

# HYDREX

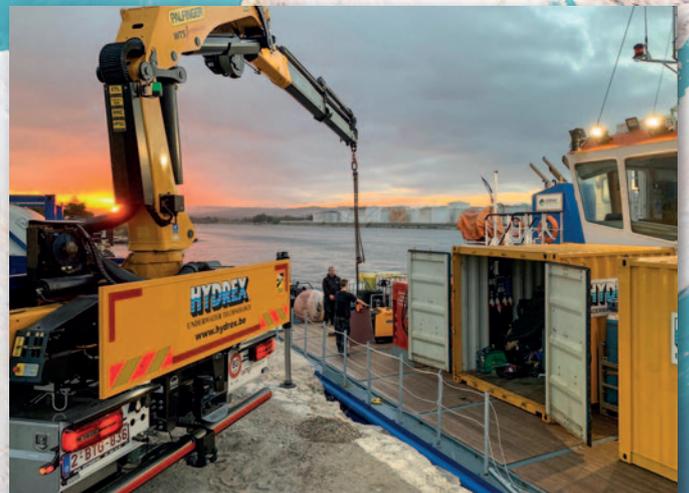
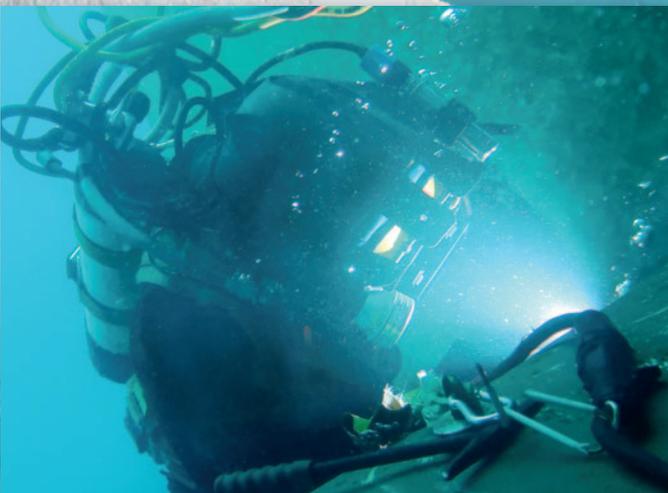
UNDERWATER TECHNOLOGY

# NEWS

LETTER | 310



## Hydrex across the globe



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Hydrex across the globe

**KEEPING SHIPS  
IN BUSINESS**

**ISO 9001  
certified**

Underwater services and  
technology approved by:



## Scrubber pipe repairs and lasting protection



**E**xhaust scrubbers filter out all harmful toxins from exhaust gases of marine diesel engines. These hazardous pollutants can severely corrode the pipes of the scrubber. Using the experience we have accumulated over the years allows us to assist you at moment's notice if this happens.

We offer a full package to owners that are experiencing similar damage. Not only can we replace the

corroded exhaust pipe while your vessel stays on schedule, but we can make sure that you will not have to call us again in a few months time for the same problem. This is done by coating the pipes with a highly corrosion resistant coating called Ecospeed.

Contact us for more information on scrubber pipe replacements or other underwater repairs. We are at your disposal 24/7.

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# Hydrex across the globe

**I**n the last few months Hydrex divers and technicians have successfully carried out major and minor underwater repair operations all over the globe: Australia, Suez, Trinidad, Norway, Poland, Turkey, as well as more locally in Antwerp, Rotterdam, Amsterdam, Fos-sur-Mer, Marseille, Le Havre, Algenciras and other European locations.

This raises the question: Why, when there are alternative companies much closer to home, do shipping companies insist on Hydrex? In this article we try to answer that question.

## Some background

When Hydrex was founded in Antwerp, Belgium in 1974, logistics were more limited than they are today. Most of the work was around Europe. “Hydrex began to become



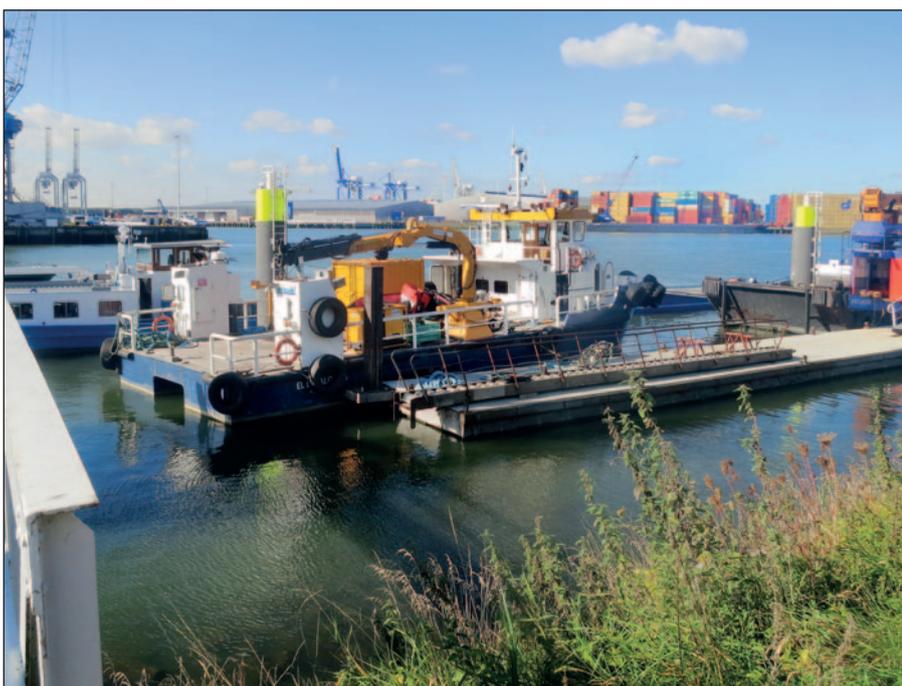
*Hydrex divers and technicians adapt to local conditions, in this case in Greenland, and get the job done.*

more of a global activity in the 1990s,” recalls the company’s Founder and CEO, Boud Van Rompay.

Hydrex has always been at the fore-

front of underwater maintenance and repair technology. “In 1979 we developed the use of the cofferdam to carry out underwater repairs ‘in the dry’ that previously could only have been done in drydock,” Boud explains. Because drydocking a ship is very expensive, many ships were knowingly sailing with cracks in their hulls.

Boud recalls, “We started to develop the cofferdam and shipowners and operators saw that they could repair without drydocking. All of a sudden, in the 1990s, we went to do cofferdam repairs all over the world: Africa, China, the Americas, Singapore, the Persian Gulf, the Indian Ocean and so on. That was the real beginning of the worldwide expansion.”



*For local work, such as in the port of Rotterdam, we frequently deploy our own workboats for a more predictable and faster job.*





*Propeller blade replacement in Tasmania.*

Hydrex has since pioneered many other operations which can be performed successfully out of drydock by trained, experienced personnel using the right equipment and procedures: stern tube seal repairs,

thruster repairs, propeller straightening and cropping, rudder repairs, as well as complex hull damage repairs can all be carried out with the ship afloat.

Others have copied the Hydrex developments and there are now several companies all over the world offering these services. Which brings us back to the question: Why call Hydrex to carry out a repair on a ship on the other side of the world?

Understanding how we operate helps answer this question.

### **How we tackle a remote job**

“We operate a 24/7 phone and email line for inquiries,” says Yannick Wyckmans, in charge of Estimations. “We regularly receive inquiries from all over the world,” he adds.

The first part of every estimate we provide at no cost is our professional opinion as to whether the required repair can be carried out successfully with the ship afloat or not. “That’s a major point,” says Boud.



*Cofferdam operation in the port of Oslo.*



*We go where the ship needs us, in this case repairing a ship that had grounded so that it could sail to drydock.*

“That gives the client the certainty that it can be done or that they have to look for another solution such as drydock.” This often requires consultation between Estimations, Technical Services and the Chief or Senior Divers and video conferences with the client to obtain the exact information needed. Clients can depend on our conclusion, whether they hire us for the job or not.

If it is determined that the job is feasible, we provide an estimate. When the client has decided to go ahead with the operation and sent a PO

confirming, the preparations begin.

The captain of a vessel that recently needed immediate assistance in Turkey stresses the urgency of a fast response: “Time was extremely important for us as we didn’t know the exact schedule for our upcoming charter. We were incredibly impressed with what Hydrex was able to accomplish and organize over a weekend. The correspondence took place through Saturday and Sunday and late into the night. Having initially reached out on Saturday, by Sunday evening they

## Hydrex underwater inspections



**U**nderwater inspections are an essential aspect of ship repairs. Building upon conventional technical skills and know-how while also taking advantage of the latest technology, Hydrex offers a unique hull monitoring service to its customers. This gives ship owners total control of the underwater hull and the underwater gear of their vessels. An informed decision can then be made concerning any required follow-up action. Catching problems early can save you much money in the long run.

Hydrex diver/technicians can carry out inspections underwater and on-site very swiftly without disturbing the vessel’s sailing schedule.

With fuel costs amounting to 40% of operational expenses and continuing to rise, reducing fuel consumption is a vital concern of ship owners. This is the reason why hull monitoring pays for itself. Underwater hull roughness, marine fouling, bent propellers and poor paint condition are all factors that will increase fuel usage due to the drag or inefficiency created by the damaged or affected area. The data gathered can then be used to see if actions are required.

Our diver/technicians are trained for a wide range of operations and they can carry out the inspections in port or at anchor anywhere in the world.

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# Worldwide underwater repair



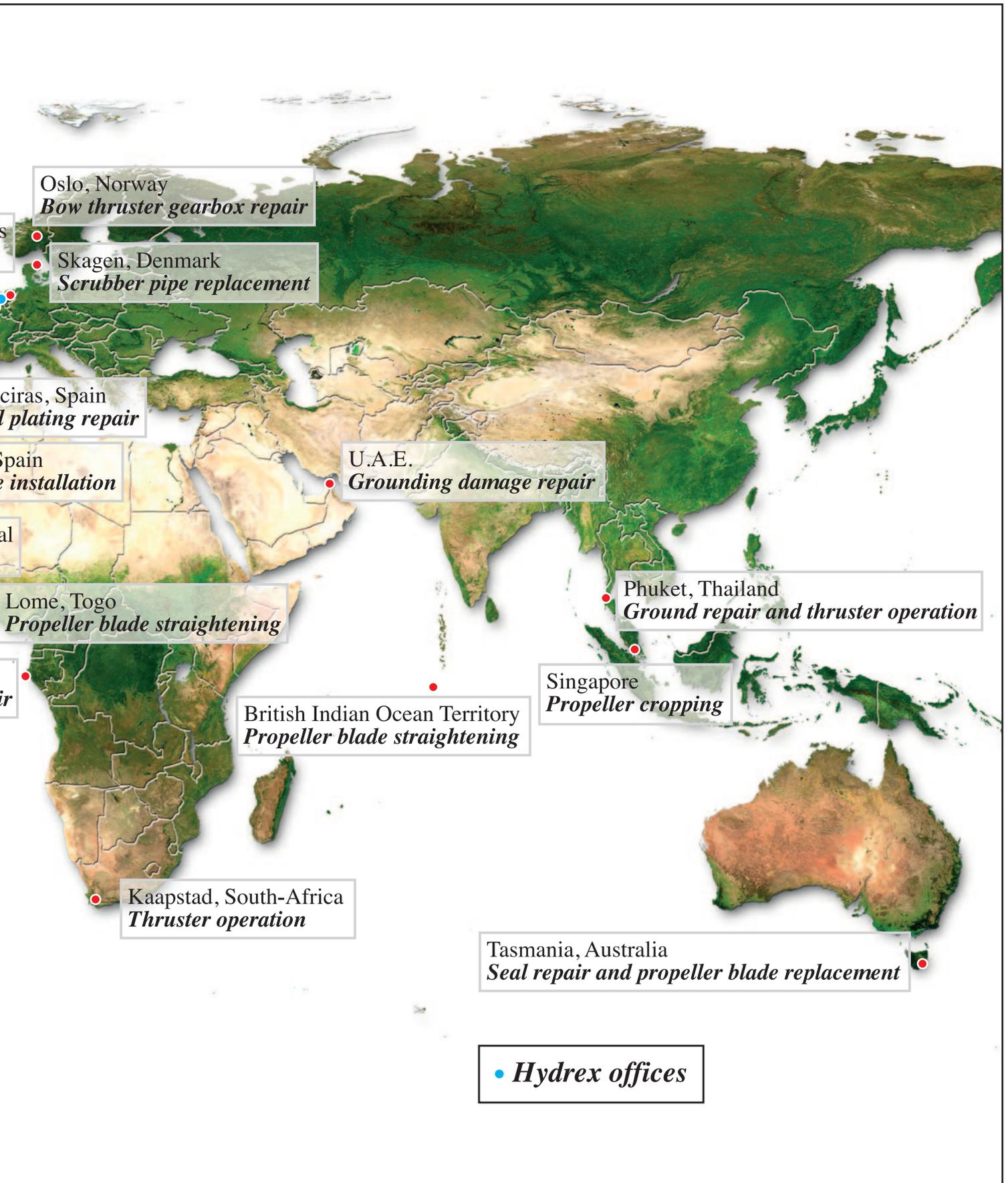
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# and maintenance operations



## Permanent in-water rudder repairs now possible without drydocking



**H**ydrex has developed an entirely new method enabling permanent repairs of rudders without drydocking the ship. Permanent repairs were hitherto not possible and ships had to drydock in case a major defect was found. The newly designed equipment is light-weight and can be mobilized very rapidly in our special flight containers. Therefore this new service is now available world-wide.

Major defects on rudders very often cause unscheduled drydocking of ships. The new method designed by our technical department allows engineers, welders and inspectors to perform their tasks in dry conditions. Class approved permanent repairs on-site, without moving the ship, are now possible and commercial operations can continue. Steel repairs and replacements can be performed and pintle and bushing defects can be solved without the loss of time and money associated with drydocking.

The equipment can be mobilized within hours to any port in the world and is available for rapid mobilization from the Hydrex headquarters in Antwerp.

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*Hydrex has carried out stern tube seal repairs on six continents, including recent jobs in Trinidad and Australia. Clients call us to guarantee a successful, cost-effective job completed within the required timeframe.*

had a team scheduled to fly in on the Tuesday to complete the job on the Wednesday and fly out on the Thursday. Extremely swift correspondence and very helpful – solutions not problems.” The job went just as planned. This was this customer’s first experience with Hydrex, but it gave them the confidence to call again when another

operation which they thought could only be done in drydock came up. The second job was completed with equal quality, rapidity, and efficiency.

### Preparing for the job

Koen Smouts, in charge of the depot and the equipment so vital to the



*We frequently carry out underwater repairs and maintenance in Algeciras, a very busy port where Hydrex has an office and depot for local support.*



*Ensuring the needed equipment is flown to the remote job-site is an essential part of any successful operation.*



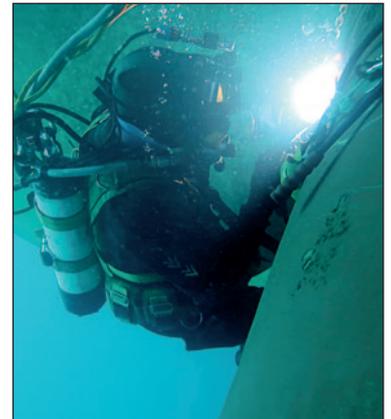
*A well-equipped Hydrex team on the way to a job on an offshore rig in the Gulf of Mexico using a local support depot.*

success of any job says, “It is very important to get the beginning of the job right in order to have a successful outcome.” This includes having reliable sources of supply who can deliver quickly. All the needed equipment must be available and in excellent working condition. Koen does any needed purchasing. Cofferdams or other parts required for the job are often fabricated at Hydrex and transported to the job site along with the equipment needed, such

as flexible mobdocks, propeller straightening devices if applicable, and a host of other specialized equipment, much of it developed in-house by Hydrex over the years.

The Technical Services team is responsible for preparing the entire operation and seeing that all the logistics are taken care of. Timo Verhoegstraete and Dave Bleyenberg are both experienced divers as well as being skilled in logistics and

## Stern tube seal repairs



**U**sing our flexible mobdock method to create a dry underwater environment, we have carried out stern tube seal repairs and replacements underwater for some years now in cooperation with OEMs.

This technology brings drydock conditions to the ship rather than having to take the ship to drydock, saving a considerable amount of time and money in doing so.

This class accepted method is performed by our diving teams under our warranty. It can be used while the ship is carrying out its usual cargo or other commercial operations in port.

Visit the special stern tube seal repair section on our website for more information and examples of the many seal repairs we have performed in recent years.





*A final in-house meeting of our team members to go over all the details before we leave on a big operation.*

administration. They have first-hand experience of being on a job far from the depot, so can plan for every eventuality.

“It is up to us to overcome all logistical obstacles to getting the job done,” says Timo who is in charge of Technical Services. “We obtain visas and dive permits, select the personnel in coordination with the Chief Diver, arrange transport for personnel, equipment and parts.”

“We work with local agents and support companies to make sure that needed workboats and equipment are available on-site,” adds Dave. “We are prepared for anything.”

Toon Joos, Chief Diver, says, “You must make sure you send enough for the whole scope of work, but not too much. We carefully select the team so that we can deliver a rapid, high-quality product.”

“Every location is different,” adds Toon. “We predict and prepare as much as we can in advance, but there are many small details you have to deal with when you get there.” The logistics, the workboat, the local support, local fabrication

facilities, the weather conditions and a hundred other factors, not to mention some surprises, need to be taken into consideration.

“Before the team leaves, there’s a lot you have to organize,” says Dave. “Once they arrive, it’s a matter of staying in contact with the team leader and providing support, but the major hurdles have been crossed.”

### Case in point

Clément Pâquet is a very experienced and proficient Senior Diver who has been on many successful operations in all corners of the globe. He recently led a project in Australia. “We changed the seals of both of a vessel’s propeller shafts in about 60 hours,” he says. “There were twelve of us. Two teams worked day and night on the first shaft while the third team prepared the second shaft. We had two habitats with us so the third team was able to prepare the second shaft while the other two teams worked on the first one. As soon as the first seal was bonded we moved to the second shaft and bonded that seal with no delay in between.”

Another company had estimated eight days and 24 divers for the same job. Based on past experience, the client in question was more confident in Hydrex’s ability to carry out the operation.

In this case the company had a tight window during which the stern tube seals had to be properly replaced and there was a much larger cost involved if the job extended beyond that window. Their confidence in Hydrex was vindicated. The job was completed in three days, start to finish, plus travel time.

### The answer

Clément answers the question, “Why call Hydrex?” “I believe clients hire us because they see it as a guarantee that the job will be successful,” he says.

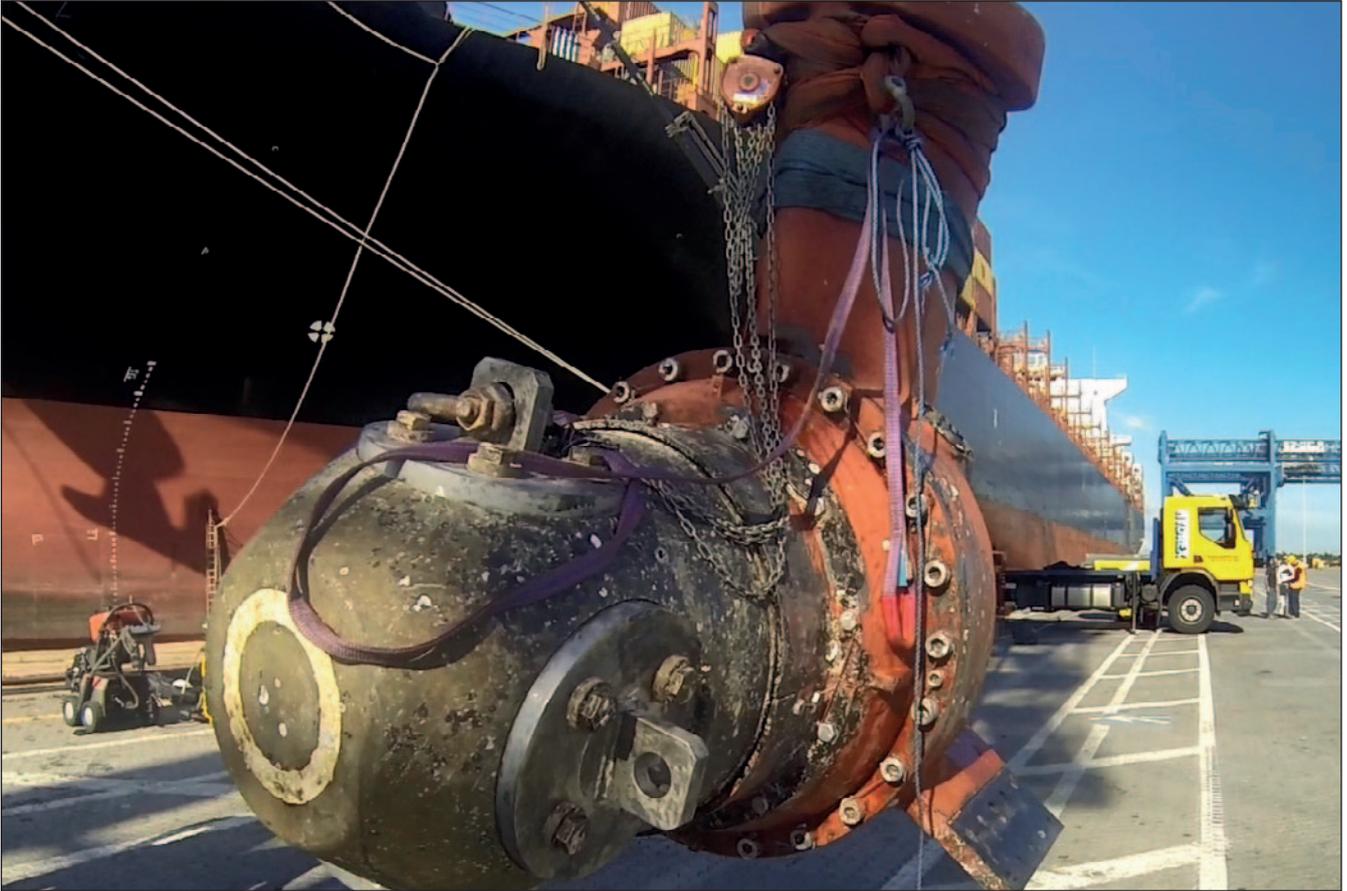
Boud confirms: “It comes down to confidence that the job will be carried out successfully, to the highest standards, rapidly and cost-effectively despite any and all obstacles, and that a correct result will be attained in every case with no failures or excuses.” ■

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# In-water bow thruster repairs



**O**ur lightweight flexible mobdocks are designed to be easily transported around the world and are used to close off the thruster tunnel on both sides, allowing divers to perform repairs and other operations in a dry environment around the bow thruster unit.

This technique enables to reinstall

the propeller blades of an overhauled thruster inside the thruster tunnel after the unit has been secured or replace the blades or seals and perform repair work on a specific part without removing the unit.

Since the development of this flexible mobdock technique, numerous thruster repairs have been carried

out by Hydrex diver/technicians around the world.

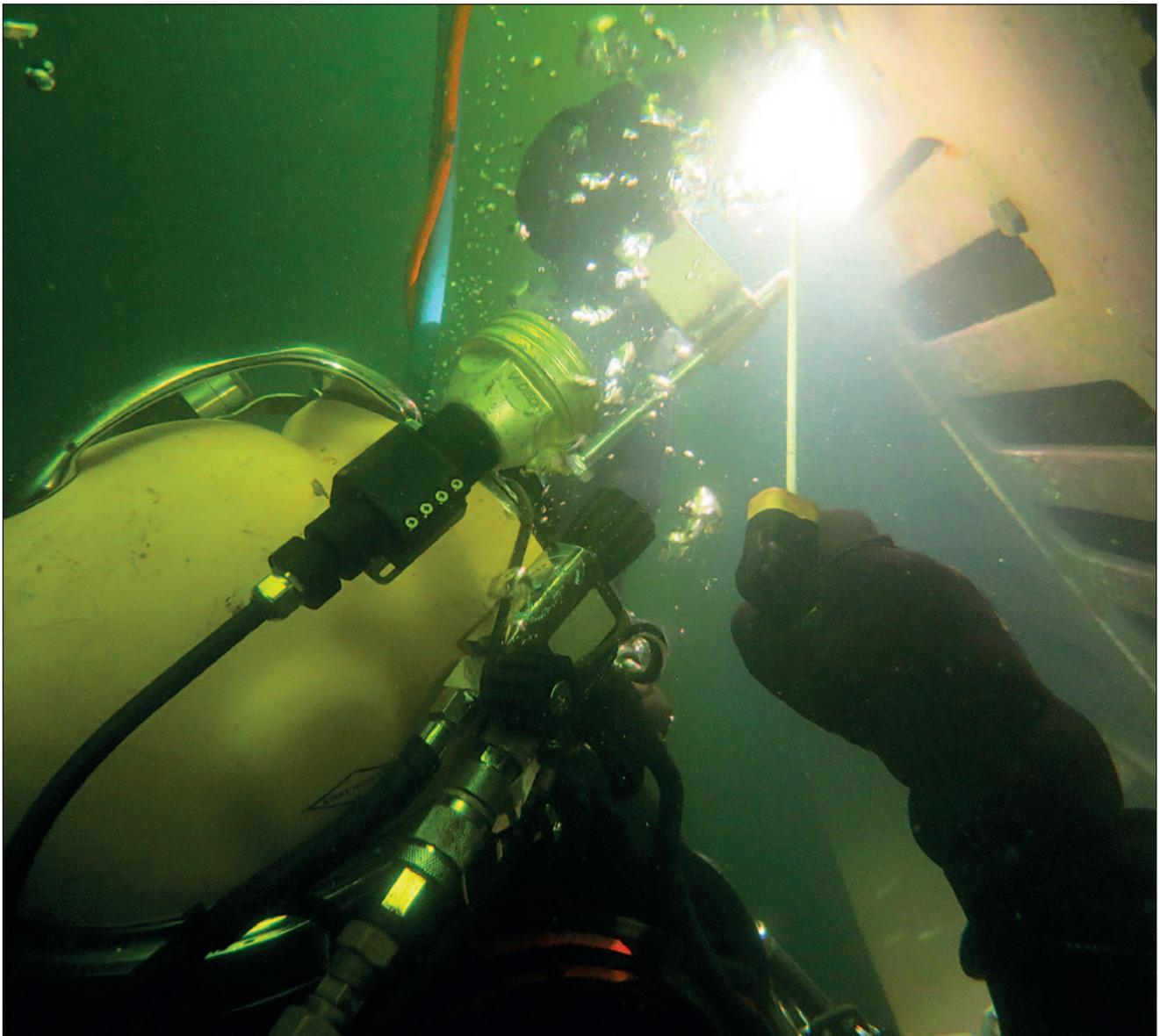
There is no need to send the vessel to drydock as all operations can be carried out in port or while the vessel is stationary at sea. Normal commercial activities can therefore continue without disruption.

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# Sail safe with Hydrex



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