Getting Safety on Board

The SHIPPING industry is booming throughout the world. The operational safety of this engine of globalization is assured by international treaties and regulations. Guaranteeing that these are consistently adhered to is the job of special service providers—like the Dräger Marine Service Centers.

THE END OF THE TITANIC was also a beginning. The demise of the 269-meter-long and reputedly unsinkable luxury liner on April 15, 1912 was the starting point for many of the international treaties that ensure safety on the seas to this day. From that time forward, vessels were required to monitor distress-signal frequencies every half hour for any SOS messages, and there were more new rules besides. After all, communication was not the only problem in that accident. One result of the analysis of the Titanic disaster—which claimed approximately 1,500 lives—was the international treaty SOLAS (International Convention for the Safety of Life at Sea), which aimed to improve the “safety of life at sea.” In 1914, the first regulation of this convention was formulated—it dealt with fire prevention on ships. Today, when Carsten Weiß from the Dräger Marine Service Center (MSC) in Hamburg, Germany, opens a fire extinguisher, checks to make sure it works, puts it together and confirms its operability with a certificate, he’s partly responding to the collision of a ship with an iceberg in the year 1912.

Since that time, shipping has experienced strong growth, which is further accelerating the process of globalization. The “Maritime Traffic Forecast 2025” of the German Federal Government predicts that the transshipment of standard containers in German harbors will more than quadruple between 2004 and 2025, to more than 45.3 million per year. The European Union is in turn supporting the establishment of “highways of the sea” as part of a “maritime-based logistics chain” by the year 2010. This is believed to be the only way to avoid gridlock on Europe’s sea lanes.

Growth and control

This trend is international. Container ships, oil tankers and, increasingly, liquefied gas tankers are emblematic of the trend toward ever larger ships with ever smaller crews. Quite apart from any romantic notions, shipping has become what the UN organization IMO (International Maritime Organization) describes as the “most internationally interconnected industry.” The IMO Secretary-General Efthimios Mitropoulos knows exactly how much responsibility he bears for employment and prosperity throughout the entire world: “The shipping industry is responsible for carrying more than 90 percent of world trade and is cost-efficient, clean and safe,” he says. Safety. That is the alpha and omega on board. Safety for the crew, the passengers, the cargo and the environment. Regardless of the professionalism of shipping companies and crews, this safety can only be ensured through external, transparent monitoring. The initial SOLAS regulation—on preventing and fighting fires—has therefore been supplemented by a whole series of national and international regulations governing the equipment of a ship. If, during a random inspection conducted by a port authority, the captain involved cannot point to up-to-date certificates as evidence that vital systems like stationary gas-measurement instruments and equipment like life jackets and alarm systems are working, he is not allowed to lift anchor. If worse comes to worst, he also runs the risk of losing his insurance coverage. Regular external inspections are achieved through “Port State Controls.” In Germany, these inspections are carried out by the organization See-Berufs- genossenschaft, which examines at least 25 percent of all foreign flagged ships. In the course of approximately 1,500 inspections in the year 2007, roughly half of the ships were found to have deficiencies, some of them severe, and 54 of them were not allowed to leave port before the 

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The gas detector reliably indicates whether it is safe to enter into the tank.
As the parties responsible for the proper operation of their vessels worldwide, ship-owners rely on specialized service providers located at the large ports of the world when it comes to inspections, audits and repairs—such as the ever-expanding network of Dräger Marine Service Centers (MSC), whose most recent new location opened in September 2008 in Singapore. “Here too, we’re building on the local Dräger expertise and extending it with specially trained service technicians,” says Srinivasan Venkatachari, the director of the new site. The nucleus of this network is Rotterdam, the Netherlands, whose sea port is the largest in Europe and the third largest in the world. “Approximately 30 years ago, we started as a one-man company,” says Harm de Jong, head of the unit Unisafe Fire Fighting and Safety Equipment Rotterdam. “In the last ten years alone, we’ve increased our sales more than tenfold.” In every respect, Rotterdam thus serves as a model for the MSC Hamburg, which was officially opened in 2007, and for Singapore as well. “At first, we just serviced fire extinguishers in Rotterdam, until we became official Dräger dealers in 1991 and later, in 2003, a subsidiary of the parent company in Lübeck,” says de Jong.

Those responsible at the Rotterdam unit have therefore approached the issue of “total care” from a different angle than the other Dräger MSCs. “By ‘total care,’” says Michael Semmler, head of the MSC in Hamburg, “we mean expert service in all aspects of fire fighting, rescue and safety—or FRS for short.” The Dräger staff in Hamburg initially concentrated on servicing the equipment that Dräger manufactures—above all compressed air breathing apparatus and gas detectors. “That went down so well with customers that they asked us to expand our services,” Semmler adds. It was no sooner said than done. The MSC in Hamburg expanded its range of services and has since been offering “total care” for FRS—for its own products and those made by other companies.

**Short port times**

As in any harbor in the world, ships entering the port of Hamburg are on a very tight schedule. Typically, the MSC learns of the arrival time, the berth, and the work to be done two or three days in advance, via the shipping company or local agents through an invitation to bid. However, sometimes the information is first received on the same day. In other cases, existing contracts with ship-owners enable the MSC in question to recommend the needed work and calculate the cost right away by consulting its own file. Once the job is assigned, the MSC puts together teams that accomplish all of this work in a brief port time of between eight and 20 hours.

After the ship has entered the port, the teams go on board and either immediately start their work right there or take equipment to their own workshop for more complex measurements and tests, or have the equipment tested by qualified partner companies, as in the case of liferafts. “For the owners,” says Michael Semmler, “getting the work done easily is an important criterion for choosing us.” The shipping company then has to deal with only one company, which draws up a single invoice and takes care of all the documentation itself, including the certification labels.

“It sounds simple actually,” says Dräger service technician Carsten Weiß, “but when you’re faced with 80 fire extinguishers that have to be tested very quickly over the weekend—in a way that can be documented and at a competitive price—you can’t succeed without precise planning and logistics.” These are criteria used by ship-owners to choose one service provider over another. As his colleague in Singapore adds: “In this market, it’s not just a question of price but also of striking the right balance among price, quality and reliability.” The large competitors, Venkatachari adds, have already found an appropriate balance between quality and price, whereas the smaller companies are mostly engaged in a price war. Their sphere of activity may be limited for that very reason. So there is no question that Venkatachari too, will structure his MSC in Singapore—one of the busiest ports in the world with roughly 140,000 shipping movements per year—like the other Dräger Marine Service Centers.

There is practically no such thing as routine in a profession in which consistently high service quality is demanded and provided 24-hours-a-day, 365 days per year. “The owner of a mega-yacht, for example, has needs and expectations that
are very different from those of the oil platform operators that our Dutch colleagues have been servicing for a long time now," says Semmler. In every case, however, precise planning, a high standard of training—including the maintenance and repair of third-party products—and well thought out warehousing operations are the constants for successful work on board a vessel or in the workshop.

Everything is meticulously prepared even before the ship enters the port: “Our service technicians know in advance what repair, maintenance, and replacement work has to be carried out on board,” says Semmler, describing the process followed by all Dräger Marine Service Centers. When the ship berths, the service technicians come on board with appropriate equipment and get right to work. They service compressed-air respirators, fill fire extinguishers, check stationary fire-extinguishing systems, inspect emergency escape breathing devices, test and calibrate gas detectors, certify breathing air bottles, and check whether the whole range of safety equipment is working. And anything requiring inspection in a workshop is picked up immediately—a task that is performed by Dräger, initially in Rotterdam, Constanta (Romania), Hamburg, and Singapore. After all, the shipping industry itself isn’t the only sector that’s booming.

## Rotterdam as a model

The Dräger Marine Service Center in Rotterdam can point to almost 30 years of experience. Unit Head Harm de Jong comments: “We are to a certain extent the model for the expanding network of Dräger Marine Service Centers.” Rotterdam services the sectors offshore, deep sea vessels, inland waterway vessels, and coastal shipping according to the “Total Care” concept. The center ensures timely, qualified, affordable, and one-stop service of its own products and third-party equipment in the fields of fire protection, emergency rescue gear, and safety equipment.

The service includes testing, refills, repair, certification, and documentation on paper and electronically in pdf file format. The Dräger MSC in Rotterdam represents more than 50 international manufacturers, keeps their original spare parts in stock, and is authorized to perform these services on their behalf. Referring to the advantages of this central project management, de Jong says: “The owners save time this way, since they’re always dealing with only one company.” In addition, there are substantial cost benefits when it comes to purchasing, because spare parts and consumables can be ordered in larger quantities—a feature that also helps lower the invoice price.

The work on board and in specialized workshops includes such activities as calibrating gas detectors and ensuring that protection suits are gas-tight and compressed air breathing apparatus is in good working order. Lifejackets are tested to ensure that they inflate automatically, and lifeboats are examined to make sure they have a complete set of personal flotation devices as well as emergency rations and supplies of potable water. Full-face masks are cleaned, disinfected and inspected. Are all the required warning signs on board and in the right places? If not, the technicians ensure that everything is put in order again—for the safety of the ship, crew, passengers, freight, and the environment.

Further information online, including:
- Products and Services
- VOICE Hazardous Substances Database
- www.draeger.com/96/MSC

Lifejackets (right) are just one area that is scrutinized by experts