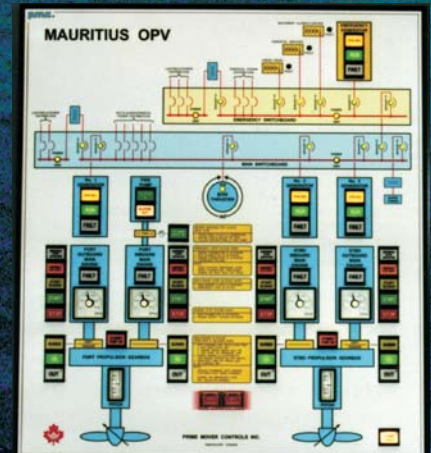
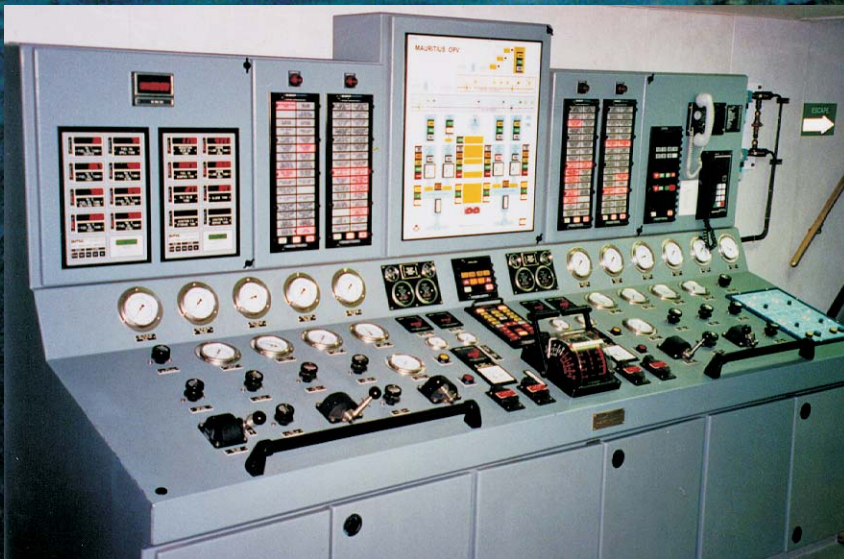




# PRIME MOVER CONTROLS INC.



# MAURITIUS OFFSHORE PATROL VESSEL CGS VIGILANT

## Specifications

Owner .....	Government of Mauritius
Naval Architect .....	Polar Design Associates Ltd.
Builder .....	Western Canada Marine Group
Shipyard .....	ASMAR-Shipbuilding and Docking Company
Classification .....	ABS Class <del>A1E</del> <del>A1S</del>
Length Overall .....	75.0 m (246.1 ft.)
Breadth Moulded .....	14.0 m (45.9 ft.)
Draught (full displacement) .....	3.9 m (12.8 ft.)
Cruising Speed .....	19 knots
Endurance .....	30 days
Range .....	8,000 nautical miles
Propulsion Engines .....	Four Caterpillar Model 3516 diesel engines each developing 3,000 BHP (2220 kW)
Reduction Gears .....	Two Volda Twin Input / Single Output
Auxiliary Engines .....	Three Caterpillar Model 3412 diesel engines driving 500 kW 380V 3 phase 50 Hz alternators
.....	One Caterpillar Model 3306 diesel engine driving a 125 kW emergency generator
Compliment .....	38

Prime Mover Controls Inc. designed and manufactured the propulsion control consoles, which are located at the three bridge stations and at the machinery control station. These propulsion control consoles incorporate the ship's controls and instrumentation.

Two PMC type PCA-2LA pitch controllers ensure maximum propulsion versatility. The fast stable automatic load control incorporated in the pitch controller maintains optimum loading on the engines. Special operational modes with dedicated pitch programs are provided for maneuvering with one or two engines and also operating the fire pump driven by the port inboard main engine. For example, the port propeller, can be driven by the outboard engine in variable speed mode, while the fire pump, is driven by the inboard engine in constant speed mode. Automatic load sharing is also incorporated to satisfy the close control tolerance required by two engines driving a single propeller.

A PMC mimic panel in the machinery control console displays the status of machinery for main propulsion, ship's service and emergency generators, switchboard indication and fire pump operation. The mimic panel includes lighted pushbuttons for main engine start and stop, as well as clutch control. Displays of engine rpm and propeller pitch are also fitted in the mimic.

All critical machinery functions are continuously monitored and displayed by a PMC 8001 alarm annunciator system. A group alarm repeater with serial communication to the machinery control room alarm system is provided at the center bridge station. A PMC type 8110 tank level monitoring system continuously displays tank level information and provides high and low level alarms as well as high flow detection.

The control transfer system features 3-stage transfer from machinery control room to bridge (Request - Enable - Accept). In an emergency, immediate return transfer can be undertaken from the machinery control console, at any time, causing warning alarms at all bridge stations.

The PMC type 8201 pushbutton propulsion telegraph system provides emergency orders between the center bridge station and the machinery control room or the local at OD box stations. These solid-state, microprocessor based units include the nine standard telegraph orders. They also include functions for bridge control and lamp test as well as power failed and wrong direction indicators. An additional feature is a separate and independently operating group of orders for standby, cancel standby and finished with engines.

The PMC supplied DHR navigation lights are controlled and monitored in the bridge by a PMC 8010 navigation light control panel. This solid-state electronic panel continuously monitors the status of the remote navigation lights when the lights are turned on or off. A visual and audible alarm is activated if a lamp fuse or a circuit fails. Dual power sources are also monitored and alarmed when either fails.

PMC also supplied a type 8118 digital RPM system, which displays shaft and engine rpm on digital meters at the machinery control station and analog meters at the bridge stations. A type 8502 pitch indicator system also displays propeller pitch at all four stations.

PMC's azimuth control components, type 5360 azimuth control head and type 8161 azimuth display meter were installed in the bridge stations and integrated with the vessel's bow thruster control system.

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3600 GILMORE WAY, BURNABY BC CANADA V5G 4R8