Norwegian brings Joy to China

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Marco Pastorino (Independent Maritime Advisors): It was important to develop something new but not to modify the platform of the ship

Norwegian Joy has been configured for the Chinese market, complete with go-kart track and Tai Chi garden. Susan Parker reports.

Norwegian Joy may be a sister ship to *Norwegian Escape* in terms of the platform it is built on but there the similarities end. The Norwegian Cruise Line (NCL) 167,800gt newbuilding is under construction at Meyer Werft in Papenburg for delivery on April 27 2017. It is destined to sail out of Shanghai and Tianjin and is the result of much research into the targeted Chinese market.

Heading up this project is Marco Pastorino, managing director Independent Maritime Advisors, whose company took over the project management of all Norwegian Cruise Line Holdings (NCLH) newbuildings on December 1 2015.

Robin Lindsay, evp vessel operations NCLH, explained: "I met Marco in 2007 and at that time we were looking for a management team for the 'O' class [Oceania Cruises' newbuildings]. The typical choices were V Ships and others but we wanted something new: a fresh look, innovative and creative." Having first consulted on, and then taken over, this class and "because of the success and savings, the quality of newbuilding and the great relationship with Marco and his company" IMA then went on to oversee Regent Seven Seas Cruises' newbuilding, *Seven Seas Explorer*, which entered service in July 2016.

Subsequently in the normal course of business NCL was assessing its newbuilding team in Papenburg: "We made the strategic decision to outsource it for a variety of reasons including saving money in the construction process and getting a better quality ship". Hence IMA took on the project management of *Norwegian Joy* for this April, *Norwegian Bliss* in April 2018 and the third vessel for delivery in the fall of 2019. The company is also project managing *Explorer 2* for delivery in January 2020 and drydocking for all three brands.

Mr Lindsay commented on NCLH's cooperation with IMA: "We have developed an incredible trust and great relationship and it is tremendously financially beneficial for the owner." With headquarters in London and offices in Germany and Italy, IMA numbers 34 staff with expansion plans to go to 50 in 2017/18. Pastorino explained the company's position: "We work only for NCLH to keep the quality we need to provide and also for the long-term relationship with all the present management, Robin, Frank [del Rio] and others so that, even if we don't have an exclusive agreement, we are working exclusively for them."

When it comes to *Norwegian Joy*, she is the first ship which NCL has fully developed for the Chinese market. Mr Lindsay explained: "The full GA has been completely reviewed by NCL, the architect and the Chinese consultant to match the needs of Chinese passengers. From restaurants to cabins, everything has been designed to match the feedback for a base product for the Chinese market. Specific features, such as the go-kart track (a first at sea), a sophisticated climbing wall, a Tai Chi garden, the Galaxy Pavilion for entertaining, gaming, video games and virtual reality have been designed for the future and put in place on this ship."

The retail shopping space has been tailored to Chinese tastes and new restaurants have been created which are more suitable for the Asian palette, for example a Teppanyaki restaurant and Korean BBQ (Shabu-Shabu) dining experience. With the Chinese tending to travel in families, the recent signature NCL studios will not appear on *Norwegian Joy* but two-bedroom suites complete with living room are being created for this ship.

Mr Pastorino commented on particular challenges associated with creating the first go-kart track at sea: “One of the main [topics] was trying to save weight because of the stability” due to it being located on the highest deck. A number of different options were considered with the final choice being made in terms of weight and space."

Behind the scenes, much of the machinery and equipment is the same as that installed on *Norwegian Escape*. However, as with all series, certain changes have been made with regard to equipment and machinery. For example a new generation of liferafts from Survitec Group have been deployed on this ship. These have a suspended floor ensuring maximum thermal protection when connecting with water. There are 11 of these Marine ARC 158-person rafts. In addition there are 16 Hatecke lifeboats which can hold 314 persons each and two MES for a total capacity of 1264 pers.

Also new is a tunnel washer from Jensen in the laundry which has been installed in order to recover and save energy. “We use less water for rinsing and then use this to start cleaning the new load. In this way we are saving water, heat and it is a more efficient process.”

In terms of IT, the whole ships has been fitted with Category-7 cable “which gives the owner the possibility of speed functionality for a long time to come”. As of today Mr Pastorino explained that there is a 1gb network installed but Cat-7 cable means it can be updated and support more and more data than the more usual Cat-6 cable that is installed on NCL ships prior to *Norwegian Escape*. The infrastructure for the technology comes from Systems Integration Specialists Company Systems (Cisco) and the communications are provided by two C-band and Ku-band satellite antennas.

All three types of fuel - HFO, LSF and MGO - are carried but *Norwegian Joy* will operate on HFO using scrubbers in the declared ECA zones of Japan, China and South Korea. The five main engines are from MAN Diesel & Turbo (two 14V48/60 and three 12V48/60) and each is fitted with a hybrid scrubbers from Yara International/Greentech. These can operate in closed-loop for 24 hours. There is a 73m3 collection tank for residuals located below the engine room which can accommodate the 24-hour closed-loop operation.

Eniram has installed systems to optimise trim and speed in different conditions and for different cruises as well as engine analysis for monitoring performance. Mr Pastorino said: “The objective is to work the vessel at its optimum, based on millions and millions of algorithms of every possible weather and sea condition. Eniram also tells us when we can clean the ship’s hull, and even the propellers, just through the characteristics of performance.” He also commented that the 80% general rule for engine use is “not necessarily the perfect point for the engine but here it is 85%, ie 184g/kWh which is the lowest point of consumption of fuel.”

The two ABB Azipods each have five blades of almost 6m in diameter. There are three Brunvoll bow thrusters of 3.5mW each. Fincantieri has supplied the fin stabilisers and Alfa Laval an evaporator with a capacity of 900m3 every 24 hours using energy recovered from the engine cooling water. There are four WatMan reverse osmosis units with a capacity of 600m3 each.

The ballast water treatment system is supplied by Alfa Laval, PureBallast 3.0. “The purpose is to avoid contamination of micro-organisms from, for example the Red Sea to the Mediterranean. It is a great system for this kind of use and it is the top technology today. Obviously it doesn’t work with chemicals but with UV treatment.”

The air conditioning system provided by Johnson Controls is an advanced fancoil system which also controls the amount of CO2 in different spaces and is fully automated. LED lighting has been installed throughout to maximise both the visual result and reduce the amount of energy used.

The advanced wastewater purification system comes from Scanship with Evac supplying the vacuum toilet system, one for each main vertical zone to ensure redundancy. In case of malfunction each zone can be operated by the adjacent.

Finally, the waste system comes from Deerberg Systems and includes two incinerators of 2,400kW each which can burn for 12 hour/day. Recycling programmes are implemented where burning is not an option.

Main particulars

Shipyard:	Meyer Werft
Delivery:	27 April 2017
Gross tonnage:	167,800gt
Length:	333.46m

Beam:	41.4m
Draught:	8.4m
Passengers:	3,889 (double occupancy)
Crew:	1,817

Main suppliers

Main engines:	MAN Diesel & Turbo SE, 2 x 14V48/60 and 3 x 12V48/60, total output 76.8mW
Pods:	2 x ABB Azipods at 22mW each
Bow thrusters:	3 x Brunvoll
Fin stabilisers:	Fincantieri
Scrubbers:	5 x Yara International/Greentech Marine
Freshwater:	4 x WatMan reverse osmosis at 600m3 and 1 x Alfa Laval evaporator at 900m3
Black and grey water:	Scanship
Waste disposal:	Deerberg Systems
Airconditioning system:	Johnson Controls
Ballast water:	Alfa Laval
Safety management system:	Wartsila/Valmarine
Integrated navigation:	Wartsila/SAM Platinum package