

MSC's largest cruise ship, World Europa (World Class Series), is equipped with GE Power Conversion's in-board propulsion system

- The World Class series cruise ships are installed with GE Power Conversion's in-board electric propulsion.
- GE's efficient induction motor and pulse width modulation (PWM) power converter technology will help to deliver reduced operating costs and improved propulsion reliability.
- To date, 17 MSC Cruises vessels are powered by GE Power Conversion's electric propulsion system, with 'MSC World Europa' being the most recent to be launched into operation.

GE Power Conversion was chosen by shipbuilding company Chantiers de l'Atlantique to equip the first two of the World Class vessels, MSC Cruises' latest class of ships, for improved propulsion performance. The first ship, MSC World Europa, is now in operation at sea and the second vessel is currently in build. This latest one marks the 18th MSC vessel to be powered by GE's electric propulsion system.

GE Power Conversion's energy-efficient PWM induction technology, such as that installed onboard MSC World Europa, can help fleet operators comply with 'clean ship' regulations while also helping to reduce operating costs in today's competitive market.

The World Class fleet are no ordinary cruise ships; the LNG dual-fuel vessels are propelled by the most powerful cruise ship electrical motors in operation - two 25 MW, 120-127.5 rpm induction motors - which are fed by four press-pack IGBT (insulated gate bipolar transistor) PWM MV7000 converters. GE Power Conversion's scope also includes four propulsion transformers and remote control for onboard propulsion, technology that can contribute to improved propulsion reliability and lower maintenance costs during the vessels' operating life cycle.



Emilio LaScala, President & Managing Director at MSC Cruise Management Ltd said: “Against the backdrop of a competitive environment, we are confident that GE’s proven electric propulsion technology is the ideal choice for our fleet. It will bring reduced operating costs and improved propulsion performance, ideally suited for our next generation of cruise vessels.”

The induction technology that GE Power Conversion developed about two decades ago was first used by the world’s navies. Today, it is used widely for a range of vessels which require optimum performance and power output in the multi-megawatt classes for electric power and propulsion efficiency.

“For delivery of long-term performance, in-board electric propulsion technology is optimal for cruise vessels as it can deliver a robust power source that balances energy efficiency and propulsion reliability with a reduction in maintenance costs,” explained Loïc Thiébaut, Merchant Marine Business Leader at GE Power Conversion. “GE has pioneered the use of both high-power induction motors and PWM for marine operations and has demonstrated a track record of applying this technology efficiently in the powering of world-wide cruise vessels.”

Thiébaut continued: “We value our long-standing relationship with MSC Cruises and recently also expanded our contribution to the MSC fleet with the fit of the fourth vessel in the Seaside series, Seascope. It’s just one of the 17 MSC cruise vessels sailing with GE’s electric propulsion technology. GE Power Conversion looks forward to continuing successful collaborative partnerships with world-leading shipyards such as Chantiers de l’Atlantique and supporting them on the path to decarbonization, without compromising on operational performance.”

About GE Power Conversion

GE Power Conversion, an integral part of the GE Vernova portfolio of energy businesses, applies the science and systems of power conversion to help drive the electric transformation of the world’s energy infrastructure. Designing and delivering advanced motor, drive and control technologies that help improve the



efficiency and decarbonization of energy-intensive processes and systems, helping to accelerate the energy transition across marine, energy and industrial applications. GE Power Conversion is at the heart of electrifying tomorrow's energy.

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