Volume 10 Issue 2 June July 2012

SORJ

(SHIP AND OFFSHORE REPAIR JOURNAL)

The Official Journal of the International Association of Shiprepair Agents

Cammell Laird wins newbuilding and lengthening contracts

Damen takes over more yards

DDW signs contract with Paxocean

Reefer vessels – mass clear out

The Staten Island ferry *Sen. John J. Marchi* in drydock for application of Ecospeed

roughness, the type of coatings employed and their condition.

Those present at the demonstration were able to see specific examples of how hull coating condition can be independently tracked over time to support decision-making in maintenance and repair strategy. The fact that the effects of wind, wave, weather and currents are integrated with the shipboard data results in a far more accurate analysis of the true condition of a ship's hull. Data indicating exceptional performance of any type can be clearly and quickly identified. The new service also allows comparative analysis between sister ships deployed on the same or different routes and the effect of changes in hull roughness over time.

The two companies said that the information relayed both to shipboard staff and authorised shore-based personnel through the secure web-based application will provide a valuable new tool in support of financial, operational and day-to-day ship management decision-making. International Paint is confident that the system will clearly demonstrate the benefits of Intersmooth self-polishing copolymer ant-foulings and Intersleek foul release coatings and is offering to pay 50% and 100% respectively of the first 12 months license fee for the software system on behalf of participating customers.

Ecospeed applications

One year after the Ecospeed underwater hull coating had been applied on her rudder, USG Corp's 47,761 dwt bulk carrier *Gypsum Integrity* entered Portugal's Lisnave, Setúbal, while Ecospeed was applied on the rudder of her sister vessel, *Gypsum Centennial* at the same location. A few months later the 30,453 dwt containership *Marie Delmas*, operated by CMA Ships, came into drydock in Dubai five years after receiving an identical treatment. Shortly afterward the rudders of two other ships owned by this company, CMA Ships UK Ltd., were also coated with Ecospeed and this in China.

The drydocking of *Gypsum Integrity* and *Marie Delmas* allowed the owners to see the excellent condition of Ecospeed on the respective rudders. This gave them further proof that they had made the right decision in choosing the same treatment for their other vessels.

Another returning customer is a Canadian based company that has ordered the application of Ecospeed on the rudder of an 18th vessel.

The rudders of all these vessels will not have to be repainted during future drydockings and extensive repairs will not be needed. Planning the maintenance of the vessels' stern area therefore becomes much easier. The smoothness attained by the coating also provides optimum hydrodynamic conditions for rudders to operate at maximum efficiency.

At least 150 rudders have now been coated with Ecospeed with 100% success. The number increases as more and more shipowners and operators find that there is indeed an answer to rudder cavitation damage. None of these rudders has suffered cavitation damage after the Ecospeed was applied and none has had to be recoated with Ecospeed.

Meanwhile, the underwater hull of *Sen. John J. Marchi*, one of the ferries owned by Staten Island Ferries was coated with Ecospeed in Norfolk, Virginia. This is the second ferry owned by Staten Island Ferries that was given an Ecospeed treatment after *John Noble* was coated in Bridgeport, Connecticut last year. Ecospeed was also applied on one of the company's fuel barges in Staten Island, New York earlier this year and a third ferry is planned to be coated later this year.

Under normal operation, ferries have to drydock once a year to comply with classification regulations. During the busy tourist season these ferries need to be sailing so the best time

for drydocking is the off season when there are fewer passengers. For this reason the majority of the ferries come into drydock for a short time during the winter months. The owner is then presented with bad weather conditions in which to perform repair work to the paint system, and often a quality paint job cannot be assured. It is therefore essential to reduce the maintenance and paint work that has to be done in drydock.

The use of Ecospeed on the hulls, however, opens the door to optimising their fuel efficiency. Ferries sail on a fixed route, so the ports they visit and the turnaround time is known in advance. Knowing the exact schedule makes it possible to implement a stricter underwater maintenance programme.

Regular underwater treatment of Ecospeed is used as a performance enhancement measure. Added drag caused by marine fouling is kept under control. Moreover, the coating's surface texture and hence its hydrodynamic efficiency improves with each treatment. As a result, by adjusting the cleaning interval, the fuel penalty resulting from biofouling is minimised to significantly lower levels than would be the case for an SPC or foul release paint.

Restoring the performance of the hull by repainting it can be time-consuming and therefore expensive in drydock. However, once Ecospeed has been applied, this is no longer an issue. Instead, the owners of *Sen. John J. Marchi* and any other ferry operator can optimise the hull performance, and thereby fuel consumption. This is achieved by in-water maintenance which can be done economically outside of drydock. The Ecospeed coating itself, once standardly applied, does not need to be replaced for the rest of the service life of the vessel so repainting the underwater hull will never again be a major requirement in drydock.

> At least 150 rudders have now been coated with Ecospeed with 100% success

Over the last few months the rudders of four container vessels and a bulk carrier from a number of different fleets, were coated with the Ecospeed surface treated coating (STC) at shipyards in China and Turkey. The coating ensures lasting protection against cavitation damage for the rudders of these vessels and this for the remainder of their service life. The decision to use Ecospeed was made by the shipowners after cavitation damage had appeared on the rudders. Ecospeed will prevent similar damage from occurring again. Most of these owners are returning customers for Ecospeed and so they had experienced at first hand the benefits of an Ecospeed coating.

Last month the rudder and the ice belt of the 301 grt harbour icebreaker tug *Jääsalo* were coated with Ecospeed in Naantali, Finland. The *Jääsalo* is responsible for keeping the Veitsiluoto fairway open in the port of Kemi in Finland.

The Port of Kemi in the Bothnian Bay is an excellent import and export harbor for the industry of the Barents Region. The harbour represents the fastest route to the northern areas of Finland, Sweden, Norway, and the Murmansk area in Russia. Nearly 750 vessels visit Kemi each year, with relatively equal distribution throughout the year. The vessels carry about 3 million tons of goods. It is therefore extremely important that the harbor is able to offer its own icebreaker services to vessels. **SORJ**

Underwater Repairs

World-wide activities at Hydrex

In a period of only 10 days Belgium's Hydrex diver/technician teams have flown all over the world to perform a wide range of underwater operations on five different continents. The services offered ranged from routine inspections and maintenance work all the way through to highly technical major repairs.

Among these jobs were two welding operations in the US, a propeller blade replacement in Bermuda and an azipod thruster operation in Japan. A stern tube seal repair and a spinner cone replacement were performed in Singapore, while a hull repair was carried out in Uruguay and a cofferdam operation was completed in India. Hydrex diver/technician teams also performed a doubler plate repair in Belgium, underwater cleaning work in the USA and the Bahamas on vessels coated with the Ecospeed hull coating system, and hull monitoring surveys in Spain, Gabon, the Netherlands, and Equatorial Guinea.

One of the reasons Hydrex can offer its customers the high quality of service they deserve is the stringent training all divers go through, whether they work for the Hydrex main office in Antwerp or for one of the other offices. Besides being required to have official international commercial diver certificates and taking high standard external courses, including offshore courses, they also receive comprehensive in-house training.

Over the last couple of months Hydrex teams of diver/technicians mobilised to vessels berthed in Zeebrugge (Belgium), Amsterdam (the Netherlands) and Douala (Cameroon) to perform insert repairs on a ro/ro vessel and two tankers. These repairs were carried out according to the Hydrex class approved procedure for the welding of inserts in a vessel's shell plating while afloat by using an external cofferdam.

To save time and money for the owners of a 270 m container vessel that was leaking oil, a Hydrex diver/technician team replaced three stern tube seals, using one of the company's flexible mobdocks. This enabled the team to carry out the entire operation on-site and underwater during the vessel's stop in Le Havre.

After the divers and all equipment had arrived at the vessel, the Hydrex team leader met up with the vessel's owner and superintendent while the rest of the diving team set up a workstation to monitor all underwater activities. Next, all quayside preparations were made for the main activity, which started immediately with the removal of the rope guard. The divers then performed a thorough underwater inspection

A Hydrex diver in action

Fast underwater repairs keep ships out of drydock

Hydrex offers turnkey underwater repair solutions to shipowners wherever and whenever they are needed. Hydrex's multidisciplinary team will help you find the best solution for any problem encountered with your ship below the water line. We will immediately mobilize our diver/technicians to carry out necessary repair work without the need to drydock.

Hydrex has a long track record of performing complex permanent underwater repairs to thrusters, propellers, rudders, stern tube seals and damaged or corroded hulls. By creating drydock-like conditions around the affected area, our diver/technicians can carry out these operations in port or at anchor.

All the projects we undertake are engineered and carried out in close cooperation with the customer and any third party suppliers, relieving the customer of all the hassle of coordination, planning and supervision.

Headquartered in the Belgian port of Antwerp, we have offices in Tampa (U.S.A), Algeciras (Spain), Mumbai and Visakhapatnam (India), and Port Gentil (Gabon).

All Hydrex offices have fully operational fast response centers where an extensive range of state-of-the-art equipment is available at all times.

HYDREX®
UNDERWATER TECHNOLOGY

Headquarters Hydrex N.V. - Antwerp
Phone: + 32 3 213 5300 (24/7)
E-mail: hydrex@hydrex.be

Hydrex Spain - Algeciras
Phone: + 34 (956) 675 049 (24/7)
E-mail: info@hydrex.es

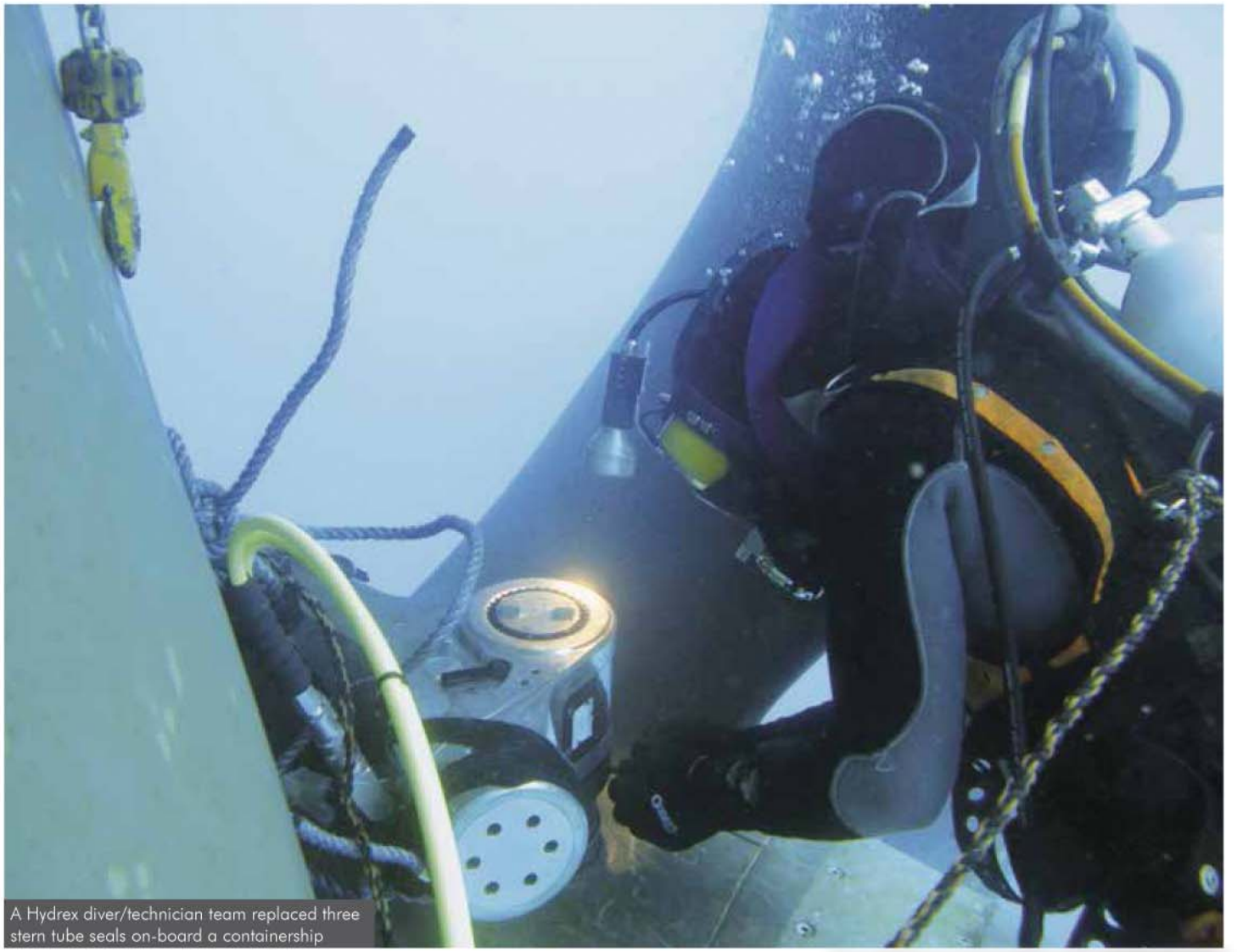
Hydrex LLC - Tampa, U.S.A.
Phone: + 1 727 443 3900 (24/7)
E-mail: info@hydrex.us

Hydrex West Africa – Port Gentil, Gabon
Phone: + 241 04 16 49 48 (24/7)
E-mail: westafrica@hydrex.be

Hydrex India - Mumbai
Phone: + 91 222 2046 988 (24/7)
E-mail: mumbai@hydrex.be

Hydrex India -Vishakhapatnam
Phone: + 91 891 2711 863 (24/7)
E-mail: vishakhapatnam@hydrex.be

www.hydrex.be



A Hydrex diver/technician team replaced three stern tube seals on-board a containership

and shaft wear-down readings. This revealed that a rope was tangled around the stern tube seal assembly, causing the oil leak. The rope was removed and the split rings were disconnected and brought to the surface to be cleaned.

The team then installed the flexible mobdock, creating a dry working environment around the stern tube seal assembly that allowed the entire assembly to be cleaned. Subsequently the divers removed the first seal and replaced it with a new one which was then bonded. This procedure was repeated with the other two damaged seals. They then reinstalled and secured all parts of the stern tube seal assembly. After a successful leakage test the flexible mobdock was removed and the rope guard repositioned.

With all five blades of its propeller severely bent, a 290 m container vessel needed a fast, on-site solution to restore the propeller's balance and efficiency. Hydrex diver/technicians are trained to carry out repairs underwater in the shortest possible time frame and a team was therefore mobilised to the ship's location in Diego Garcia in the British Indian Ocean Territory to perform a cold straightening of the blades.

Through an ever-expanding, worldwide network of offices and service stations, Hydrex can provide a wide range of services economically at any location. Headquartered in the Belgian port of Antwerp, Hydrex has offices in Tampa (USA), Algeciras (Spain), Mumbai and Vishakhapatnam (India), and Port Gentil (Gabon).