



dockwise yacht
transport express vessel



THE CASE STUDY

This yacht transport vessel is the largest of its kind, and it has a variety of unique features that make it an effective, powerful yet manoeuvrable yacht carrier.

Yacht Express is semi-submersible and offers a unique float-on/float-off loading method. It has a length of 209 meters (685.7 ft) and a beam of 32.2 meters (106 ft) with a deck space of 5,115 square meters (55,060 ft).

There were multiple challenges in the installation, combining MV and LV busbar, electric propulsion, thrusters and ballasts control with heavy consumers water pumps and yet to give absolute power control during the deballasting and ballasting of the ship when loading the expensive vessels.

The deballasting was the most difficult stage of the operation since the Yachts have different sizes and drafts and have to lie down carefully on wooden cribbing. At this particular stage, the trim of the boat has to be perfectly balanced.

GENSYS MARINE has been used to his full capacity to support this complex application, using hundreds of additional I/Os and integrating them into the embedded PLC with logical sequences.



OUR SOLUTION

Yacht Express has a propulsion and manoeuvring plant consisting of two 8,700 kW Wärtsilä 12V38 B common rail diesel generator sets, both controlled on ilot/paralleling mode by GENSYS MARINE system, the generators are mainly dedicated to the control of two lips azimuth pulling thrusters featuring co-propellers via two electric motors of 5,100 kW each.

The GENSYS MARINE system is doing more than synchronising and load sharing the medium voltage power plant, it is controlling and synchronising the tie breakers separating the starboard bus and the port bus, and it is also managing the propulsion limitation through CANopen remote analog inputs.

Auxiliary power is derived from two Wärtsilä common rail diesel generator sets of 1,020 kW managed by two Gensys marine system on load sharing and de-drooping mode.

Emergency power is supplied by a Volvo Penta D34A MS generator of 610 kW, 440 V, 60 Hz with GENSYS MARINE.

Each part of the power plant can be isolated for a backup operation and can be synchronized back without black out due to the exclusive GENSYS MARINE tie breaker synchronisation.

The shore power failure is also check by the 2 auxiliary engines for black start operation.

