



Active Solution Company Limited

Where Your Technology Is Innovation

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Where Your Technology Is Innovation

1. ABOUT ACTIVE SOLUTION

- ▶ Founded in 2019, Head Office is located at 4th Floor, Vung Tau Plaza Building, 207 Le Hong Phong, Ward Tam Thang, Ho Chi Minh City, Vietnam and the Representative office at 9th Floor, Pearl Plaza Building, 561A Dien Bien Phu Street, Ward Thanh My Tay, Ho Chi Minh City, Vietnam with purpose to provide professional and efficient service to our customers in sustainable objectives.
- ▶ We are specialized in Solution Provider and supply a wide range of products related to Marine and Infrastructure Segment to various of Application Upstream/Downstream, Oil & Gas/ Refinery; Power/ Energy/ LNG, LPG Terminal; Onshore/ Offshore Wind Farm; Chemical/Petrochemical.....with purpose to create the greatest value to client and meet client's bespoke operational challenges.
- ▶ Equipped with a team of efficient and capable workers, responsible and experienced supervisors, we are here to ensure the success of many types of project that will be undertaken in the future.
- ▶ .



Active

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OUR VISION

To become an integrated SmartPort technology provider & Solution Specialist with the highest standard of competency, integrity & professionalism in Vietnam country.



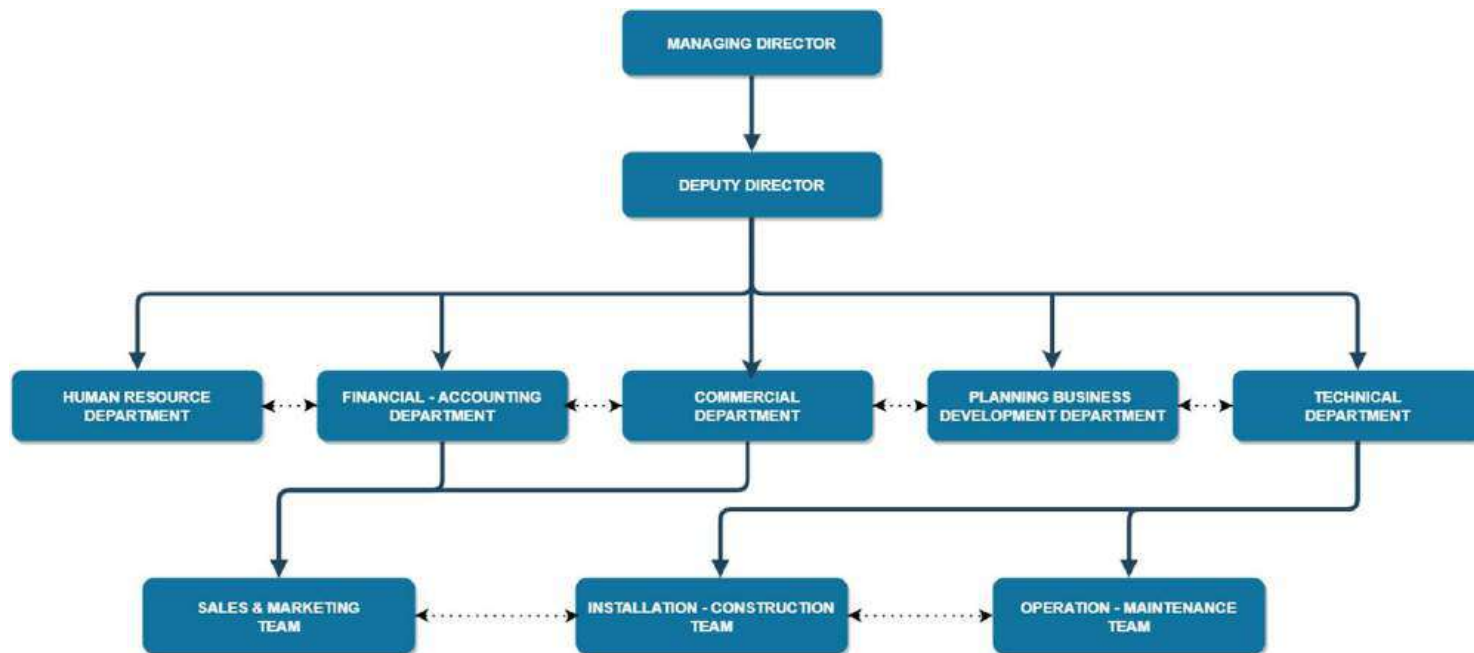
OUR MISSION

As experienced and best service in technology provider, we pursue for business, safely delivering cost effective, technical services & after sales service efficiency that meet or exceed clients' expectations. We move forwards along with client success.



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COMPANY ORGANIZATION



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WHY CHOOSE US?

You will receive:

- Dedicated support throughout the full lifetime of your project and beyond.
- We deliver commercial and technical knowledge and support, and the power to put it into practice through site services and in life maintenance.
- We offer full after-sales service including customized training, spare parts, and tailored maintenance programs, to help you reduce downtime, improve productivity and reduce lifetime cost.

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2. CORE PRODUCTS & SERVICES



- ❖ **The latest innovative SmartPort System, Modern Fenders system** (Công nghệ tiên tiến về việc áp dụng phương pháp neo đậu tự động, hệ thống tích hợp công nghệ neo đậu thông minh và hệ thống đệm va hiện đại nhằm nâng cao hiệu quả kinh tế và an toàn cho việc vận hành cảng) offering deploys the latest in marine technology applications to help ports and terminals optimize Port Owner's operations. It's a technology platform that connects port operations, allowing users to analyze asset performance and apply data insights, to improve day-to-day decision making and long-term operational efficiencies .
- ❖ **End-to-end service and a comprehensive product portfolio** meet and exceed customer needs, enhancing safety and improving efficiency in all marine environments, from conception to completion and beyond.

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I. MARINE FENDERS



Where Your Technology Is Innovation

MARINE FENDERS

Trelleborg's Super Cone Fenders (SCN) are the latest generation of 'cell' fenders, with optimal performance and efficiency.

The conical body shape makes the SCN very stable even at large compression angles and provides excellent shear strength. With overload stops the Super Cone marine fender is even more resistant to over-compression.



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MARINE FENDERS

SCK Cell Fenders have a very long track record and remain popular because of their simplicity, high performance, and strength.

Trelleborg Cell Fenders come in a wide range of standard sizes and are interchangeable with many, older marine cell fender types.



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MARINE FENDERS

Trelleborg's Arch Fenders are simple and rugged marine fender systems, providing reliable and trouble-free service for a wide variety of berths even under the most severe conditions. The SAN-fender is a traditional rubber-faced unit whilst the SANP-fender can be fitted with either UHMW-PE face pads or connected to a steel panel.

Corner Arch fenders are available in three standard sizes and provide a simple, easily installed solution to prevent berth corners from damage by smaller vessels.



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MARINE FENDERS

TRELLEBORG'S FOAM FENDERS

Trelleborg's wear and tear resistant Foam Fenders absorb impacts even in an aggressive environment. Our Foam Fenders share a construction technology centred on a closed cell polyethylene foam core and an outer skin of reinforced polyurethane elastomer. The closed cell foam structure makes punctures a thing of the past. Every cell is separate, and so water cannot migrate into the foam. Even after many years of active service, the foam core can be returned to the factory, re-skinned and made ready for a new lease of life. No matter how badly abused, Trelleborg Foam Fenders, will not burst or explode. Damage is rare, but if the worst should happen our foam fenders will still function until repairs are possible.

- + SeaGuard
- + Sea Cushion
- + Donut Fenders



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MARINE FENDERS

TRELLEBORG'S FOAM FENDERS

SEAGUARD

- Unsinkable design
- Virtually indestructible
- Fully compliant with US Navy specifications



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MARINE FENDERS

TRELLEBORG'S FOAM FENDERS

SEA CUSHION

- Low maintenance
- Ultra-tough, unsinkable design
- Low reaction and high energy options



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MARINE FENDERS

TRELLEBORG'S FOAM FENDERS

DONUT FENDERS

- Freely rotates around a pile
- Requires minimal maintenance
- Will not mark ship hulls



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MARINE FENDERS

TRELLEBORG'S ACCESSORIES

LADDERS

- Corrosion resistant
- Suits many applications
- Can withstand most accidental impacts from smaller vessels



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MARINE FENDERS

TRELLEBORG'S ACCESSORIES

FENDER PANELS

- Closed box steel structure
- Blind boss fender connections
- Pressure tested for water tightness



UHMW PE

- Very low friction coefficient
- Excellent abrasion resistance
- UV and ozone resistant



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MARINE FENDERS

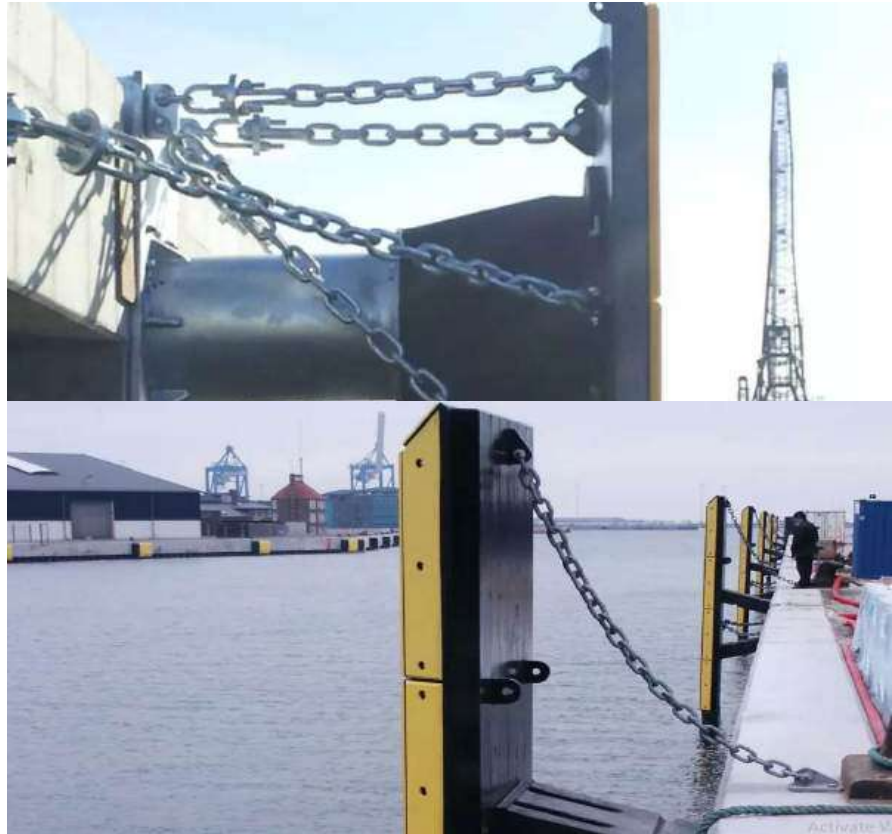
TRELLEBORG'S ACCESSORIES

ANCHORS & SHACKLES

- High holding power
- Available in various sizes
- Available in various steel grades

CHAINS

- Choice of open or stud link chains
- Proof load tested and certified
- Galvanized as standard



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TRELLEBORG BOLLARD

Marine bollards are a simple and cost-effective way to fulfill mooring requirements and safely secure vessels alongside jetties, berths, wharves, and dolphins in ports and harbors. Trelleborg Marine and Infrastructure provides bollards with a range of design profiles, sizes, and mooring line capacities to suit all mooring applications.

The shape of Trelleborg bollards has been refined with finite element techniques to optimize the geometry and anchor layout. Even at full working load, Trelleborg bollards remain highly stable and provide a safe and secure mooring operation.



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

SURVEY SERVICE AND REPORT



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

SURVEY SERVICE AND REPORT



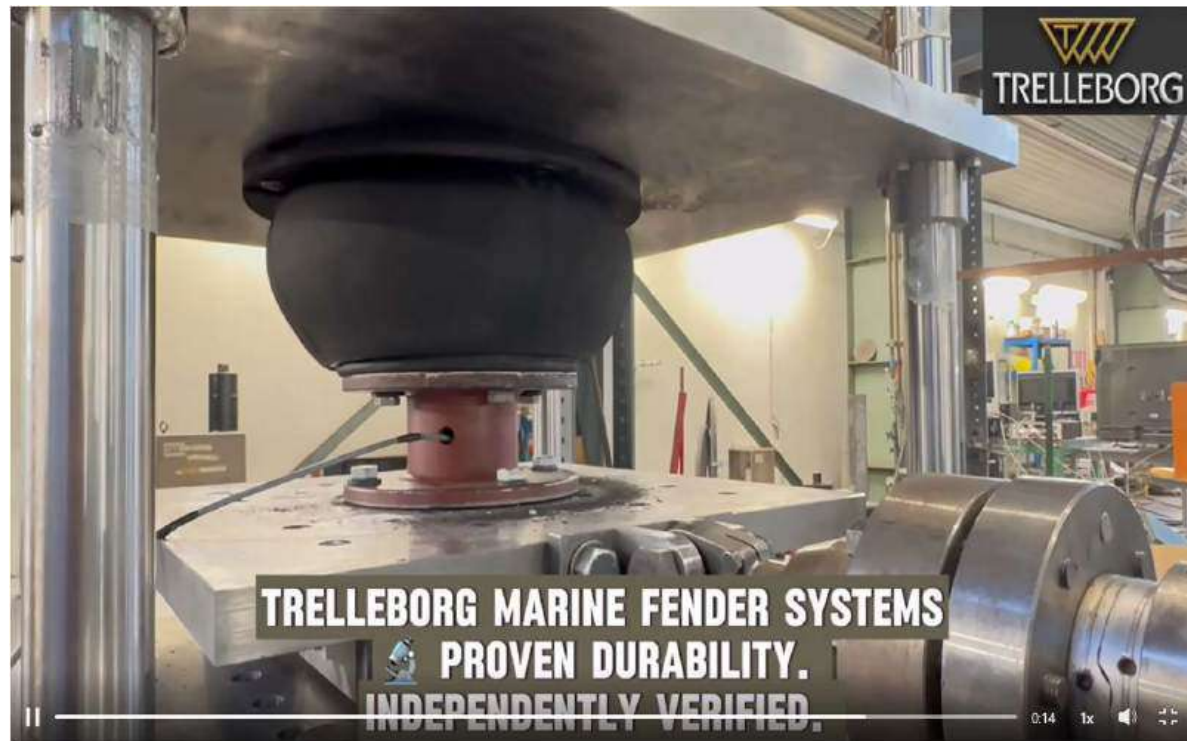
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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

SUSTAINABLE PORT OPERATION

- High durability
- Low maintenance
- Reduced replacement frequency
- Lowest Total Cost of Ownership (TCO)



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

COMPRESSION TEST (PIANC)

Test on actual fenders



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

QR CODE AND COMPRESSION TEST (PIANC)

Test on actual fenders



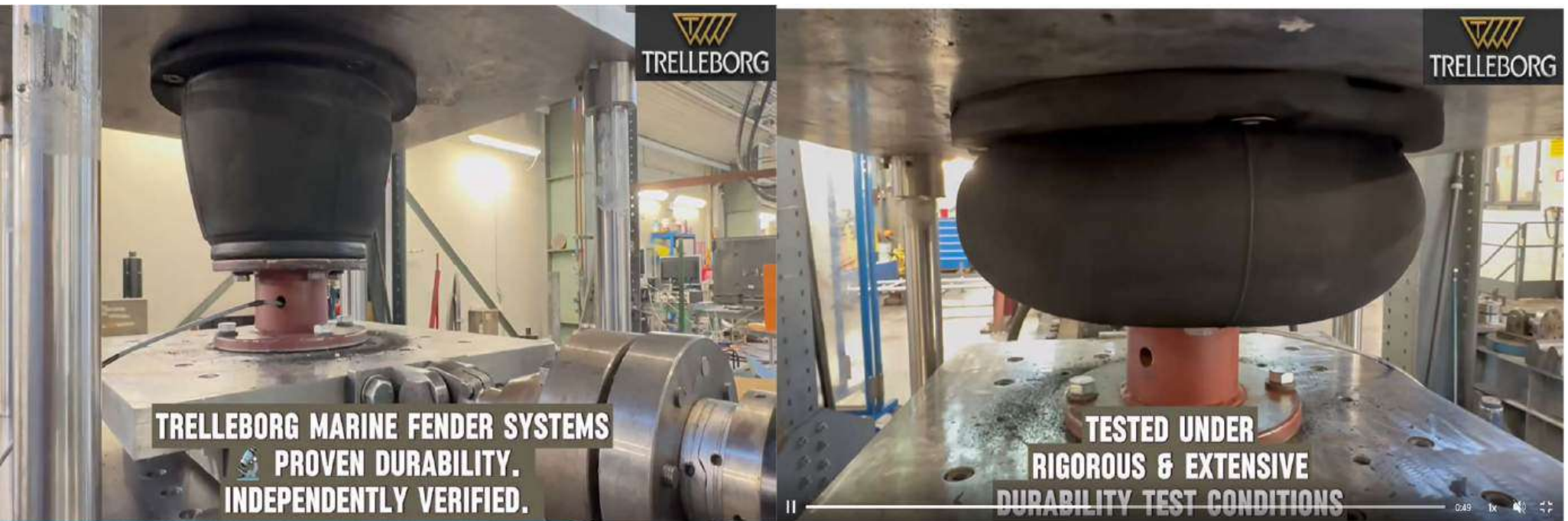
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WHY ARE TRELLEBORG FENDERS?

We are solution provider, Trelleborg Marine Fenders consistently meet and exceed the highest global durability standards.

PROVEN DURABILITY TEST BY THIRD PARTY LABORATORY

These 10,000 cycles simulate over 20 years of operational use — matching the expected design life of a marine fender, as outlined in both PIANC WG33 (2002), PIANC WG211 (2024) guidelines including the British Standard BS6349-4:2014.



WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

PHYSICAL MATERIAL TEST



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

TGA TEST (Thermo Gravimetric Analysis)



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

MAGNETIC TEST FOR PANEL

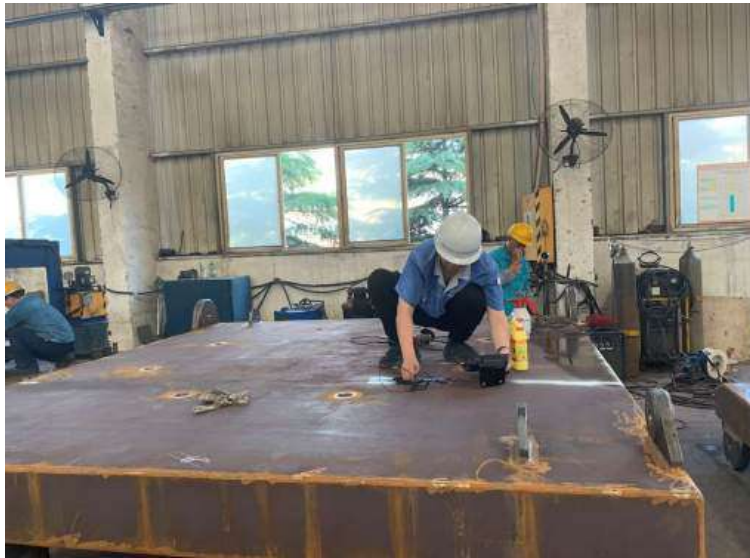


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WHY ARE TRELLEBORG FENDERS?

Best quality with all testing followings to International Standards

ULTRASONIC, LEAKAGE TEST FOR PANEL



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

TRAINING AND INSTALLATION MANAGEMENT PROCEDURE

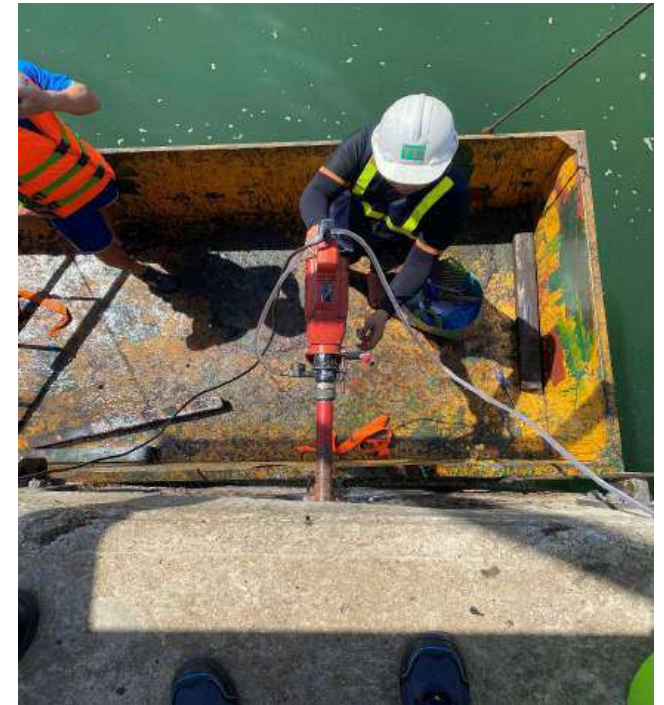
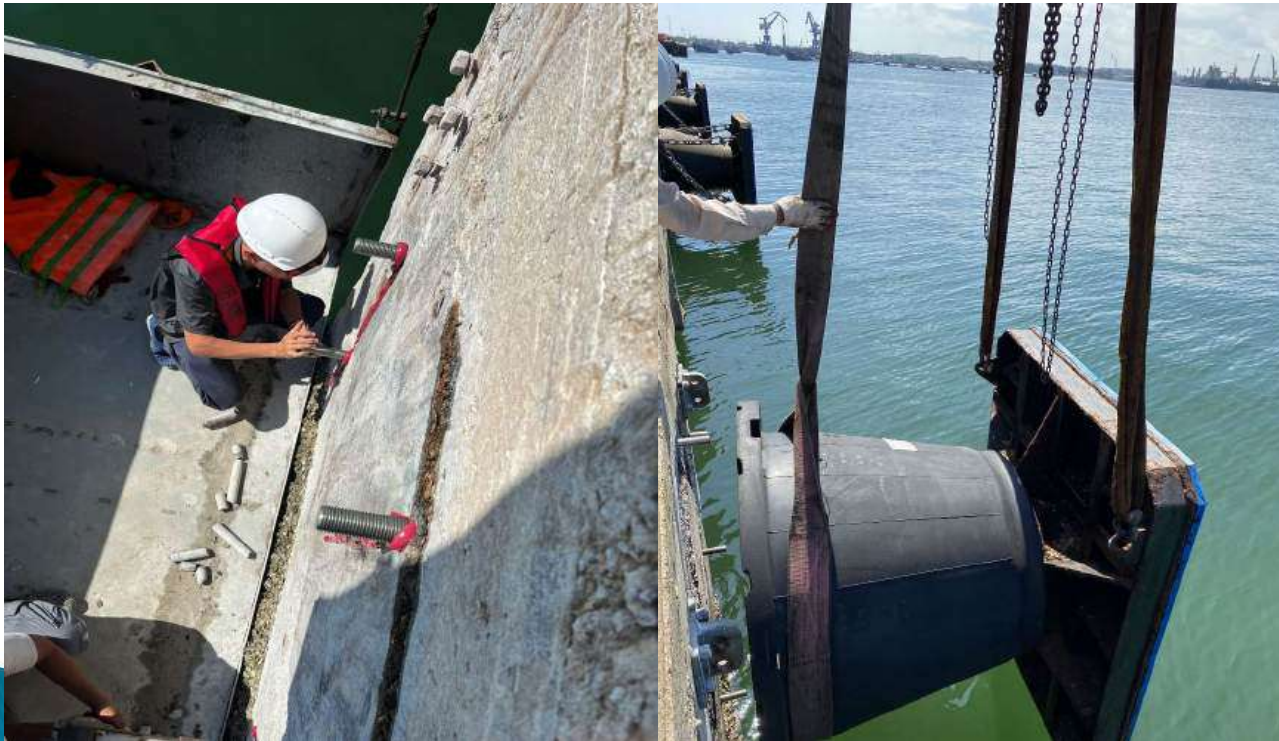


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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

TRAINING AND INSTALLATION MANAGEMENT PROCEDURE



Where Your Technology Is Innovation

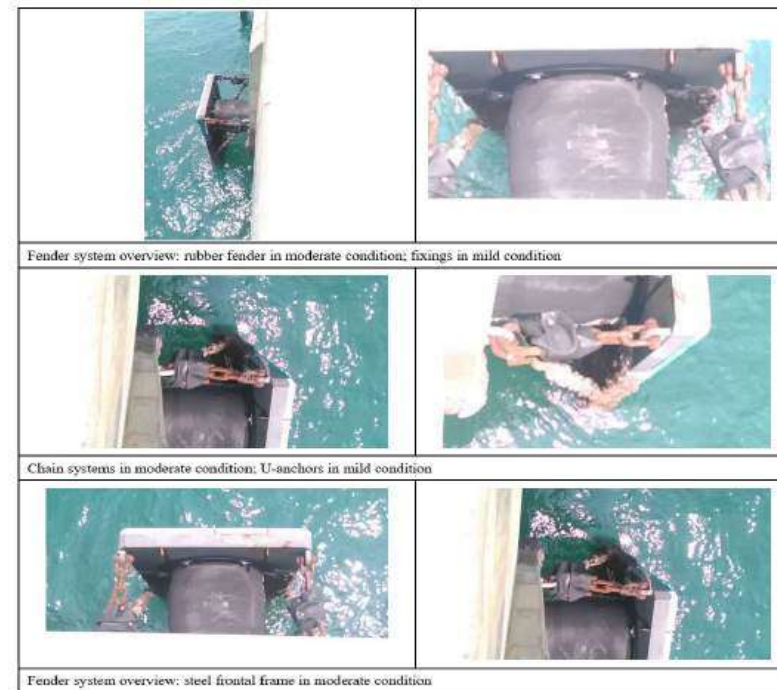
WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

ACTIVE SOLUTION AFTER-SALES SERVICES



FENDER SYSTEMS INSPECTION REPORT



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WHY ARE TRELLEBORG FENDERS?

We are solution provider, assist client develop business and beyond their expectation

ACTIVE SOLUTION AFTER-SALES SERVICES

CONCLUSIONS:

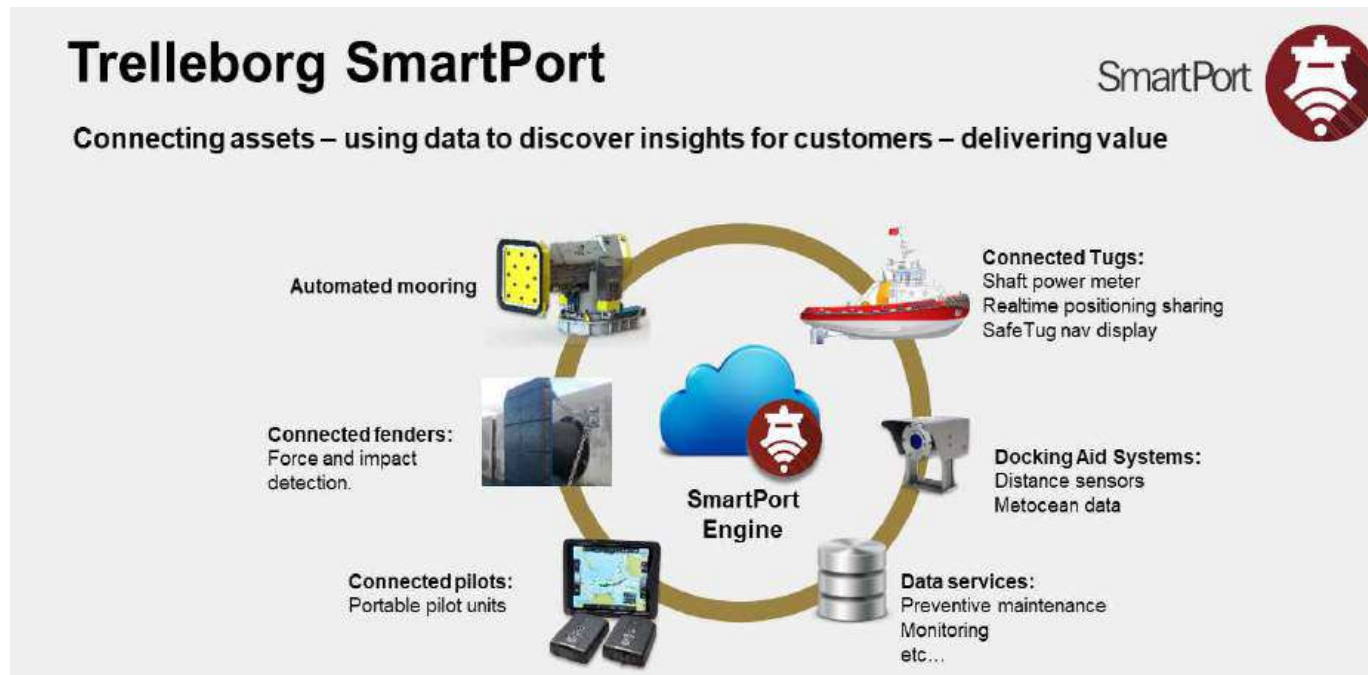
Marine fenders are not maintenance-free products, periodical inspections and remedial works are recommended to ensure that the fender systems are functioning as expected. Trelleborg maintenance guide is available upon request.



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TRELLEBORG SMARTPORT

(Hệ thống cảng thông minh - tích hợp công nghệ tiên tiến)



Where Your Technology Is Innovation

TRELLEBORG SMARTPORT

(Hệ thống cảng thông minh - tích hợp công nghệ tiên tiến)

Smarter Marine and Port Operations

Connecting assets – using data to discover insights for customers – delivering value

- Connects port operations – assets at the port / vessel interface
- Allowing operators to analyze performance
- Use data to improve decision making.
- Performance data is captured, transmitted, standardized and stored – allowing seamless analysis.
- Data is presented to relevant stakeholders, across a range of devices.
- Data users are registered through a license server and pay by subscription

SmartPort



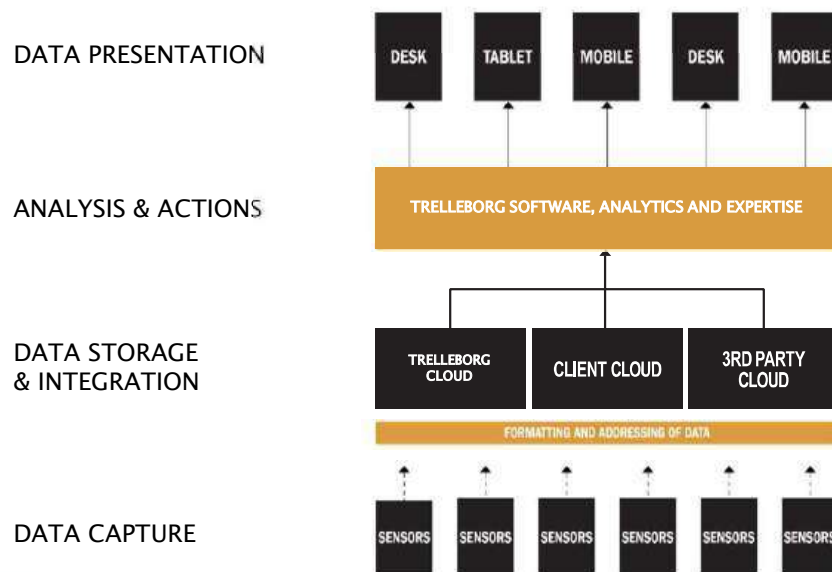
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TRELLEBORG SMARTPORT

(Hệ thống cảng thông minh - tích hợp công nghệ tiên tiến)

The SmartPort Platform

Supporting our customers to improve their operations

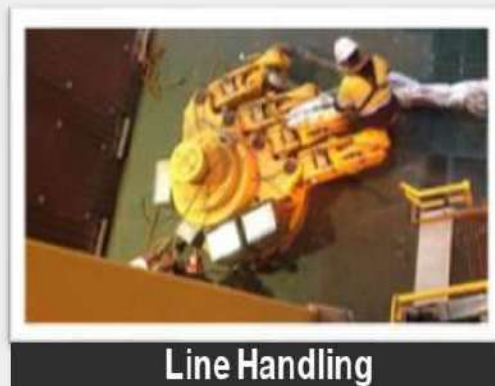


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TRELLEBORG SMARTPORT

(Hệ thống cảng thông minh - tích hợp công nghệ tiên tiến)

II. Docking and Mooring



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Complete Terminal Configuration

The background of the slide features a 3D rendering of a port terminal. A large cargo ship with a red and white hull is docked at a curved pier. Several yellow gantry cranes are positioned along the pier, and various port infrastructure like buildings and smaller vessels are visible in the distance. The scene is set against a light blue sky and water.

- ☐ **Quick Release Hooks**
- ☐ **Integral Capstans**
- ☐ **Load Monitoring**
- ☐ **Remote Release**
- ☐ **Docking Aid Systems**
- ☐ **Environmental Monitoring**
- ☐ **Portable Displays**
- ☐ **Integrated Central Monitoring**

Where Your Technology Is Innovation

TRELLEBORG SMARTPORT

(Hệ thống cảng thông minh - tích hợp công nghệ tiên tiến)

Docking and Mooring

Field proven since 1972 and installed in over 500 mooring facilities worldwide, Trelleborg's SmartMoor Quick Release Hooks (QRH) are the foundation for today's modern mooring systems, delivering improved safety and mooring security to clients worldwide.

Available with double or triple hooks in capacities from 60t to 150t, each hook cantilevers from the mounting base and the design ensures the hook cannot impact the deck under any loading configuration.

The SmartMoor QRH is designed to be released by an operator when a mooring line is attached, even under full load.



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Quick Release Hook Unit

Manual Release

All hook release components are enclosed within the hook side plates, protecting the mechanism for debris and damage. A 20 kg force is all that is required to release the hook at full load whilst a single operator stands safely behind the hook.

Positive Hook Locking

The fail-safe hook mechanism ensures a positive reset confirmed by an easy visual check (with remote verification optional). This prevents hair-trigger and accidental release, which can occur with inferior designs.

Rope Guide

A rope guide is fitted as standard to all capstans, which helps guide the messenger line onto the capstan head.

Electric Capstan

Capstan motors are fully enclosed within the hook base for ultra-low maintenance, corrosion protection and reliability. Various load ratings and running speeds are available to suit all ship sizes and mooring line materials.

Hazardous Area Operations

All electrical components are certified for hazardous area operations (where required). The hook design prevents contact with the structure during mooring and on release, reducing spark risk.

Footswitch

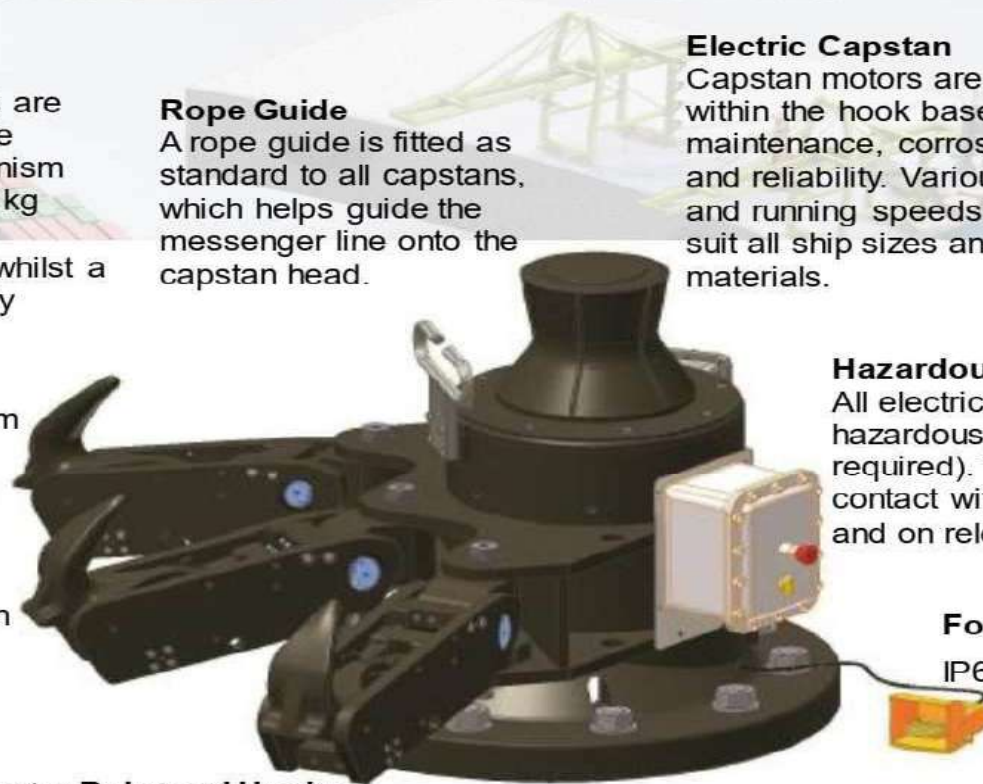
IP68 rated. IS for hazardous application

Counter Balanced Hooks

The cast mooring hook is counter balanced for easy resetting. The smooth hook profile properly supports mooring ropes, reducing stress concentrations and chafing.

Mounting Base

Single or multiple hook configurations are available. Bases can be supplied cast or fabricated to suit new or retrofit installations. Upgrades include custom bases to fit existing anchor arrays.



ACTIVE SOLUTION AFTER-SALES SERVICES

LOADCELL REFURBISHMENT: inspection checks, calibration and overhauls (cable replacement)

BENEFITS

- Fast turnaround time. No need for calibration equipment equals less time on site. Load cells are simply changed out.
- Guaranteed results. Load cells are factory calibrated and ready to install.
- Meets SIGTTO recommendations for annual calibration.
- Load cells are warranted for the length of the agreement.

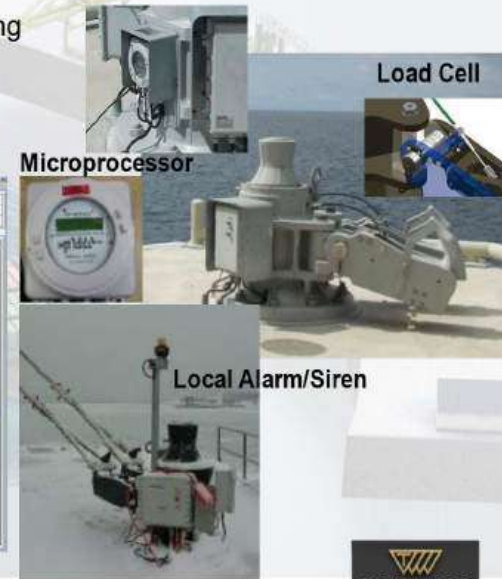
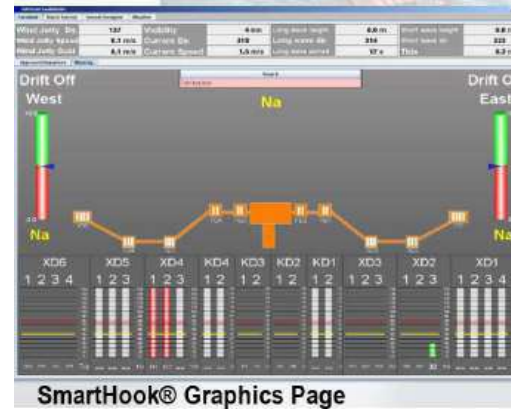
Many industry leading companies are choosing load cell exchange.

Load cell exchange is part of the Trelleborg suite of site services and can be conveniently packaged with training, site audits or programmed maintenance.



Load Monitoring System

- Real Time Mooring Line Monitoring
- Local Load Display
- Optional Local Alarm / Siren
- Operator display, reports, alarms



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TRELLEBORG SMARTPORT

AutoMoor

- Safer mooring operations – no mooring lines
- Minimizes vessel motions at berth
- Reduced mooring time increases port throughput and revenue



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TRELLEBORG SMARTPORT

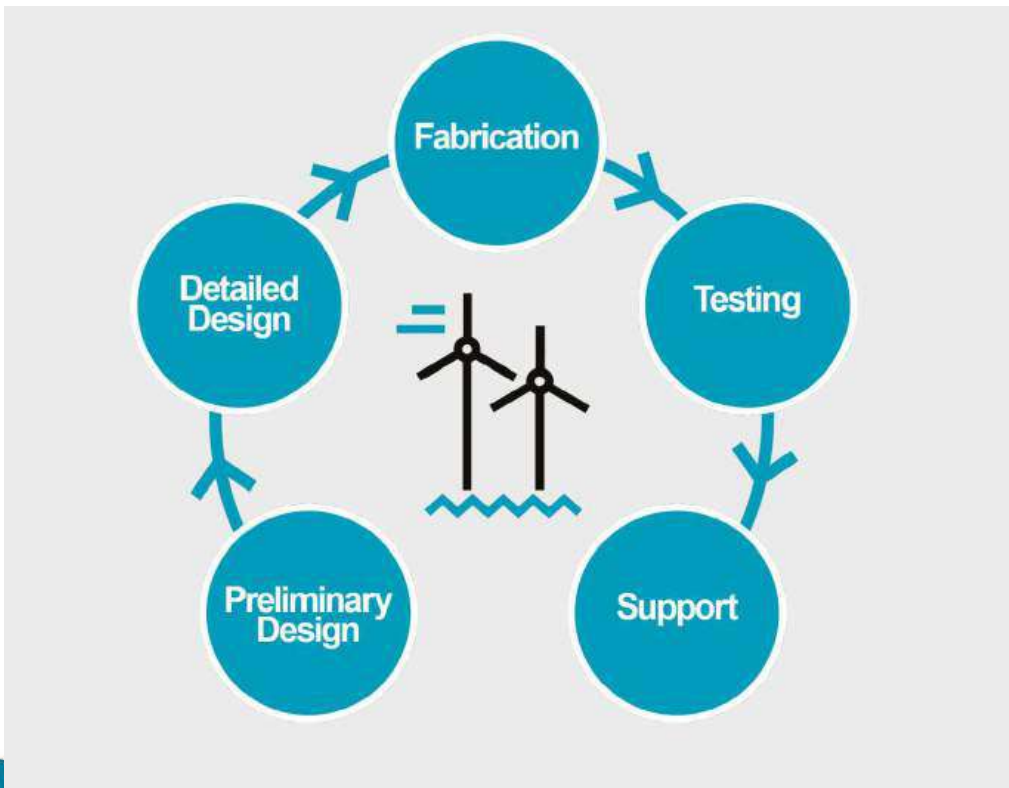
SEMINAR FOR NEW TECHNOLOGY TRAINING



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TRELLEBORG INFRASTRUCTURE

I. OFFSHORE WIND FOUNDATION SEALS



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TRELLEBORG INFRASTRUCTURE

I. OFFSHORE WIND FOUNDATION SEALS



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TRELLEBORG INFRASTRUCTURE

II. INFRASTRUCTURE OMEGA SEALS: provides an ideal solution for large Gaps movements are expected as a result of temperature and/or settlement.



3. ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

SUPPLY AND INSTALLATION OF SCK1150 RUBBER FENDER AT SITV PORT



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

Fender Installation



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ACTIVE SOLUTION EXPERIENCES

MARINE SYSTEMS

Fender Maintenance



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

Fender SCK 2000 (200,000 DWT)



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

TREELBORG FENDER INSTALLATION SCK 2000 (200,000 DWT)_AT HOA PHAT DUNG QUAT JSC



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

Fender SCK 2000 (200,000 DWT)



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

Fender SCK 2000 (200,000 DWT)



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

Arch fender AN 500 x 2000mm long, E2.7



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

SUPPLY AND INSTALLATION SCN1300 TO SSIT

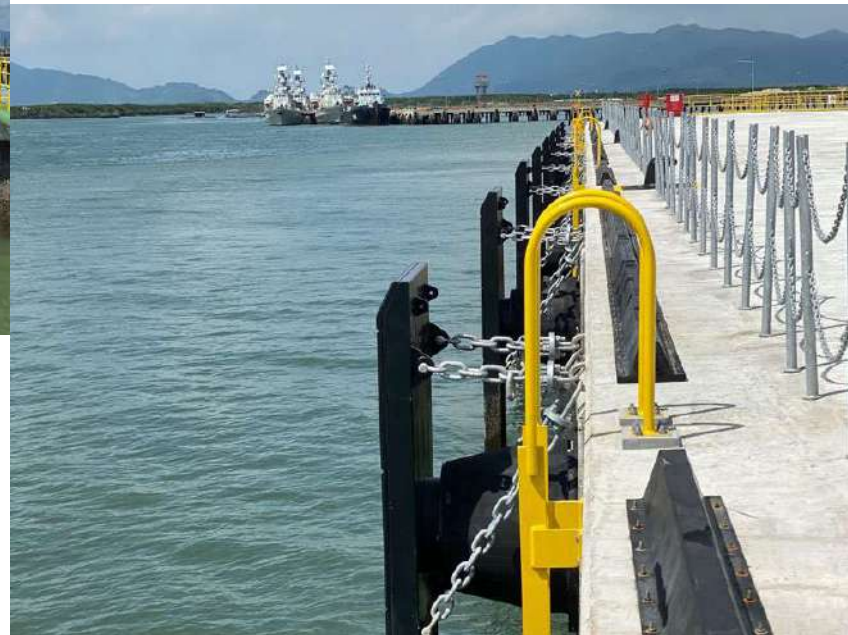


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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

SUPPLYING SCN 1000 AT CONSTRUCTION JETTY – LONG SON PETROCHEMICAL COMPLEX PROJECT



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ACTIVE SOLUTION EXPERIENCES

MARINE FENDER SYSTEMS

SUPPLY SCN1000 TO SNP PROJECT



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ACTIVE SOLUTION EXPERIENCES

- ▶ Trelleborg Fender SCK 2000 E2.4

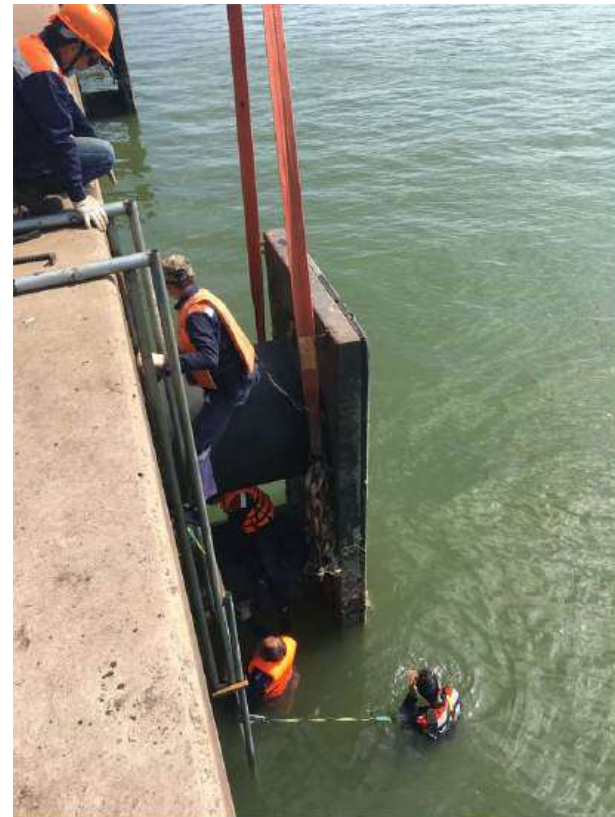
End User: **Hoa Phat Dung Quat Steel JSC**



ACTIVE SOLUTION EXPERIENCES

- ▶ Trelleborg Fender SCK1150

End User: **Saigon International Terminal Viet Nam Limited (SITV PORT)**



ACTIVE SOLUTION EXPERIENCES

- ▶ Weight chain system

End User: **SP-SSA International Container Services Joint Venture Company (SSIT)**



ACTIVE SOLUTION EXPERIENCES

- ▶ Fixing Bolt for SCN1800 Fender System

End User: **POSCO E&C**



ACTIVE SOLUTION EXPERIENCES

- ▶ Pneumatic Fender

End User: PTSC LPG FSO



ACTIVE SOLUTION EXPERIENCES

- ▶ Fender SCN 1000, SCN1300, SCN1600, SCN1800

End User: POSCO ENGINEERING & CONSTRUCTION And SCG THAILAND



ACTIVE SOLUTION EXPERIENCES

- ▶ SUPPLY PE PAD, Fender SCN1300

End User: **SP-SSA INTERNATIONAL CONTAINER SERVICES JOINT VENTURE COMPANY (SSIT)**



ACTIVE SOLUTION EXPERIENCES

- ▶ SUPPLY Quick Release Hook
- ▶ Project: LNG Thi Vai
- ▶ End User: SOUTH VIET NEW SPRING CORPORATION
- ▶ Owner: PETROVIETNAM GAS JOINT STOCK CORPORATION/PVGAS PROJECT MANAGEMENT COMPANY



ACTIVE SOLUTION EXPERIENCES

- ▶ SUPPLY Fender SCN1800, SCN1600
- ▶ Project: LNG Thi Vai
- ▶ Client: SOUTH VIET NEW SPRING CORPORATION
- ▶ Owner: PETROVIETNAM GAS JOINT STOCK CORPORATION/PVGAS PROJECT MANAGEMENT COMPANY (PV GAS)



ACTIVE SOLUTION EXPERIENCES

- ▶ SUPPLY **Fender** SCN1800, SCN1600 and **Quick Release Hook**
- ▶ Project: LNG Thi Vai
- ▶ Client: SOUTH VIET NEW SPRING CORPORATION
- ▶ Owner: PETROVIETNAM GAS JOINT STOCK CORPORATION/PVGAS PROJECT MANAGEMENT COMPANY (PV GAS)



Vietnam - Thi Vai LNG terminal

Located in the southern province of Ba Ria Vung Tau, when operational, the terminal will boast the capacity of one MTPA in 2022, and three MTPA in the second phase of development. In order to safeguard the traffic of LNG carriers plying international routes, it was vital that we upgraded the terminal with an integrated berthing system that successfully meets international LNG operation safety and quality specifications and standards. We've no doubt Trelleborg is the ideal strategic partner to realize our ambition of facilitating LNG supply as one of the major energy sources for Vietnam.

- PV GAS Project Management Company at PetroVietnam Gas

ACTIVE SOLUTION EXPERIENCES

- Supply SCN600 Fender System for – Vinh Tan 2 Thermal Power Plant

End user: Phu Xuan Construction and Consultant Joint Stock Company Owner: Power Generation Joint Stock Corporation (**EVNGENCO3**)



4. OUR VALUE CUSTOMERS

- ❖ PV GAS
- ❖ Gemadept Corp
- ❖ PTSC Vietnam (Petroleum Technical Services Company)
- ❖ Vietsovpetro
- ❖ EPS
- ❖ Binh Son Refinery Petrochemical Company Limited
- ❖ Nghi Son Refinery and Petrochemical Limited Liability Company
- ❖ Hoa Phat Dung Quat Steel JSC
- ❖ SITV port
- ❖ EVN
- ❖ Long Son Petrochemicals
- ❖ SSIT
- ❖ Saigon new port
- ❖ Etc..

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GEMADEPT CORPORATION

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5. CONTACT US

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Website: **<https://activesolution.vn/>**



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6. OUR TRACK RECORD

Please see attachment

End



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