

Trelleborg Port Expansion

Berth 11 & 12, Port of Trelleborg, Sweden



Application

Ferry & RoRo Terminals

Type

Pile Fenders

Date 2024

Reference 5722

A CLOSER LOOK AT THE CASE

Port of Trelleborg, Scandinavia's largest RoRo port and the shortest route to the European continent, underwent an expansion and relocation project towards the Southeast. The construction of berths 11 and 12 moved ferry traffic away from the central area of Trelleborg, providing significant environmental benefits. With the project complete, **the port can safely accommodate vessels up to 240 meters in length.**

During peak season, passenger and RoRo ferries use the berths extremely frequently, creating a **significant requirement for high-performance fenders and durable designs.** Thus, working in partnership with PEAB, ShibataFenderTeam designed and delivered 12 sets of Pile Fender Systems, each consisting of two Element Fenders (FE 1450x1000 mm, G3.1) and one exceptionally large closed-box panel (2620x13315 mm).

Project Scope

- ▶ 12 Pile Fender Systems consisting of 2 Element Fenders (FE 1450x1000 mm, G3.1) and 1 closed-box panel (2620x13315 mm)

CHALLENGE AND SOLUTION

Pile Fender systems are always special, uniquely designed for each project to cover individual vessel and berthing requirements. For this one, our in-house engineering team considered the following:

- ▶ Line load impacts over the entire length of the panel, as the ferries are equipped with beltings, developing a custom 13,315 mm-long one-piece steel panel designed to withstand them. **Using the correct load cases for the panel calculations was crucial;** otherwise, considerable deformation or damage could occur. The large size also came with a significant weight—each panel weighed 15 tons.
- ▶ High stability and resistance to shear forces, which Pile Fenders need to offer due to the side berthing requirements. To ensure reliability and optimal performance, the **custom design incorporated not only tension chains but also shear chains** into the fender system.



Port of Trelleborg Berth 11 & 12 | Trelleborg
| Sweden

Port of Trelleborg's new berths aimed to reduce maneuvering time and improve vessel safety at this major Scandinavian port. For us at ShibataFenderTeam Group, this project perfectly exemplifies our **expertise in designing and delivering high-quality solutions**, regardless of the complexity involved.

The custom fender solution provides safe berthing at the new berths, which were built to improve Port of Trelleborg's overall logistics and reduce the environmental impact on the city it is named after. Explore more SFT Case Studies or Contact Your Nearest Office.

