# Shore Connection Solution

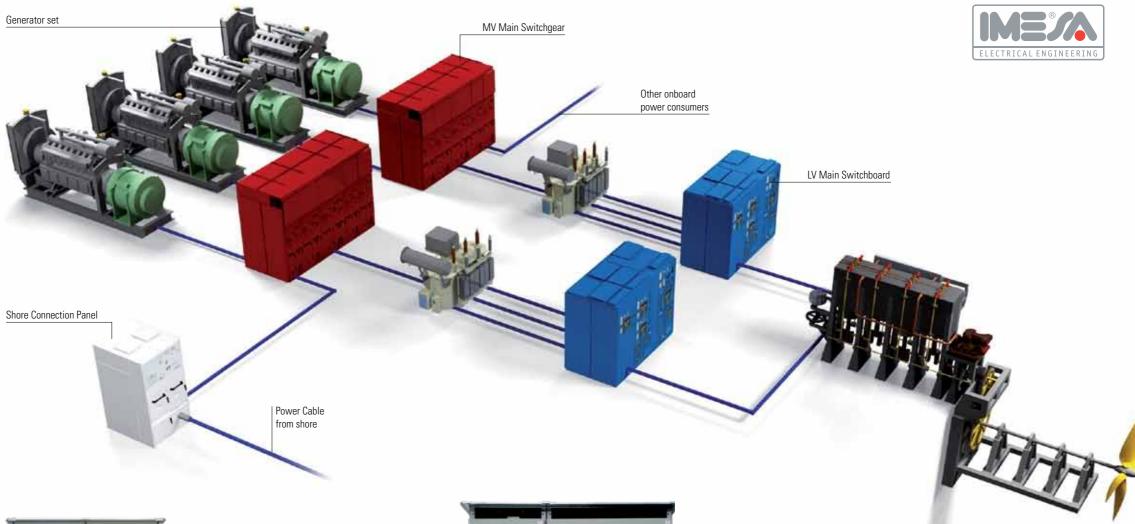




For years Imesa has been a reliable supplier of electrical switchboards which act as the main distribution point of the electrical system of the ship. In the next scheme you can see how the Main Switchboard is able to distribute the power supplied by the generators to the various consumers, including the propulsion.

This plant now includes a further new element, the shore connection panel which, bypassing the generator sets, supplies the main switchboard of the ship directly from the power grid on shore. The Shore Connection Panel (SPC) is typically made by a circuit breaker panel and a connector panel (which may vary in number and size according to the need for current and to the connection system provided). The SCP electrical characteristics can reach values of 12kV-50kA-2000A.

The sockets are installed in the connector panel so as to ensure easy access by maintaining preserved the electrical requirements as well as the protection against possible internal arc.





#### **CRUISE VESSELS**

- Customer: Fincantieri HULL 6223/6224
- **Shipowner:** Princess Cruises
- Electrical Features: 12kV-1600A-40kA



#### **MEGA YACHTS**

- Customer: SAM ELECTRONICS Mega Yacht "Azzam"
- Electrical Features: 12kV-630A-31,5kA



#### NAVY VESSEL

- Customer: Imtech Marine & Offshore
- Vessel Name: JSS
- **Shipowner:** Royal Netherland's Navy
- Electrical Features: 6,6kV-630A-31,5kA



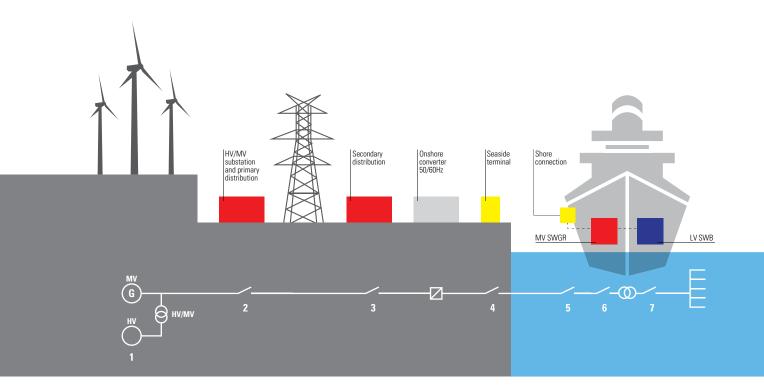
### CONTAINER VESSEL

- Customer: SAM ELECTRONICS
- Vessels Name: Tokyo Express/Seoul Express/ Rotterdam Express/Dusseldorf Express/Kobe express/ London Express
- Shipowner: Hapag Lloyd
- Electrical Features: 6,6kV-1250A-16kA

## **Zero Emission Link**

The European law 2005/33/EC of January 2012 has posed a great environmental challenge within to port authorities and shipowners in the whole Europe. In order to reduce noise and pollution within 2015, cruise ships, cargo ships and ferries stopped at the dock for more than two hours must turn off the engine and, therefore, connect to the electrical ground for their heating system, lighting and refrigeration. The diesel engines of a cruise ship which remains at the dock burn

several tons of fuel and produce several tons of carbon dioxide. Emissions can be substantially reduced by connecting the ship to the electrical ground grid. For this reason Imesa proposes a solution which is at the same time eco-friendly and easy to implement in order to equip ships with a system capable of interfacing with any Main Switchboard, even existing vessels that must be renewed in order to ensure compliance with the new quidelines.



#### **IMESA's businesses**

- 1. Energy production Photovoltaic plants, medium voltage switchgear, **HV** substation
- 2. IMESA primary distribution medium voltage switchgears
- 3. Medium voltage distribution
- 4. Seaside terminal (also container solutions)
- 5. Shore connection

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- 6. Medium Voltage Main Switchgear
- 7. Low Voltage Main Switchboard







