generation of the proven Woodward easYgen control line provides the ultimate in control flexibility whereby up to 32 generators and 16 independent breakers can be fully controlled in nearly any imaginable power management scenario.



Summary

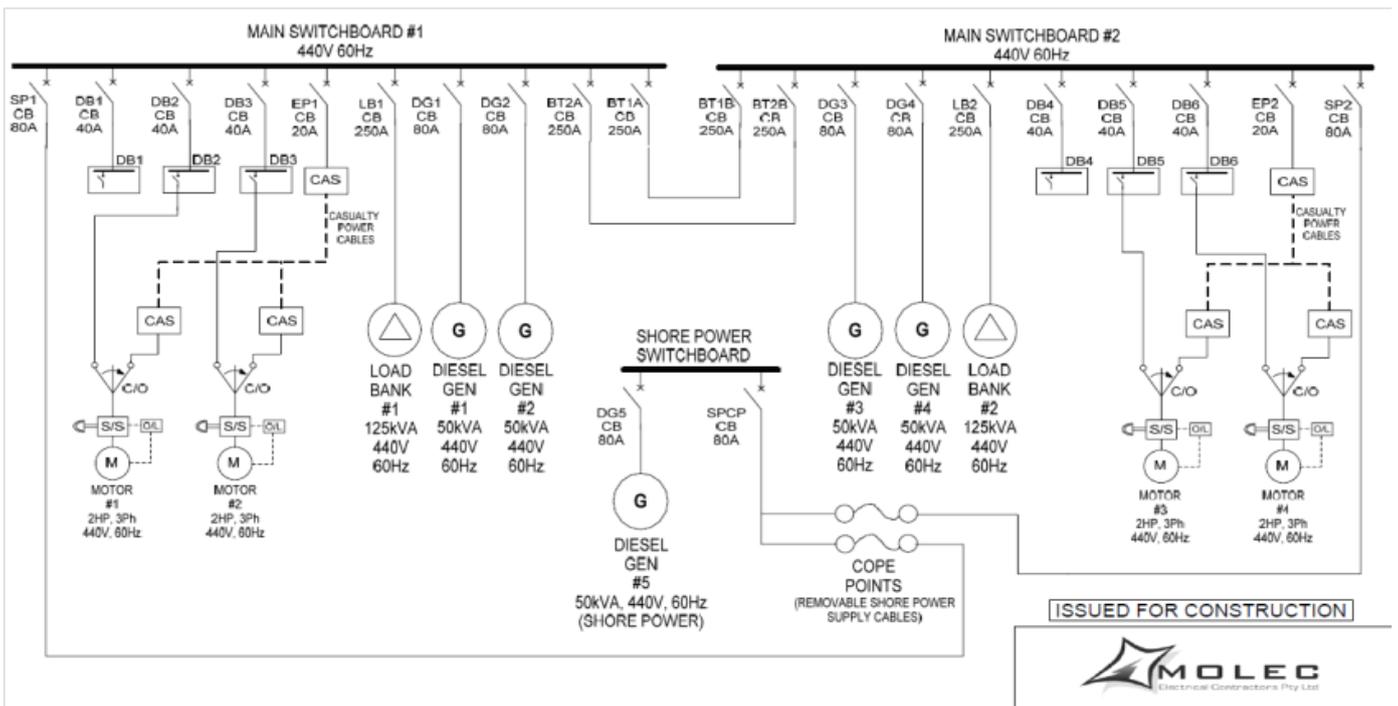
- Solutions
 - Woodward EasYgen 3400 generator controllers
 - Woodward LS5 remote breaker controller
- Solution provider
 - PM Control Systems
 - MOLEC Electrical Contractors



The MEDB system consists of five Kohler 440V, 60Hz 3Ø diesel gensets rated at 50KVA in a split bus configuration to replicate a ships generation plant and shore power facility. The systems also comprises two Main Switch Boards (MSB) and one Shore Power Switchboard (SPS) with variable ships load simulated via two variable load banks providing both real and reactive loads.

Students can operate the plant in full automatic or local manual control dependant on the training scenario. They can also witness many “what if” protective conditions, such as reverse power or generator power overload and view the casualty corrective action, which the automated control system conducts, without the issue of damaging ships equipment and in a controlled and safe environment.

The system also provides trainees with a solid understanding of power management and control principles including droop control, real and reactive load sharing, synchronization and correct power plant operation. It addresses a need to ensure sailors are trained to a high standard, are fully competent and qualified prior to being posted to sea billets, thus reducing “at sea” qualification time and needing vessel specific training thereafter.



About PM Control

PM Control delivers energy optimisation solutions that increase efficiency while lowering emissions. Serving the energy, process and transportation markets, PM Control is the appointed distributor and recognized retrofit partner for Woodward Inc., Regional Technical Centre for ABB Switzerland and Value Added Reseller for L&S Electric. Through our activities PM Control is having a positive impact on the lives of people across SE Asia, Australasia, India and beyond.

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