



Crystal Endeavor was built at MV Werften in Germany

CRYSTAL BROADENS PORTFOLIO WITH EXPEDITION SHIP

The Crystal Endeavor is the first deep-sea cruise ship built by MV Werften and the first expedition cruise ship in the fleet of Crystal Cruises, which like the shipyard is part of the Genting Hong Kong group. It is also the first deep-sea newbuilding for the U.S.-based luxury cruise line since 2003.

By Kari Reinikainen

Following the entry into service of the new ship, the Crystal Cruises' portfolio now includes two traditional oceangoing cruise ships, the Crystal Esprit cruise yacht, five river cruise vessels and the expedition cruise ship Crystal Endeavor. While many upmarket expedition cruise ships have a rakish profile that brings large megayachts to mind, the Crystal Endeavor has a more businesslike appearance, thanks to the fact that the engines are only slightly aft of midships and the bow has only a gentle rake forward.

On many upper-end-of-the-market cruise ships, cabins are located forward and public areas aft of them, but on the Crystal Endeavor, the layout is more horizontal. The guiding flow optimization, public room layouts, cabin modules and support services were the work of AD Associates, based in London. They liaised closely with naval architects, expedition experts and operational sponsors, and they continued to support the process

right through to delivery. "AD has played a significant role in designing the ship's entertainment spaces, dining and public areas. While each space has its distinct design, it was a fundamental objective to ensure fluidity when travelling from room to room," the company said in a statement.

Six passenger decks

The ship has six passenger decks and the majority of the public areas are located on decks 4 and 5. Cabins occupy most of decks 6 to 9, while on deck 10 there is a sun deck that features good-quality seating and is partly covered against the elements. Forward on deck 9 there is the Palm Court that has floor to ceiling windows on three sides and which is also used for afternoon tea. Immediately aft of this area, there is a pantry and library plus a space for lectures and conversations with members of the ship's expedition teams

Aft of deck 8 there is a helipad that can host two aircraft, while cabins occupy the midship and forward parts of this deck. The vessel also carries a sonar forward in the hull plus a remotely operated vehicle (ROV) that can operate 600 metres from the camera.

Further down on deck 5 there is a reception area forward that merges with a bistro. Aft of this, there is a gym and salon on the starboard side and a spa on the port side. Shops are also located on the starboard side along a corridor that separates the two. Products available for purchase include limited-time merchandise and destination-related, artisanal collections inspired by the ship's planned itineraries. For initial voyages, guests can shop from a range of relevant goods that include a selection of outerwear accessories for polar climates, cold-weather skin care and sun protection technology.

"The vision for Crystal Endeavor's retail concept exemplifies adventurous with an element of practicality complemented by a flexible merchandise approach that equips guests to explore exotic, undiscovered destinations with comfort, style and craftsmanship," said **Lisa Bauer**, President and CEO of Starboard



Deluxe Suite and bathroom

Cruise Services, which operates the shops, in a statement. “The fresh approach on retail is perfect for adventure travel while maintaining Crystal’s ultra-luxury standard.” Brands available include Alpaca Apparel, Caudalie, Herschel Supply Co., Hubert Jewelry and Lat & Lo plus Swarovski Optik. “The launch of Crystal’s first vessel designed exclusively for expedition cruising needed the retail program to be customized for adventurous world travelers. The daring retail program elicits exploratory shopping and accentuates the unique guest cruise journey,” added Crystal Cruises President **Jack Anderson**.

Aft on deck 5, there is the lower part of a two-deck-high, glass enclosed solarium that also has a pool and a Jacuzzi. The walls and ceiling of the solarium are made of glass, so that it can be used to enjoy the views outside. “The Solarium design is a realization of our vision to bring the outside in,” said Anders Lund-Rasmussen, Project Director at Tillberg Design of Sweden (TDoS), which was in charge of the area. “Look up to witness the

majesty of star fields, while you let all your worries evaporate in the spa or maybe catch a glimpse of a polar bear as you cruise by, while sipping a snow ball cocktail. We’re creating unforgettable memories by surrounding you with plenty of exquisite designs,” he said in a statement. TDoS also designed the Palm Court and salon, fitness and sauna areas on the ship.

Continuing down to deck 4, there is a casino forward on the starboard side and aft of this is the Crystal Cove, which is used by guest speakers and also acts as a venue for pre-dinner cocktail parties and late night entertainment. The Umi Uma sushi bar is located aft of the lounge on the starboard side, offering Japanese-Peruvian fusion cuisine. A gallery runs from Crystal Cove on the port side of the ship, where one will find Prego, an Italian restaurant that is a hallmark of Crystal Cruises. The Vintage Room, which features fine vintage wines, is also located here. Waterside, the largest dining venue on the ship, is located at the aft end of the gallery and occupies the full width of the stern on



Photo credit: Bruno Cucarini

Crystal Endeavor in Vopnafjordur, Iceland

deck 4. The restaurant has an open-sitting policy and offers a Michelin-inspired menu with a selection of modern favorites.

Ship performed well in bad weather

The Crystal Endeavor performed very well on its sea trials that were conducted in the North Sea in May. The ship underwent rigorous performance and operational tests on its systems, machinery and engines including safety, navigation and propulsion systems and noise and vibration measurements, said **Gustaf Grönberg**, EVP Marine Operations and Newbuildings at Genting Hong Kong. The onboard team, consisting of Captain Thomas Larsen plus senior bridge and engine room teams from the cruise line, with engineers, naval architects and builders from MV Werften, noted that the ship had exceeded expectations when it came to performance. The Crystal Endeavor "crash-



Gustaf Grönberg



Resorts World at Sea casino

stopped" from full speed to zero within 660 meters, equal to four ships' lengths compared with 1,700 meters or 10 ships' lengths that was the requirement. Its maneuverability, such as in the turning circle test, also far exceeded the set standards and noise measured at 10% lower than requirements with vibration measuring even lower at up to 80% lower than requirements. The ship also exceeded the 19.0 knot top speed required by the building contract by attaining 19.7 knots on the trials.

The ship's propulsion system includes two Azipod D units and a diesel-electric power plant designed specifically for ice-going vessels to help them operate at optimum efficiency while providing 13,020 kW of installed power, delivering well-balanced power and propulsion installation, giving both speed and comfort. The Crystal Endeavor has a Polar Class 6 ice classification to allow operations in the high latitudes north and south. Grönberg noted that the ship had performed very well in rough weather conditions that were experienced on the second trial run. This is very important, given the fact that it will operate in various parts of the world where weather conditions can be challenging. Throughout the design of the ship, functionality was high on the agenda and the bridge of the ship represents a major step forward in ergonomics. "Nothing like this has been built so far," he pointed out.

The Crystal Endeavor has a gross tonnage of 20,449 and under normal conditions can accommodate 200 passengers, for a very high space ratio of 102.2. Grönberg noted that the option to cruise in Asia and cater to the local markets, where it is common that people travel with family and in larger groups, was taken into account in the design. For instance, in the cabins a thick curtain is fitted so that the bedroom and sitting areas can be separated from each other. Sofa beds in each cabin can be used by a further two people, and the ship's capacity will double to 400 as a consequence. Even then, the space ratio would be about 50 – still a rather high figure.

Teamwork essential to success

The Crystal Endeavor is the first deep-sea cruise liner that MV Werften has built, although the yard had previously delivered four high-end-of-the-market river cruise ships for Crystal Cruises. Grönberg said that the shipyard team acknowledged that it did not have all the experience in-house that would be needed to successfully complete the vessel. As a result, it was essential that good cooperation could be forged between the yard, designers, the owner and the contractors and suppliers that were

involved in the project. This important goal was achieved and largely the same teams will also work on the Global Dream, a 208,000 gross ton ship for Dream Cruises that is a sister company of Crystal Cruises.

Many of the companies that worked on the Crystal Endeavor had already been involved with the construction of the four river cruise vessels that MV Werften delivered to Crystal Cruises and they are also likely to work on the Universal class ships of some 85,000 gross tons that the Genting Hong Kong group plans to build at MV Werften. These are intended for charter work, with major international hotel groups envisaged as key customers. Should the plans materialize, they would mark a major development in the cruise industry, where it is customary that the ships are owned by the companies that operate them. In most cases, technical management is also kept in-house. Hotel companies, by comparison, often employ an asset-light business model. They rarely own the properties but rather just operate the hotel in them. Sometimes even the operations are outsourced to a third party, or the operations are based on the franchise business model. "It is very costly and complicated to meet the requirements of technical management in shipping. Besides, new regulations that will take effect in the future will make it even more demanding. With the Universal class, we can take care of all that on behalf of the hotel operators," Grönberg pointed out.

As the global economy is recovering from the pandemic, there are concerns that inflation will accelerate, at least temporarily. These concerns are affecting the shipbuilding sector as well, Grönberg pointed out. An article in Fortune magazine said in early July that the price of steel has risen by 215% since March last year and price pressures are emerging elsewhere in the supply chain as well. "Building the ship during the Covid pandemic added a lot of stress and new challenges for all parties involved, in a way it did also singles out those who are looking for a long term partnership with MW Werften," he said.

All voices heard

Pia Litokorpi, Managing Director of Kudos Dsign in Finland that designed the cabins and cabin corridors of the Crystal Endeavor, said the project left pleasant memories. "I experienced that we had a good cooperation. Often the shipyard and the shipowner have different views about various things, but in this case the owner of both was the same company, and there were no such issues. Everybody's voice was heard in this project," Litokorpi told CruiseBusiness.com Magazine.



Palm Court



Pia Litokorpi

Litokorpi herself has past experience from project management and this was useful, once again, as it helped her to understand how these projects proceed and what pitfalls there may be along the way. One of the reasons, perhaps paradoxically, that made creating the Crystal Endeavor such a positive experience was the fact that MV Werften had not built an ocean-going cruise ship so far under the ownership of Genting Hong Kong. This meant that it lacked

the experience that is required to complete a project like this, and the management of the yard openly admitted the situation.

Instead of being a liability with potentially very harmful consequences to all concerned, the situation became a major strength of the project. As everyone got their voice heard, not only were potential pitfalls avoided, but the team that worked on the ship was able to find new solutions to challenges. This might not have been possible in case of a shipbuilder with a long experience in the cruise shipbuilding business with established ways of working.

As far as the cabins are concerned, an aesthetically pleasing visual outcome and solutions that highlight functionality were at the top of the agenda for the project. The Kudos Dsign team interviewed staff members whose job it is to maintain and clean the cabins to find out what kind of details annoy them and hamper their work. It was found that keeping the number of decorative items low was a major wish from these people, whose voice rarely gets heard in the design process. The Crystal Endeavor is the first Crystal vessel that has no bathtubs in the bathrooms. However, since passengers will need to relax once they come onboard after an excursion ashore, the shower had



Waterside



Expedition Lounge

Zodiacs and kayaks



Mudroom



to be upgraded beyond a standard one. As a result, there is heated bench in each bathroom on which you can sit while having a shower.

Emphasis on functionality and flexibility

Usually, cabins on cruise ships feature a desk and a small coffee table, but in the case of the Crystal Endeavor, a lot of thought was given to the use of the cabin as a place where it is possible to work in comfort. The desk can be turned 90 degrees so that if you place a chair behind it, you have a sea view. As many people are likely to work while on a cruise, this feature enhances the experience. The desk can also be used as a dining table thanks to the fact that it can be turned off the wall – a design feature that will probably be much appreciated in these days of the Covid-19 pandemic, but which also widens the use of the cabin by making it a venue for private dining.

Moving on to the colors chosen for use in the cabins, Litokorpi said that the palette is calm and muted. “The nature of the destinations that the ship is visiting should be the main focus of passengers. In the cabins, it is therefore best to use calm and peaceful colors that allow the sceneries outside to remain in the focus, and to make the cabins peaceful places where the passengers can relax,” she said, adding that in the public areas of the ship, more colorful palettes have been used. On the other hand, it was decided that the color scheme in the cabins should not be too light, because then maintenance would be more demanding. Experience from other Crystal ships acted as a guide here. Too light colors can be difficult from the maintenance point of view

On the Crystal Endeavor, access to the cabins is from a short corridor that two cabins share. This allowed Kudos Dsign to introduce a cupboard where passengers can place their laundry at the end of the short cabin corridor. This is accessible both from the cabin and also from the corridor. Items can be collected from the cupboard without the staff having to enter the cabin itself and disturb the passengers. This solution also helps to dampen sounds that might otherwise be heard in the cabins as there is a separate door from the shared corridor to the main one.

Another important aspect of the design has been access to technical areas behind the screens in cabins. “Easiness of maintenance is a major issue on cruise ships. Sometimes a lot of paneling and other items will have to be removed before it’s possible to access, for example, piping,” she noted. On the

Crystal Endeavor, it was decided right from the beginning of the design process that problems such as these should not emerge on the new ship. This was the right approach, because if these concerns arise later, fixing them can require a lot of extra work. “Then the price may no longer be the same as the one that had been originally agreed,” she pointed out.

Genting Hong Kong acquired Crystal Cruises in 2015, and it has not always been smooth sailing for them and MV Werften since. However, the delivery of the Crystal Endeavor marks a major step forward in their relationship despite the challenges of the Covid-19 pandemic. ■

