



An SFT foam fender.

Focus on fenders

Claire Instone talks to a representative from ShibataFenderTeam to gain some expert insight into the fender market.

Ocean shipping is not only an integral part of the supply chain for most industries, but also a vital pillar of the global economy. 90% of traded goods are transported by sea - a growing trend, with volumes to further increase.

Together with the rise of seaborne trade comes an increasing need for modern ports with berthing options for increasing vessel sizes around the world, and with that an increasing need for marine safety measures, with fenders being one of them.

Fenders are safety-critical equipment for maritime infrastructure. They are the interface between vessels and berths - fenders protect vessels, infrastructure and most importantly, people working in port or onboard a vessel.

With fenders being such an integral part of a port's functionality, WPD wanted to get some expert insight on what to look for in a fender and its manufacturer.

Where does the expertise lie in fender manufacturing?

Generally speaking, within the fender market across-the-board major innovations are less common and most of the focus is on customised solutions for very demanding projects, new engineering approaches, and working to meet the increasing demand for sustainable fenders.

The real expertise lies in being able to produce bigger and safer. In this regard, SFT has put a lot of effort in the past to increase capacity and respond to increasing demand, mainly at the production facility in Malaysia.

As technical specialists, we at SFT have noticed that Foam Fenders and Buoys are experiencing unrivaled high demand and impressive development. It is pure craftsmanship for our skilled staff in our facility in Rechlin when manufacturing high-quality foam fenders up to the biggest sizes in the market.

An Ocean Guard Foam Fender measuring 3000x4500 mm is not a simple task to complete. What is needed is an experienced manufacturer with the right equipment and

know-how to complete the job. (SFT can boast being the only company to offer such high-quality fenders made in Germany).

The manufacturing of such a large fender takes time and skill. First, the dimension and fender weight are a challenge to our colleagues making this fender by hand! Moreover, the fender size makes the manufacturing control process in each step of the production even more important as the enormous number of materials have to be balanced throughout the fender to ensure a homogeneous product, skin thickness and nylon distribution.

Even the simple task of keeping the fender round is a different story when you make a 3000x4500 mm fender vs. a 1200x2000 mm!

What do you think clients most value in a fender manufacturer?

Trust. Trust is essential in the maritime industry. We always stay in close contact with our clients, with regular and direct communication. This level of availability is something we experience becoming more and more demanded by port authorities, contractors and consultants.

Projects in maritime infrastructure always go along with heavy investments, long-term planning and long-term commitment. Therefore, trust in the partner that accompanies you along

the way is essential. All market players within the industry need a lot of perseverance until they can finally see their project become “live”. Having a partner that stands next to you during all project phases is most valued by our clients; they invest heavily in port infrastructure and expect a parallel commitment from us.

The trust placed in our team is one more reason to strive for excellence in all we do, and it is also the foundation of all our partnerships.

Moreover, with an increase of global port projects, it gets more and more important to have a partner with a global reach. The SFT Group has a worldwide presence through sales teams and agents - 5 offices and agents on all six continents - with decades of experience in fender design. Clients need to be able to rely on global support and at the same time, rest assured that we are able to adhere to local standards and regulations. Accessibility and availability of our team is a priority.

Do you have one key tip for customers?

It's important to know that foam fenders can be re-skinned. Refurbishment extends the fender lifetime and saves resources and is a sustainable and cost-effective alternative to buying new ones.

Our Ocean Guard Fender, a foam fender covered with a thick nylon reinforced polyurethane skin, can be re-skinned. The SFT Group performs this service on a regular basis for clients.

Back in 2021, we worked at the Port of Kiel in Germany where the fenders had been in service for about ten years and the outer PU skins showed the usual signs of wear and abrasion. The fenders were still performing even after a decade, but to extend their lifetime further they were overhauled.

With SFT this service included transporting the fenders to our production plant in Rechlin so our experts can assess all needed repairs. The factory takes off the current PU layers and then applies a new PU skin with a thickness of approx. 20 mm (skin thickness depends on overall dimension of the fender) on the rough surfaces of the prepared fender. As part of the overhaul, typically the internal chain as well as the swivel, swivel plate and bolts are also replaced, as corrosion

inevitably appears on steel elements after 10 years in seawater. For this special project, we have overhauled 11 Ocean Guard Fenders with a diameter of 1000 mm and a length of 3000 mm.

The overall turnaround time was about 5 weeks from the pickup and overhaul to the reinstallation. The fenders were reinstalled at berth 32a at the seaport of Kiel and are again ready for further decades of service.

Finally, can you detail some of your most recent projects?

In the last few months, some projects that ShibataFenderTeam Group (SFT) have been working on and planning for months, even years, have become reality. The most prominent of which are detailed below.

Wilhelmshaven, first LNG Terminal in Germany, equipped with ShibataFenderTeam Fender Systems

Wilhelmshaven, a deep-water site on Germany's North Sea coast, became the country's first LNG Terminal at the end of 2022. SFT's German office designed and delivered customised fender systems for the project: three sets of fender systems, including SPC Cone Fenders and steel panels (5000 x 3300 mm) with UHMW-PE pads.

The design really focused on permanent mooring and safety for the chartered FSRU. The demanding 3-month time frame required close communication and coordination with the contractor and SFT team at the German production facility. The delivery schedule could only be met by supplying the steel components from our own factory in Germany.

New dry dock at the Port of Djibouti equipped with ShibataFenderTeam Wheel Fenders

Djibouti has made significant investments in recent years to enhance vessel handling and berthing. Among these investments is a new 50 x 20 meter dry dock equipped with eight Wheel Fenders designed and manufactured by SFT to protect its entrances.

The fenders were designed by our in-house engineering team and produced in our production facility in Rechlin, Germany, with welding done according to ISO 15614 standards.

The manufacturing process was supervised by Lloyd's Register as an independent third party to ensure compliance with project regulations.

43 ShibataFenderTeam Cone Fender Systems for the expansion of Freeport in Texas, USA

The Freeport port in Texas is undergoing expansion to accommodate larger vessels, with berth seven being refurbished to become the deepest container terminal in the Gulf of Texas and a new berth, number eight, being constructed. ShibataFenderTeam designed and delivered 43 sets of SPC Cone Fender Systems with closed box panels.

The project faced challenges in maintaining consistent fender design between the berths and accommodating the curved berthing line of berth seven, but ultimately achieved a unified and safe solution inserting individual spacers for each of the berth 7 fender systems.

Multiple ShibataFenderTeam fender systems for new Tibar Bay Port in Timor-Leste

Timor-Leste, a country in Southeast Asia, has developed the Tibar Bay Port as its largest infrastructure project to support the country's 20-year development plan; the port aims to handle 750,000 containers annually. SFT supplied Tibar Bay Port for the past four years to complete, in recent months, state-of-the-art equipment for safe vessel accommodation. The most recent - and last - delivery included 41 sets of CSS Cell Fender Systems, 22 Staghorn Bollards and 10 Steel Ladders.

High profile project to refurbish Port El Bluff, Nicaragua with ShibataFenderTeam Cone Fender Systems

Puerto El Bluff in Nicaragua underwent improvements, including replacing the wooden berthing structure with a new steel dolphin structure. ShibataFenderTeam worked closely with the client throughout the project to design and deliver a customised fender system: two sets of double SPC Cone Fenders systems and one set of SPC Cone Fender System with redesigned anchorage to fit the new dolphins.

Design and manufacturing were completed in-house and representatives from the Nicaraguan client visited SFT's manufacturing facility in Malaysia to witness the testing process of their fenders. 