

Shipyard De Hoop to build first river cruiser with three-tier aft deck

Shipyard De Hoop's Patrick Janssens tells *Passenger Ship Technology* about the innovations developed by the shipyard for the successful Amadeus series of river cruise vessels

Shipyard De Hoop is one of the leaders when it comes to the river cruise sector. It has just won a contract to build the first river cruise vessel in the world that has a three-tier aft deck. And it has recently delivered the 11th Amadeus vessel, *Amadeus Silver III*, to Austria's Lüftner Cruises. This 135m vessel will operate across all of Europe's waterways and has been designed to the innovative 'Amadeus concept' that the Dutch shipyard has developed with the owner.

Shipyard De Hoop's chief executive Patrick Janssens explained the Amadeus concept. "It is a concept that has been developed between Lüftner Cruises and Shipyard De Hoop. There are some special features on these river cruise ships, both exterior and interior. The concept focuses on a high level of comfort in the cabins, with very low noise and vibrations. We spend a lot of time and effort on this."

Homing in on the noise and vibration aspect, he said: "It starts with a thorough analysis of the sources of noise and vibration. The first step is to tackle these sources."

He gave an example: "We made a flexible mounted section in the aft of the ship. The engine units were installed on top of this. They

are below the water line but not connected to the steel of the hull because of an insert. This is mounted on rubber to disconnect this particular source of noise and vibration."

The Amadeus Club (a bar-café which has to be quiet) sits on top of the engine room in the vessels. "Passengers who sit there do not know that they are only 0.5m away from Caterpillar engines making a lot of noise," commented Mr Janssens. He explained how this had been achieved. "The bar is a whole separate section mounted on rubber devices which keep the section floating. This is done throughout the ship. When we fit the interiors, they are based on floating floors." These are created by fitting rubber on top of the concrete floor.

The hydrodynamics of the Amadeus hulls are also optimised so that they can cut through the water at high speed, using less power. Mr Janssens added: "Every ship has a shallow draught. There are two advantages to this. When the ship has less draught, there is less resistance. And a low draught means that they can continue to sail in a dry season. They can operate in low waters, at a time when many of their competitors stop."

Shipyard De Hoop has just signed a contract for the 12th Amadeus ship. This is a river cruise vessel with a difference, as it is the only river cruise vessel in the world to have a three-tier aft section. It will be built to the same concept as the other ships – but with some notable changes. "The concept has evolved since the beginning. We have taken a big step forward in engineering this ship. It is not 135m like the previous versions but 110m. The biggest feature is the large outside swimming pool area. This is a big development as there are size limitations on rivers –

not just in terms of rules and regulations, but also through locks and bridges which restrict size in all dimensions."

Usually the end of the ships, where the engine room is placed, has a two-tier structure. "This time we will deploy smaller engines because we have optimised the hull so that it can go at high speeds at lower power. Smaller engines mean more room in the engine room, which makes a lower ceiling possible. This enables three tiers in the aft section," said Mr Janssens. The three tiers create 10-15 per cent more deck space in the ship, which means more turnover for the shipowner. **PST**



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