

innovations

Focusing on innovation in the global cruise industry

Proven innovation offers
the path of least resistance
to cruise recovery



Special Report
International Cruise Ship Industry

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SPS Technology's Business Manager, Ian Nash, explains the company's involvement in an innovative, flexible and reliable approach to repairs and maintenance for cruise ships post-COVID-19.

The cruise industry has taken the full brunt of the COVID-19 pandemic.

In many cases, cruise ships became floating epicentres for the virus. And while passengers have now long since disembarked, the sector remains in a state of limbo, haemorrhaging money while it waits for restrictions to ease.

As the global focus inches cautiously from containment towards a post-pandemic world, cruise owners and operators are looking to find the path of least resistance to a much-needed recovery.

In a bid to recover their early season losses, a number of cruise lines have indicated that they are planning to recommence operations over the course of the northern hemisphere summer. For companies like Carnival – which has reported zero revenues across the pandemic – getting back to operating some of its over 100 vessels in various brands in 2020 will be key to stemming the tide of the economic impact of COVID-19.

In the race back to business as usual, there is greater need than ever for vessels to be 'sea ready' quickly, however logistically this presents challenges. The vast majority of cruise vessels are currently in port under severe restrictions, in what is described as 'hot lay-up'.

To transition vessels quickly and smoothly from hot lay-up to operation, it is key that these ships still meet their class survey requirements. However, many class items are currently delayed; class societies in the UK for example have imposed a 90-day referral process for all class items. Meanwhile those surveys which can commence are done so with severe limitations.

Equally, those operators seeking to take advantage of the crisis-driven downtime

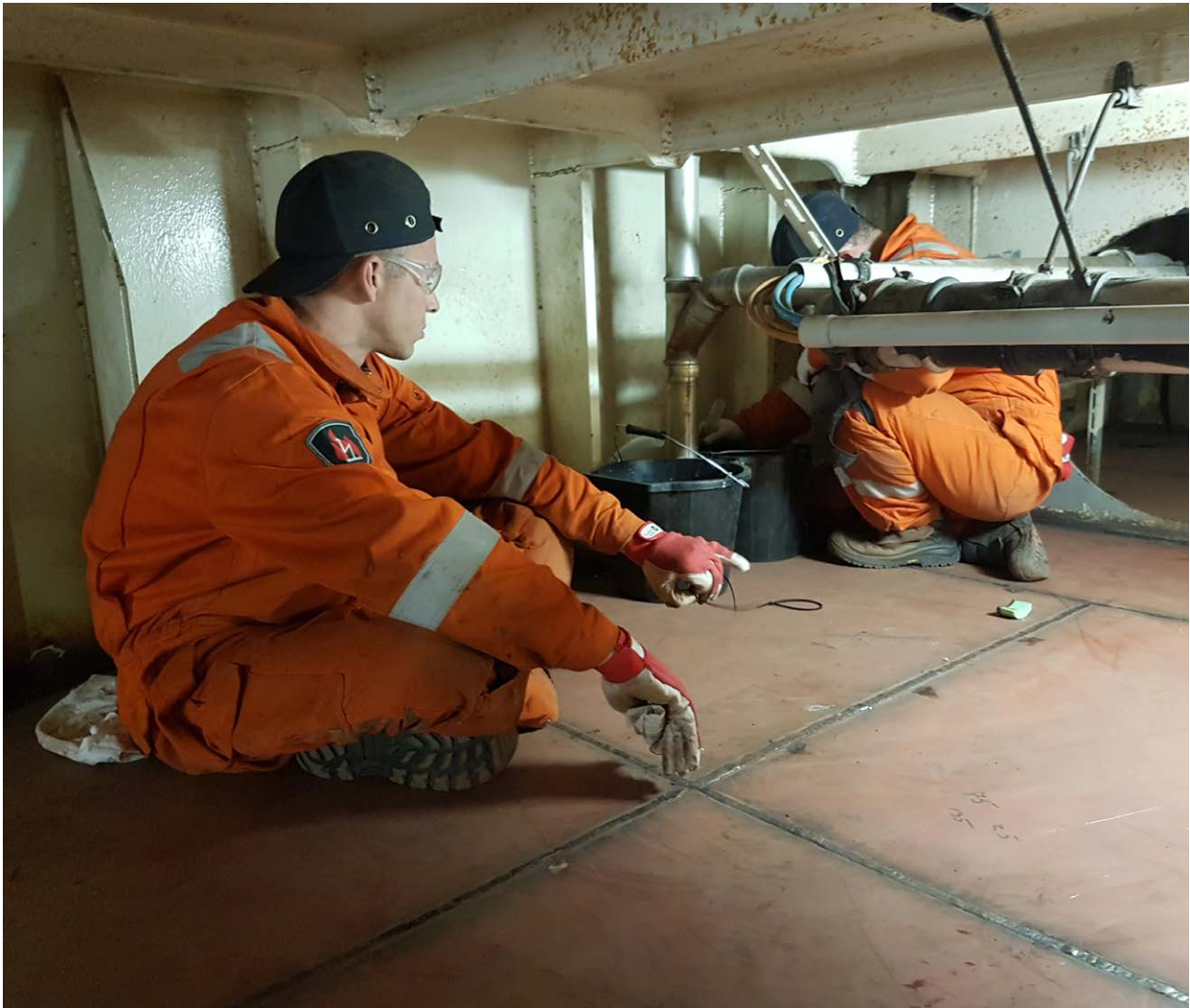


SPS Technology's Business Manager Ian Nash

to get their vessels into drydock for repair and maintenance work, are faced with prohibitive access to engineers. Indeed, many will be looking for drydock exemptions of at least 12 months in order to get vessels back to sea. Due to this, most lines can realistically expect considerable delays not only to individual repairs, but to any work resulting from their scheduled five-year class surveys as well.

Present-day challenges

What is clear is that the traditional processes around class surveys, repairs, and scheduled maintenance are no longer conducive to the industry's present-day challenges. In order for the cruise sector to bounce back, there is a strong argument to transition away from a warm or cold lay-up in a phased restart. Innovation, marrying proven technologies with common-sense alterations to our standard procedures of assessing and conducting repairs, will be a key driver.



An elastomer injection seen underway

Class societies have been encouragingly vocal throughout the pandemic in promoting the opportunities created by remote surveys; and these are already used in some cases wherein the class society does not require a physical presence on the vessel to understand what work needs to be done.

The extended roll-out of remote surveys ensures more class items can be assessed without heightened risk to surveyors or crew. Equally while new technologies can transmit data to the class society for assessment, this can be cross-referenced with data from previous surveys to analyse and advise on the appropriate solution.

Five-year scheduled surveys present more complex cases given the typical necessity of out-of-water assessment, and the reality of arranging extensions to these surveys

will be unavoidable for most shipowners.

Limited availability at drydock is unlikely to ease with global restrictions, as backlogs will create a concertina effect as shipyards' return to operation. Vessels may well need to resort to drydock space, which exists far beyond their normal operating routes, generating even further losses due to extended time out of service – losses that the cruise sector in particular cannot afford.

As with remote surveys, the argument is clear for a more innovative, flexible, and yet equally reliable approach to repairs and maintenance. The deployment of riding squads, that can conduct class approved repairs and maintenance (up to and including steel work), while the vessel is operational at sea allows for this fresh thinking now, and beyond COVID-19.

In the particular case of cruise ships, these repairs can be isolated and conducted away from passengers with no risk of disturbing their experience on board. Having worked with the likes of Carnival, Royal Caribbean, Cunard, and P&O Cruises, experienced riding squads join the vessel and conduct repairs throughout its sailing, with no need for alongside support.

Utilising strict safety guidelines that meet global COVID-19 restrictions, permanent, class-approved, structural steel repairs and maintenance work can be carried out safely through the use of 'no hot work' solutions, implemented by riding squads while vessels continue operating to tight deadlines and key performance indicators (KPIs).

With minimum disruption to passengers, riding squads support the bounce back of the cruise industry by negating any costly downtime associated with drydock repairs and operational time off-route.

SPS Technology has been utilising riding squads across a range of repair and maintenance projects within the cruise industry to the benefit of its customers. Work undertaken by riding squads, which would normally require drydocking, includes SPS repairs on decks, fuel tank thermal barriers, bulkheads, side shell protection, and machinery space upgrades.

'QM2' - repeat customer

For example, Carnival's 'Queen Mary 2' is a repeat customer of SPS Technology's riding squad installations; the company's patented composite steel repair solution, sandwich plate system (SPS), was installed to the 'tweendeck plating, as well as Deck A and the 'tweendeck plating below Deck 8.

The 'no hot work' installation process allowed the riding squad to conduct the repairs safely and without disruption, and all repairs were completed at sea during normal operations. A combined 136 sq m of SPS overlay was applied to the

vessel, some of which was installed as an 'underlay' between existing longitudinal stiffeners and transverse beams to reinforce the deck from below as access from above was not possible.

As with the case of remote class surveys, the combination of updated operational procedures with proven technologies provides a clear path towards recovery for the cruise sector. Alongside the proven credentials of riding squads themselves in streamlining both the cost and conduct of class-approved repairs and maintenance, the inherent characteristics of SPS provides operating benefits including high impact resistance; A60 fire, blast, and fragment protection; and vibration and sound dampening capabilities. The technology is tested, proven, and permanent, with no risk of further corrosion to existing plating from above.

Clearly, innovation is essential in helping the cruise sector combat the challenges it faces on the road to post-COVID recovery, but the crucial innovation of process is often overshadowed by the innovation of technology. Reviewing the accepted order of things in a normal operational climate – from in-person class surveys to repairs in drydock – offers the cruise sector a streamlined solution without the exceptional price tag or leap of faith normally associated with the latest in technological advancements.

Technology has its role to play but it does not need to be expensive or untested. SPS Technology's solution is underpinned by 20 years' experience, independent testing, and hundreds of projects in service. It is also class-approved by ABS, DNV GL, and Lloyd's Register.

Greater understanding and adoption of existing, proven alternatives to traditional methods, married with a creative and collaborative approach to standard class assessment and repair processes, is integral to accelerating the cruise sector's effective recovery.

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