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Taming the Seas

Shipbuilding is, in many respects, more difficult than construction on dry land, but both Holland America Line and marine engineer Cyril Tatar are set to maintain their rich heritage in the industry with a pair of new vessels

By Matt Alderton

The sea can be a wild, wicked place. At times as violent as it is vast, its to-and-fro is as full of terror as it is treasure. From the life deck of a luxury cruise liner, however, all that is easy to forget. There, the specter of sharks and storms fades into a backdrop of sunshine and surf. Scuttling between the ship's spa and casino, then dinner and a show, there's no time to worry about seasickness or shipwrecks. Instead of "SOS," there's only "R&R."

That the lullaby of waves against portholes isn't scary but soothing is a credit to shipbuilders, whose impervious engineering and remarkable artisanship are maritime miracles that tame the raucous ocean for millions of cruise passengers every year.

One such shipbuilder is Cyril Tatar, vice president of newbuilding and seabourn technical operations at Seattle-based Holland America Line, a cruise line sailing 15 ships on more than 500 trips each year. Here, he discusses his industry's biggest challenges and his company's brightest solutions, including two new ships that represent the future of cruising.

A Family Tradition

For Tatar, who came to the United States from France in 2004, shipbuilding isn't just a profession—it's a family tradition.

"My father and grandfather both worked at the shipyard, so there is a long history of shipbuilding in my family," says Tatar, whose grandfather built one of history's most iconic ocean liners, the *SS Normandie*, which launched in front of 200,000 spectators on Oct. 29, 1932. "Although I started working in the shipyard over holidays when I was 16 years old, one of my main objectives when I was young was to escape the shipbuilding industry because it's a very tough industry."

Instead of building ships, he wanted to practice law or medicine. Ultimately, though, the lure of the docks in his native Brittany proved too great. "Shipbuilding is such a major activity in the region, employing tends of thousands of people there, that it was hard to escape," says Tatar, who ultimately decided to pursue a master's degree in marine engineering. "It was the early 1990s, which was a golden age for shipbuilding. All the big players in the cruise industry were building lots of ships in Europe. The shipyard was so busy that there was great demand for naval architects and marine engineers. Everyone told me not to be an engineer, but I naturally gravitated toward it because my background was science and because my dad and grandfather had taught me so much about ships."

Tatar commenced his shipbuilding career in 1997 after a year of military service at the French National Military Academy of Saint-Cyr, and he's since embraced the romance of the industry. "When you work in the shipyard, you get to see the whole process of a ship being born, from the first plate all the way through to delivery," he says. "Ships are custom-made. Building them is very hard physically and requires many hours, so the people who work on them are very committed and very proud. In my hometown in France, it's not unusual to see 10,000 workers who worked on a ship line up to witness its christening before it leaves the shipyard. These are tough guys, but most of them cry. It's a very emotional experience. It's their baby."

Rough Seas

Building for land isn't always easy. Building for sea, however, is downright difficult. Among shipbuilders' most vexing challenges are the following:

1. Visionary Executives: In order to stay at the top of the industry, cruise lines must perpetually build bigger, newer, cooler ships. When the senior executives who envision these ships come to the shipyard, shipbuilders brace themselves. "Owners always want something unique and custom that challenges the current establishment, so they're always coming up with new concepts and crazy ideas that challenge naval architects to engineer new products," Tatar says, explaining that the requests range from average (more rooms, more balconies) to awesome (building a planetarium onboard). "But, at the same time, the naval architects have to make their design economically viable. It isn't easy."

2. Global Deployment: Buildings are static, so architects design them to suit a single site. Ships, on the other hand, are mobile, so naval architects must design them with multiple sites and changing tides in mind. "Wherever the ship will go—the Panama Canal, for instance, or the Suez Canal—it needs to fit," Tatar says. "So, we have to check clearance on bridges, channels, rivers, and ports. At the same time, based on its deployments, we need to consider things like speed, comfort, vibration, acoustics, and fuel consumption."

3. Marine Engineering: It might not be simple to engineer a building that will stand, but it's doubly complicated to engineer a vessel that will float. In addition to normal building systems, naval architects must consider and include complex marine systems in their designs. "You have a number of watertight compartments, diesel engines, hydrodynamics, hull optimization—all of this is part of the design," Tatar says. "A cruise ship is basically a moving city, so then you also have electrical substations, A/C, advanced wastewater treatment, and a reverse-osmosis plant that creates potable water from seawater."

4. Safety: "In 15–20 years, ships have gone from 100 or 200 passengers maximum to 4,000 or 5,000," Tatar says. "We have to ensure ships have the appropriate accommodations, lifeboats, navigation, and technology to make sure all these passengers are safe and have a great experience."

5. Scheduling: "The time between designing the vessel and delivering it has been reduced," Tatar says. "It used to be five or six years; today, because of advanced design systems and market demand, it's two or three years. The time has basically been cut in half, which challenges the shipyard to build at a faster pace." Luckily, prefabrication and preoutfitting make it possible to build more, faster. "Ships today are built in sections that are lifted onboard and welded together," Tatar says. "It's very smart engineering."

Holland America Line: Dutch Born, Seattle Made

Tatar joined Holland America Line in 2004 as a project manager for large retrofit projects. The brand began much earlier, however.

"Holland America was founded in 1873 as the Netherlands-American Steamship Company, a shipping and passenger line," Tatar says. "Because it was headquartered in Rotterdam and provided service to the Americas, it became known as Holland America Line. The line was primarily a carrier of immigrants from Europe to the United States until well after the turn of the century."

Carnival Corp.—owner of Carnival Cruise Lines, AIDA Cruises, Costa Cruises, Cunard Line, Princess Cruises, and Seabourn Cruise Line, among others—purchased Holland America Line and moved it to Seattle in 1989, when the global cruise industry began to proliferate.

"At that time, the company was on the brink of bankruptcy," Tatar says. "From 1990 to 2010, however, it built 15 new vessels—one every year, almost—which helped it transition into the premium cruise line it is today. It's a great turnaround story."

Project Spotlight: The *MS Koningsdam* and the *Seabourn Encore*

Tatar's team currently is working on two new ships. The first, Holland America Line's *MS Koningsdam*, will launch in April 2016, and it represents a new class of ship for the line, with several innovative concepts and new public venues.

The vessel, whose maiden voyage will be a seven-day cruise through the Mediterranean, will be 1,000 feet long and have 1,331 guest accommodations, with a total capacity of 2,650 guests and 1,000 crew members. With an interior design by hospitality designer Adam Tihany and maritime architect Bjørn Storbraaten, the ship will also include the following:

- 44 purpose-built staterooms, including 32 designed specially for multigenerational families and 12 designed for solo travelers
- High-speed wireless Internet onboard
- A Culinary Arts Center presented by *Food & Wine* magazine, offering hands-on culinary classes and cooking demonstrations
- A fitness center
- Two outdoor pools
- An on-deck jogging track and sports courts
- A "digital workshop" offering technology classes
- A spa and salon
- Three entertainment stages
- The industry's first 270-degree panoramic LED screen, called World Stage
- Eight different dining venues

"It will be Holland America Line's largest vessel and an evolution from 'traditional excellence' to 'contemporary classic,'" says Tatar, whose second new ship, the *Seabourn Encore*, will launch in December 2016 under Holland America Line's sister brand, Seabourn. Also designed by Tihany, it will carry just 600 guests. "This is a vessel for the ultra-luxury segment," Tatar says. "It's intimate and all-inclusive with very, very high-end service—like a Four Seasons hotel, but at sea."

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Congratulations Cyril Tatar!
We applaud your continued success in the cruise industry!
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