

FENDERS

Luxury or Essential?

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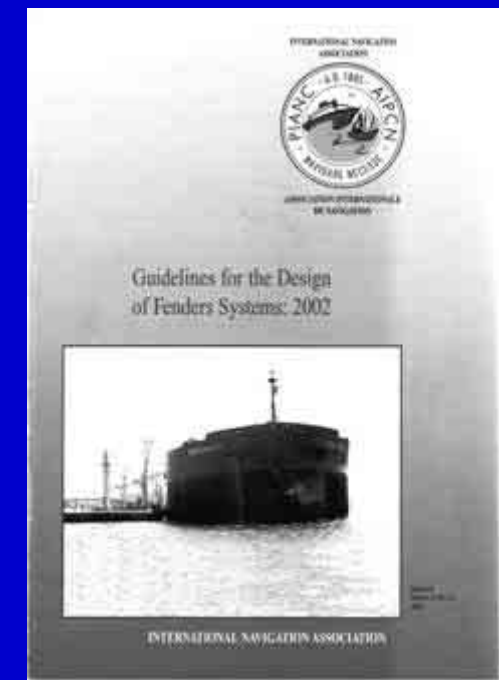
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Why fender?

According to PIANC's "Guidelines for the Design of Fender Systems (2002)"

- ▶ There is a simple reason to use fenders: it is just too expensive not to do so.
- ▶ In addition to the financial aspect, safety is probably an even more important reason to install fenders.



How can fenders influence Port efficiency, costs?

- ▶ Lower construction costs
- ▶ Less maintenance
- ▶ Bigger/smaller ships
- ▶ Versatile, adaptable facilities
- ▶ “Upgradeability”
- ▶ More exposed locations
- ▶ Faster berthing, turnaround
- ▶ Efficient cargo handling
- ▶ Reduced accident risk
- ▶ Fewer “lost” days
- ▶ Longer service life
- ▶ Small spares stock
- ▶ More loyal customers



Full life costs – a simplified comparison

After 20 Years...	“Cheap”	Lowest FLC
Purchase Price	90	100
Installation	40	40
Replace @ 10 years	90	
Re-installation	60	
Maintenance	90	40
Maintenance Install	120	48
FULL LIFE COST	400	228



How can Ports achieve these savings?



- ▶ Innovative fender designs
- ▶ Tested, proven components
- ▶ Stricter specifications...
- ▶ ...and stick to them
- ▶ Allowance for wear & tear
- ▶ Good after sales service
- ▶ Partnering





VLCC Berth (Ijmuden, NL)

- ▶ Exposed, unprotected berth
- ▶ 225,000dwt vessels
- ▶ Maintenance was costing over \$100k/year...!!
- ▶ New SCN systems installed in 2 days
- ▶ Full payback in <2 years



Sohar Phase 1 (Oman)

- ▶ 600m of bulk quay
- ▶ Caters for all ship sizes
- ▶ Adaptable to containers
- ▶ Good trust & cooperation led to Phase 2 (600m) plus liquids berth terminals



...the bad...



“Copy” Fenders

- ▶ Superficially similar, but...
- ▶ ...half the performance!
- ▶ Every one failed after 3~5 compressions cycles when tested by 3rd party
- ▶ Certificates were “fake”
- ▶ Supplier order cancelled, new order placed



Poor Grade Cylindricals

- ▶ Customer saved 3%..!!
- ▶ Untested, no records
- ▶ Fenders failed before fitting
- ▶ Correct replacements delayed project 10 weeks
- ▶ Supplier blacklisted but claim remains unsettled



...and the ugly!

MARINE SYSTEMS



