

IMESA

MARINE SOLUTIONS





IMESA Marine solutions

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IMESA SPA



In the last years shipbuilding sector has become increasingly important and thanks to its daily experience on complex projects Imesa has been chosen as a reference point for finding innovative solutions to be compliant with every customer need and fulfilling the prescriptions of Naval Registers.

Flexibility and “taylor made” attitude are both key factors that distinguish Imesa from its competitors; in all naval sectors engineering solutions have to be discovered in order to find the right compromise between the most demanding electrical features and space constraints and the result is a product that can be adapted to every specific situation.

This is the reason why Imesa and its Marine Division are now dealing exclusively with the design, developing and marketing of electromechanical systems which have become smarter thanks to the use of the state of the art technologies on fault detection and safety measures able to preserve the operators and reduce the loss of service.

In the marine market Imesa provides solutions for the following sectors:

- **Cruise**
- **Navy**
- **Off-Shore / Special Vessels**
- **Shore connection for marine applications**

CRUISE



Viking Cruises - Fincantieri Shipyard



*MSC Cruises - Seaside
Fincantieri Shipyard*



*LV Main Switchboard
440V - 6300A - 80kA Internal Arc Execution*



*LV Main Switchboard
690V - 4000A - 85kA Internal Arc Execution*

Probably the most important sector in the marine market is the one linked to the Cruise; the continuous demand of new vessels with even bigger number of passengers is pushing Shipowners and Yards to find new solutions to accommodate each type of facilities on board.

The decreasing availability of space inside a ship forced Imesa to discover innovative solutions like double layer cubicles, "C" or "L" shape layouts, minor clearance on the top by granting anyway safety for operators. Constant improvements are given also by a continuous exchange of information with Customers through technical seminars aiming to train crews and obtaining precious feedbacks from technicians who operate daily Imesa's products.



*Princess Cruise - Royal Princess
Fincantieri Shipyard*



*Virgin Voyages
Fincantieri Shipyard - Main LV Substation
690V - 2500A - 50kA*



Aircraft Carrier "Cavour" - Italian Navy



*Multipurpose Patrol Ships (PPA)
Italian Navy - Fincantieri Shipyard*



*LV Main Switchboards with Shock Withstand Requirement
690V - 4000A - 65kA
PPA - Italian Navy*



*School Ship "Amerigo Vespucci"
Italian Navy*

Imesa provides special switchboards for Navy applications which are usually subject to severe environmental tests (shock and vibration) by authoritative organizations. These are really complex projects which start supporting Navy and the Yard during the investigations and analysis of the tech-

nical requirements for the basic design. The use of special devices for Navy applications and shock absorbers becomes a strategic choice to be done, basing also on the strong experience Imesa has in this particular sector.



*Multi-Mission European Frigates FREMM
Italian Navy - Fincantieri Shipyard*



*MV Main Switchboard with Shock Withstand Requirements
12kV - 630A - 31,5kA
LHD - Italian Navy*

OFF-SHORE AND SPECIAL VESSELS



SAIPEN 7000 - Crane Vessel



*MV Main Switchboard
11KV - 4000A - 50kA Internal Arc Proof with Is Limiter*



Sapura Diamante - Pipe Layer



Pioneering Spirit - Crane Vessel

The high specialization in this sector brought Imesa among the top players in such market of customized equipment for Off-Shore and Special Vessels. Reliability, flexibility to adapt the configuration to operational modes, capability to isolate a fault in a restricted section of the plant are key factors that determine the resilience of the electrical equipment.

Imesa has continuously developed solutions to design equipment able to exchange information through GOOSE messages for complex configurations like DP3 with open and closed ring. The use of sophisticated devices like fiber-optic continuous temperature monitoring systems and internal arc sensors helps the user to check the working condition of the equipment and restore it quickly in case of fault.



LV PMCC Switchboard
440V - 5000A - 80kA



Cidade de Ilhabela - FPSO

SHORE CONNECTION



Zero Emission Link



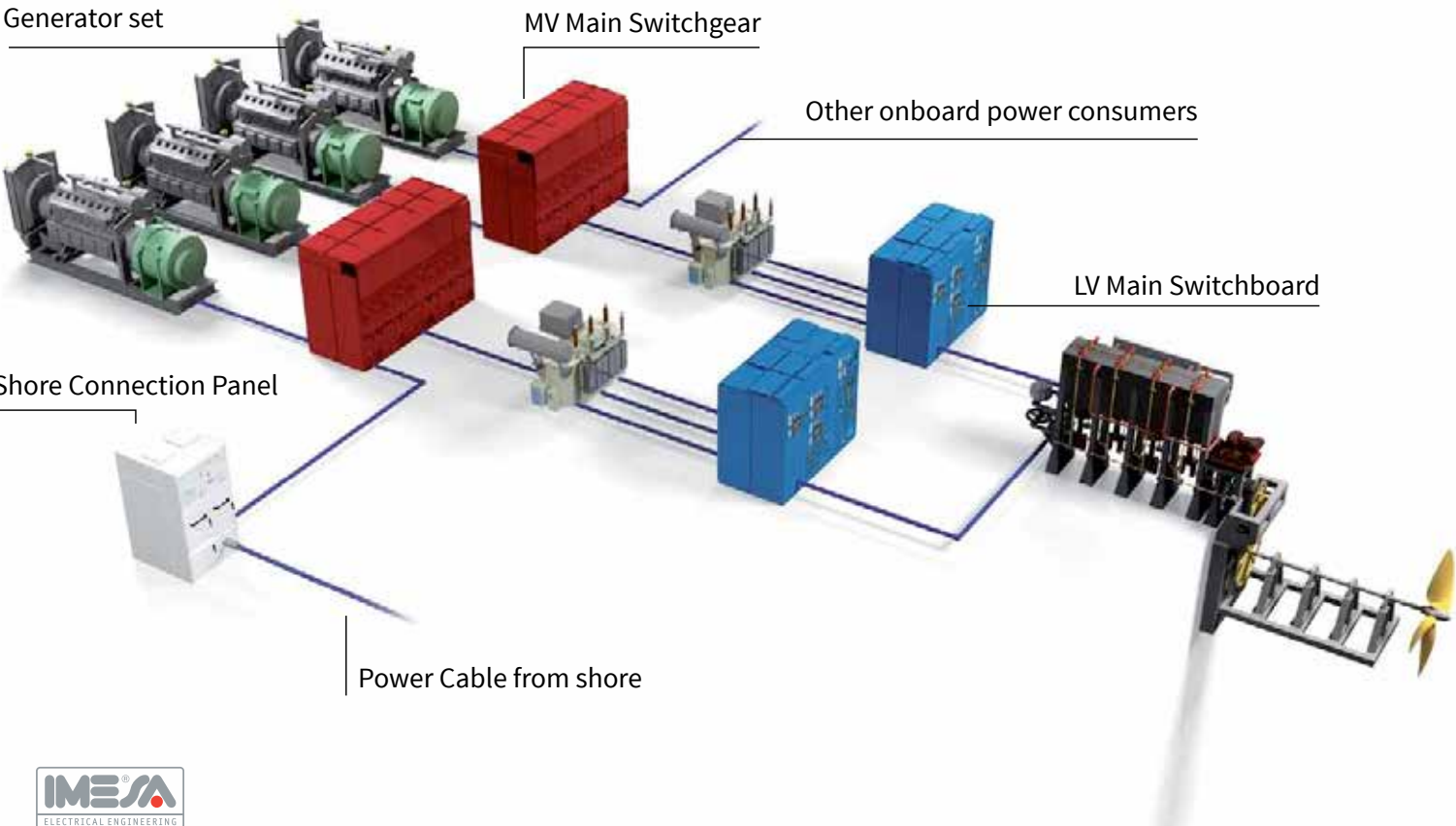
*MV Containerized
Shore Connection
System*

*LV Shore Connection
Panel
690V - 2500A - 100kA
LSS - Italian Navy*



The law aiming to drastically reduce pollution in the harbours opened new market opportunities. Imesa has developed Shore Connection solutions for Cruise vessels, Ferries, Mega-Yachts, Navy, container and special vessels. Through special sockets it is possible to connect the land-based electrical network to the one on board giving the possibility to switch off the generators during the stay at port.

Exhibition Samples



IMESA MAIN REFERENCES

	Vessel Name	Vessel type	Classification Register	Shipowner	Scope	Electrical Features
CRUISE	Unnamed (6290) Unnamed (6275) Sky Princess Majestic Princess Regal Princess Royal Princess Ruby Princess Emerald Princess Crown Princess	Cruise ships	LR	Princess Cruises - Wärtsilä / FC	Main MV /LV Switchboards Shore Connection	12kV - 1600÷2000A - 40kA
	Scenic Eclipse	Polar Discovery Passenger Ship	BV	Scenic Cruises - Uljanik d.d.	Main LV Switchboard, Auxiliary Switchboard (LV), Emergency Switchboard (LV)	690V - 1250÷6300A - 40÷75kA
	Unnamed (6287 - 6288 - 6289)	Passenger ships	LR	Virgin Voyages - Fincantieri	Main LV Switchboards Emergency LV Substations LV Lightning Panel	690V - 3200A - 50kA
	Viking Tellus Viking Venus Viking Jupiter Viking Orion Viking Sun Viking Sky Viking Sea Viking Star	Passenger ships	LR	Viking Ocean Cruises - Wärtsilä	Main MV Switchboard Shore Connection	12kV - 2000A - 31,5kA
	Seaside Seaview unnamed 6306 (Seaside Class1) unnamed 6307 (Seaside Class2)	Cruise ships	Rina	MSC Crociere Spa - Fincantieri	Main MV Switchboard Shore Connection	12kV - 2000A - 50kA
NAVY	Hull 6260	Landing Helicopter Dock (LHD)	RINA Mil	Italian Navy - Fincantieri - Fincantieri SI	Main MV/LV Switchboards, Power, Small Power and Light Panel (LV) Main MV Switchboard for Roto converters Shore Connection Panel (MV)	12kV - 630A - 31,5kA 230÷690V - 1600÷5000A - 20÷50kA 690V - 4000A - 85kA
	Hull 6261-62-63-64-65-66-67	Multipurpose Patrol Ships (PPA)	RINA Mil	Italian Navy - Fincantieri - Fincantieri SI	Main LV Switchboards Secondary and Tertiary Switchboards (LV) Shore Connection Panel (LV)	690V - 400÷1000A - 40÷70kA 690V - 4000A - 85kA
	Hull 6259	Logistic Support Ship (LSS)	RINA Mil	Italian Navy - Fincantieri SI	Main LV Switchboard, Emergency Switchboard (LV) Shore Connection Panel (LV)	690V - 2500÷4000A - 100kA
	Spartaco Schergat Emilio Bianchi	Fremm GP Frigates	RINA Mil	Italian Navy - Fincantieri	Main MV /LV Switchboards Shore Connection	12kV - 630A - 16kA 440V - 2500÷5000A - 70kA
	Amerigo Vespucci	School ship	RINA	Nidec/ASI Italian Navy - B&P	LV Main Switchboards Primary Distribution Switchboards (LV)	400V - 3200A - 50kA 400V - 400A - 25kA
	Saipem 7000	Semi-submersible crane & pipelaying vessel	ABS	SAIPEM	Main Switchboards (MV, LV), Emergency Switchboard	12kV-4000A-50kA 220÷440V - 1250÷5000A - 70kA
OFF-SHORE	Liza Destiny	FPSO	ABS	ExxonMobil - SBM	"Main Switchboards (MV, LV), Emergency Switchboard HV/HV -HV/LV Transformers"	12kV - 3150A - 50kA 220÷440V - 400÷5300A - 25÷80kA
	Walcheren & Serooskerke	Semi-Submersible Crane Vessels	ABS	OOS - Kongsberg M.E.	Main MV Switchboard	12kV - 1250A - 31,5kA
	John Agyekum Kufuor	FPSO vessel/ OCTP Project	DNV	Eni Ghana Exploration & Production Ltd. - Kongsberg M.E.	Main Switchboards (MV, LV)	6,6÷13,8kV - 1250÷3150A - 25÷50kA 440÷690V - 1600÷5300A - 50÷80kA
	Hilli	FNLG Terminal	DNV	Golar LNG - Kongsberg M.E.	Main Switchboards (MV, LV)	11kV - 4000A - 50kA 440V - 2000÷6000A - 80kA



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