Marine Fenders International, Inc.

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Cruise ship terminal in Ketchikan, Alaska constructed with Marine Fenders International's Ocean Guard Netless foam filled marine fenders.

Marine Fenders International, Inc., a leading manufacturer of marine fendering systems was selected to supply our Ocean Guard™ Netless foam filled marine fender system for the Cruise ship terminal in Ketchikan, Alaska.

Ketchikan is a major cruise ship port along the Inside Passage, welcoming hundreds of thousands of visitors each year. Given the decline of the timber and fishing industries in Southeast Alaska, tourism has become the mainstay of Ketchikan's local economy.

However, the structural deterioration of Berths had become a critical issue for the community. These docks are essential to the continuing health of the local economy and must be replaced with modern and safe facilities. Continued preservation of the wood docks does not constitute a cost-effective solution.

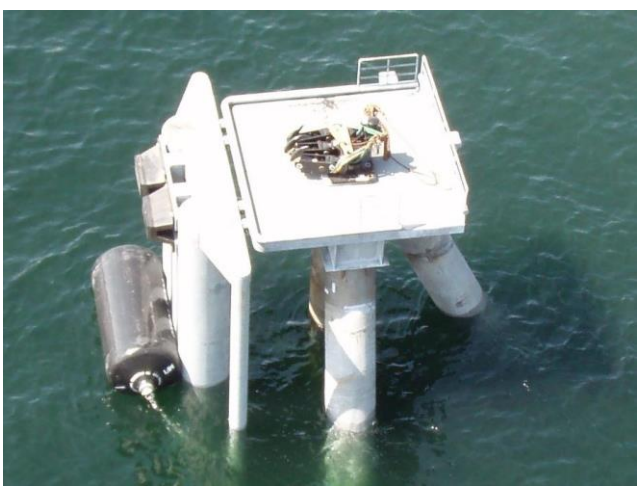
A critical consideration in the design and rehabilitation of the berths was the optimal fendering system. Ocean Guard™ foam filled marine fenders have a proven track record for outstanding performance for the cruise ship industry. This foam filled fendering system provides many desired attributes for cruise ship berthing including:

- Soft Berthing – Compared to rubber buckling fenders, the foam filled construction gradually and smoothly compress providing a soft berthing for the vessel and its passengers. In comparison buckling fenders can "jolt" as the fender buckles.

- All Tide Mooring – In the Alaskan waters large tidal fluctuation can be experienced. The floating characteristics of Ocean Guard™ foam filled marine fenders provide optimal fendering at all tides.

- Hull conforming- The resilient nature of a foam-filled **Ocean Guard™** Netless Fender give it the unique ability to conform to a vessel's hull contours and extremities, such as rub rails. The hull conforming feature eliminates point loading, which cans occur with panel type fenders, on hull contours therefore evenly distributing energies over a greater surface area. This results in much lower hull pressures.

- Unsinkable - The foam core construction not only provides a sink proof construction but also lower hull pressure than pneumatic fenders.



14 each of 6 ft diameter x 16 ft **long Ocean Guard™** Netless foam filled fenders with integral swivel end fittings.

These 6 ft diameter x 16 ft long **Ocean Guard™** Netless foam filled fenders are designed to absorb 427 ft-kips (59 ton-m) of energy when 60 percent compressed with a corresponding load of 265 kips (120 tons).

These resilient tough marine fenders are constructed with a heat laminated energy absorbing resilient foam core; a thick tough filament nylon tire cord reinforced non-marking urethane skin; and heavy-duty integral swivel end fittings internally connected with a stud-link chain.

Ocean Guard™ Netless foam filled fenders efficiently absorb significant amounts of energy with a low corresponding reaction force, lower than pneumatic or rubber buckling fenders.

Marine Fenders International, Inc.'s **Ocean Guard™ & Ocean Cushion™** foam filled fenders are constructed and designed for the worlds toughest environments.

ENGINEERED FOR EXCELLENCE.