

## Pacific Expertise

Queen Salote, Nuku'alofa Port, Tonga



**Application**  
Container Terminals

**Type**  
SPC Cone Fenders, Extruded Fenders, V Fenders

**Date** 2024

**Reference** 0599, 0646

### A CLOSER LOOK AT THE CASE

Located in the South Pacific Ocean, the Kingdom of Tonga modernized and expanded the Queen Salote International Wharf (QSIW) at Nuku'alofa Port, handling 98% of the nation's imports. The project included reconstructing Wharf 1, extending Wharf 2 by 50 meters with a new pile deck, and adding three new dolphins. This critical upgrade improved the port's capacity and resilience against cyclones and climate change; upon completion, **the port can accommodate larger vessels** and meet the region's needs for the next 20 years. The complexity of the fender system design for this project, stemming from the **need to coordinate work across various areas such as wharfs and dolphins**, was met by SFT's in-house engineering team, who designed a custom solution to support both refurbishment and new construction.

#### Project Scope

- ▶ 31 Extruded Fenders (SD 250x1500 mm)
- ▶ 12 V Fender Systems (SX-P 600x3000 mm)
- ▶ 14 Cone Fender Systems (SPC 1100, G2.2)
- ▶ 12 Rubber and one stainless steel Ladders and 10 Bollards

## CHALLENGE AND SOLUTION

For McConnell Dowell, contractor of the project, prioritizing **partnerships with companies that have expertise in the Pacific region was key**. Therefore, they selected SFT and engineering firm Royal Haskoning DHV to deliver one of the most durable and sustainable fender systems in the Pacific.

To ensure long-term performance with minimal maintenance, all components, except for the panels, were fabricated from stainless steel SS316L, known for its excellent corrosion resistance and suitability for harsh marine environments.

Furthermore, each wharf and breasting dolphin required a carefully custom fender design to ensure optimal performance. **Our in-house engineering team's approach ensured that every component was meticulously designed** to contribute to the long service life of the installation, reinforcing the project's resilience against the Pacific's demanding conditions.



Queen Salote International Wharf 1 | Nuku'alofa  
| Tonga

As a **member of the PIANC WG240 Ports in Small Island Countries**, ShibataFenderTeam is proud to have contributed to the development of Queen Salote International Wharf. This modernization aligns with WG240's objectives of promoting best practices in port planning, design, and construction, as well as enhancing efficiency, safety, and environmental safeguards in small island ports.

The custom solution, over 50 fender systems designed to enhance the port's resilience, reflects SFT's expertise in both the fender industry and the Pacific region. Explore more SFT Case Studies or Contact Your Nearest Office.

