



COASTAL CONCEPTS

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SACRIFICIAL HIGH ENERGY FENDER



UNIQUE DESIGN

The Sacrificial High Energy Fender is uniquely designed to absorb extreme impact forces which exceed the capacity of the fendering system. This is achieved by harnessing the elastic and plastic properties of steel resulting in a large energy absorption whilst limiting reaction forces on the berthing structure.

The Sacrificial Fender can be custom designed for most fendering systems or retrofit to existing systems.



MODULAR SYSTEM

With a modular bolted system the Sacrificial Fender can easily be transported and assembled on site.

The Sacrificial Fender not only protects the vessel and berthing structure from damage and unwanted downtime, but also allows the berthing structure to remain operative after impact while replacement components are manufactured.



APPLICATION

Offshore and highly exposed berthing structures.

Sensitive structures:

- oil and gas industry
- aged structures/ subject to structural analysis
- berthing monopiles

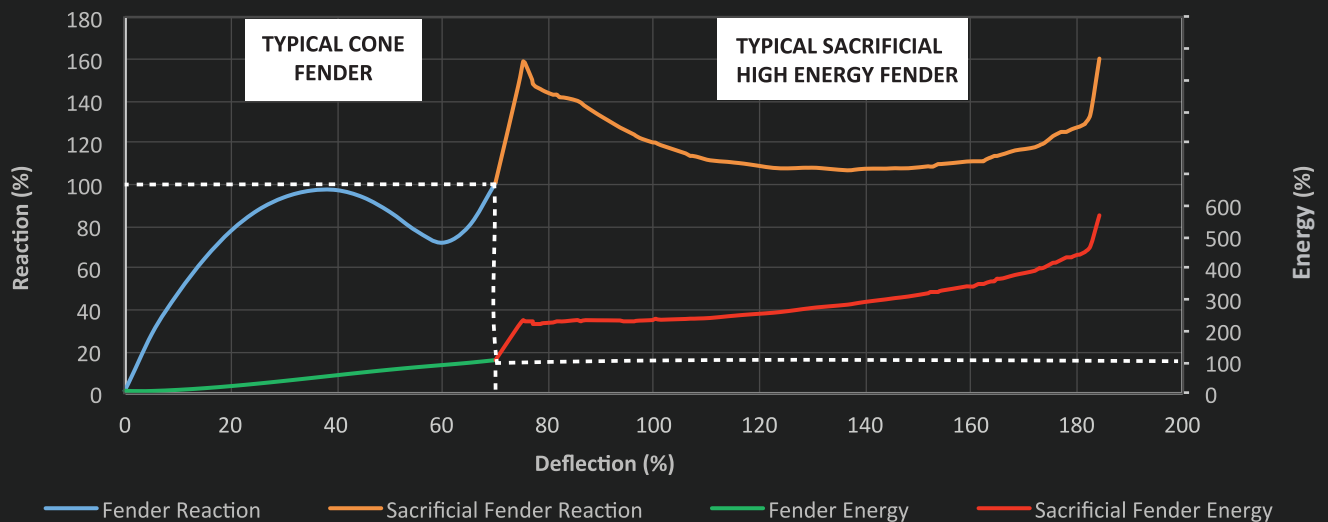
Additional protection for all cargo handling structures.



PERFORMANCE

Reaction forces transferred to berthing structure limited to 1,5 - 2,0 times the fender capacity.

Energy adsorption typically 5 times that of the fendering system.



PERFORMANCE TESTED

Performance testing has been conducted on full scale Sacrificial Fenders incorporating an SPC 600 conical fender supplied by ShibataFenderTeam according to SABS, BS and DIN specifications. Finite Element Modelling is used to simulate various loading conditions when designing the Sacrificial Fender prior to manufacturing and testing. The Sacrificial Fender remains within its elastic region throughout the deformation of the fender, thereafter reaching its rated reaction force and yielding plastically. This plastic deformation allows for a high rate of energy absorption whilst limiting the reaction force transferred to the berthing structure.

COASTAL CONCEPTS

Coastal Concepts strives to deliver specialist marine engineering solutions through extensive product research and development.

CONTACT INFO

Old College Building, Stellenbosch

+27 (0)21 883 8870

Christopher Adam - 083 449 6494

info@coastalconcepts.co.za

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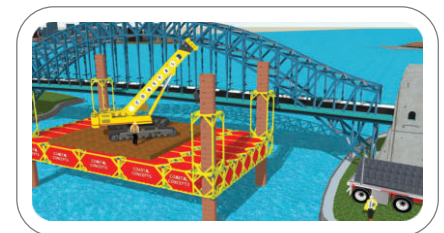
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Pile Guide Frame



De-watering Cope Shutter



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