



COMPANY PROFILE.

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COMPANY PRINCIPLE

1. PROFILE.





1.PROFILE.

COMPANY
INTRODUCTION

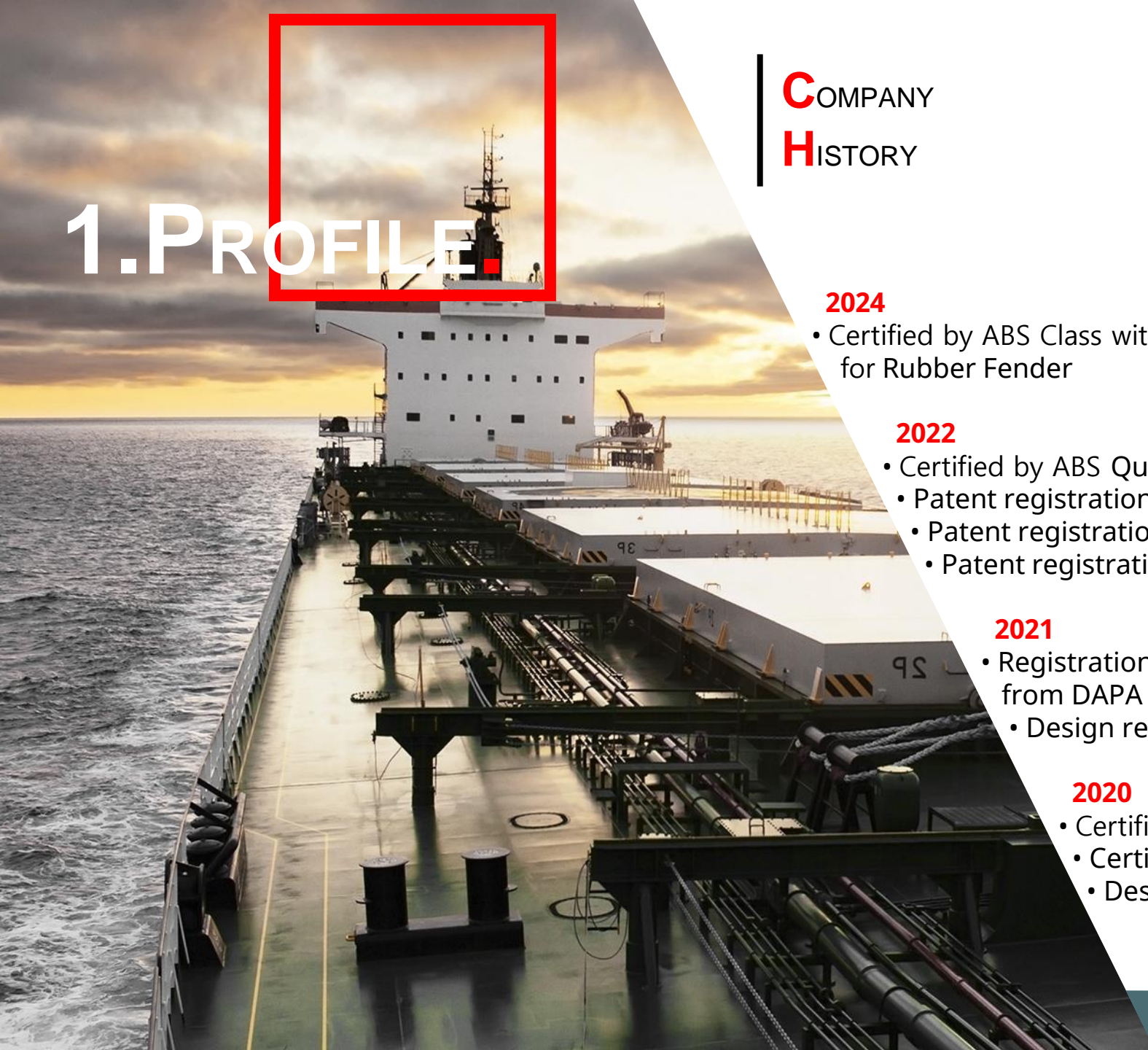
YMI Corporation
Your best Maritime Innovation partner-

We **YMI** are specialized in the Design, Engineering, Manufacturing, Installation of Marine Equipment and System.

We **YMI** are able to assist you in all your requirements of Berthing & Mooring & Dredging Line and Pontoon and Marine Products.

We **YMI** offer products and services to Major Ports, Contractors, Vessel Owners, Ship chandler, Shipyard

We have sound knowledge of Marine Products.



1.PROFILE.

COMPANY HISTORY

2024

- Certified by ABS Class with ISO 17357-1:2014(E) and PIANC 2002 for Rubber Fender

2022

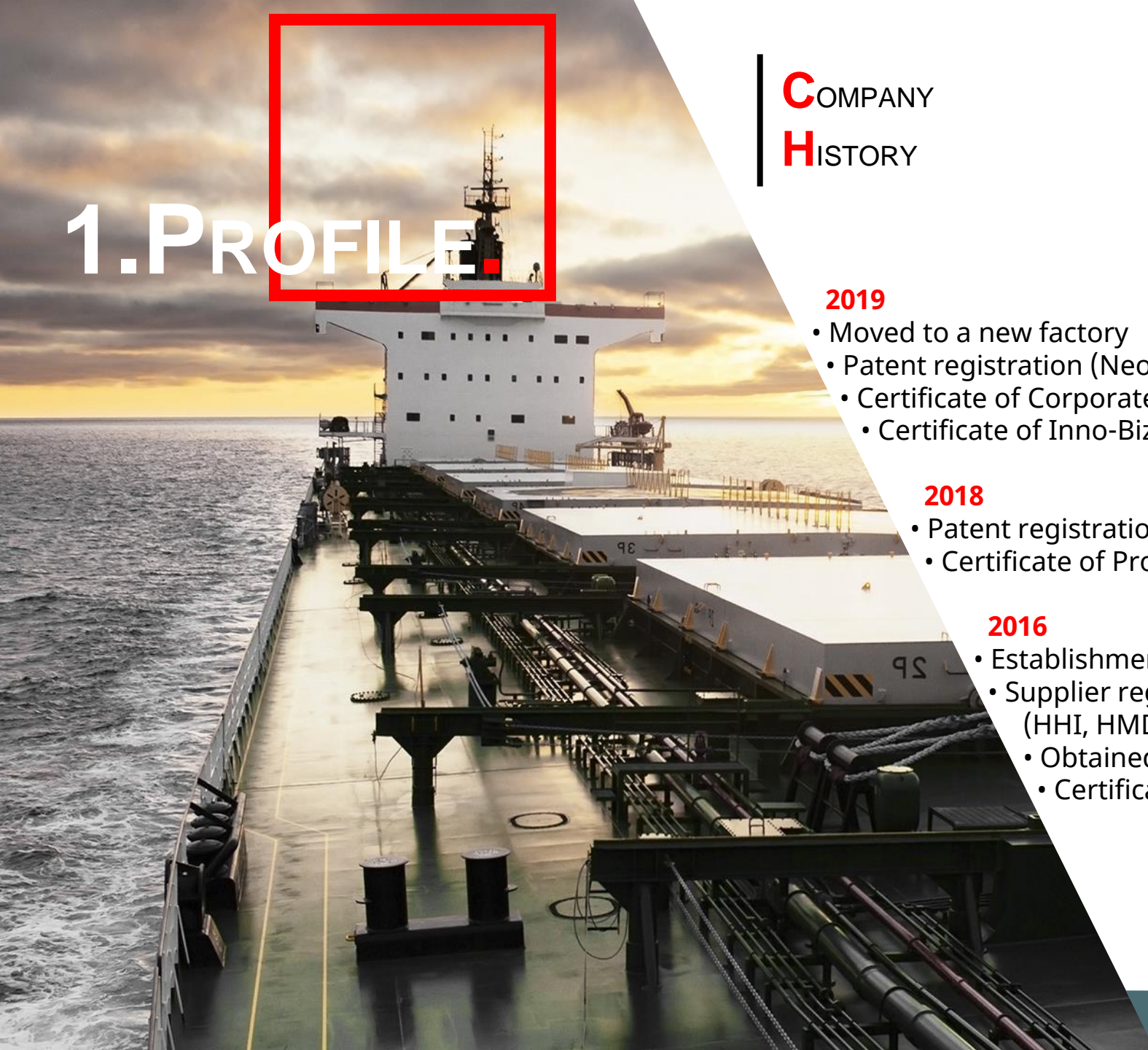
- Certified by ABS Quality Evaluations with ISO 9001, 14001, 45001
- Patent registration(Steel Structure for Fender)
- Patent registration(Underwater Fender)
- Patent registration(Anti Damage of Ship Hull Pneu- Fender)

2021

- Registration of Foreign Procurement & Arms Trade Agency from DAPA
- Design registration (Submarine Fender)

2020

- Certified by ABS Class with WPS
- Certificate of Ppuri Corporate
- Design registration(Nut for Anchor Bolt)



1.PROFILE.

COMPANY
HISTORY

YWI YMI Corporation
Your best Maritime Innovation partner-

2019

- Moved to a new factory
- Patent registration (Neo Cover for Pneu-Fender)
- Certificate of Corporate R&D Center
- Certificate of Inno-Biz

2018

- Patent registration(Bollard Installation Method)
- Certificate of Promising Small and Medium Enterprise in Export

2016

- Establishment of **YMI Corporation**
- Supplier registration to Korean Major Shipbuilding company (HHI, HMD, DSME, SHI, STX, HHIC)
- Obtained ISO9001:2015 & ISO14001:2015
- Certificate of Venture Business by SBC



1.PROFILE.

COMPANY

ORGANIZATION



2. CAPABILITY.



2. CAPABILITY.

COMPANY
CAPABILITY

6 EXPERTISES



DESIGN



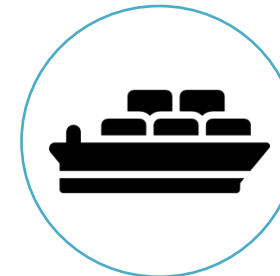
RESEARCH



ENGINEERING



MANUFACTURING



SUPPLY



INSTALLATION

ONE STOP

2. CAPABILITY.

GUARANTEED
DESIGN

4.1.0 BERTHING ENERGY CALCULATION

Detailed Berthing Energy Calculations in accordance with ISO 24741 - Part 1: 2004 of Landed vessel as per document, 04_Appendix 2, Section 2.1, is given below.

MODEL TYPE	MSL TOWNSHIP	CONCRETE	LEADER	LANDER
Deadweight (DWT)	8,204 T	8,204 T	1,625 T	15,102 T
Displacement (DS)	13,652 T	13,652 T	1,601 T	27,745 T
Length Overall (Lo)	110.00	110.00	120.00	148.00
Length Berth Per (Lb)	100.00	100.00	120.00	140.00
Beam (B)	30.00	30.00	30.00	27.00
Design Draft (D)	0.00	0.00	0.00	0.00

BERTHING DATA

Direction Type	Side Berthing
Input from Bow	20% (Quarter Front)
Berthing angle (a)	10 Degree
Value Mass Coefficient (Cv)	1.00
Exceeding Coefficient (Cv)	0.00
Beam Configuration Coefficient (Cv)	1.0
Surface Coefficient (Cv)	1.0

BERTHING ENERGY

Berthing Velocity (V)	100 m/s	100 m/s	100 m/s	100 m/s
Normal Energy (E)	100 kJ/m	100 kJ/m	12.4 kJ/m	200 kJ/m
Factor of safety (F)	1.20	1.20	1.20	1.20
ABNORMAL BERTHING ENERGY (E)	312 kJ/m	208 kJ/m	21.1 kJ/m	611 kJ/m

1. Berthing Energy Calculation

5.1.0 FENDER SELECTION

The proposed fender system is provided for maximum vessel size along with the tension and weight chain arrangement.

Hence the fender panel is analyzed and designed for the maximum fender reaction by distributing the load as a uniform pressure on the effective area of the fender panel.

5.2.0 YOUNG'S MODULUS CHECK

The capacity of the selected fender is verified for the Large DWT Vessel (20,000T) which gives the largest abnormal berthing energy (611 kJ/m).

Model (DWT)	Target (15,100 DWT)
Modulus of Elasticity per system (E)	80
Modulus Deflection (N)	70
Reaction force (kN)	1202
Energy absorption (kJ/m)	626
Accepted abnormal E, Energy (kJ/m)	611
Check	PASS

The proposed fender layout is presented in CPY0006-YOUNG'S MODULUS GA drawing.

2. Fender Selection

11.0 ASSUMPTIONS

The proposed fender system is provided for maximum vessel size along with the tension and weight chain arrangement.

Hence the fender panel is analyzed and designed for the maximum fender reaction by distributing the load as a uniform pressure on the effective area of the fender panel.

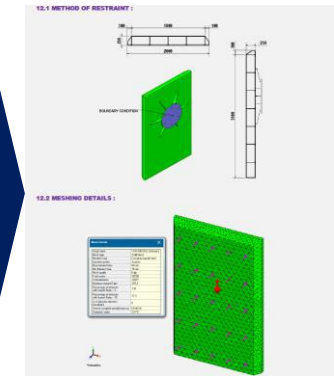
12.0 LOAD CASE - FULL FACE CONTACT

I. Dead Load $\rightarrow 25.5$ kN (Self weight of the Panel)
II. Live Load $\rightarrow 1202$ kN (Fender's Rated Reaction)

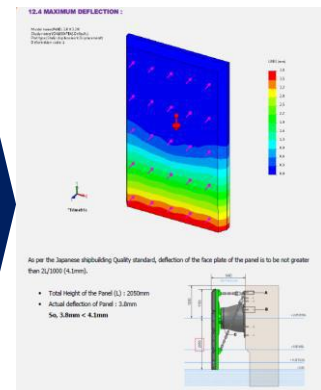
The fender reaction load (Live load) is applied as pressure on the effective area of the fender panel.

\checkmark 1202 kN/(12.0 m x 3.1 m) $\rightarrow 215.4$ kN/m²

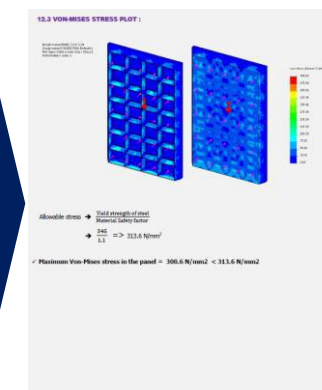
3. Panel Calculation



3. Panel Calculation



4. Panel Maximum Deflection



5. Panel Stress Plot

13.0 TENSION CHAIN CALCULATION

The following berthing conditions are considered to decide about the necessity of Tension chains.

- Impact @ lower water level

Vertical distance between Tension chain to centre of the fender (a) = 0.05 m

Distance between Bottom edge of effective length of panel to centre of second fender (b) = 2.05 m

Total Length (L) = a + b \rightarrow 2.10 m

The reaction of Fender (R) @ 10%

$R = 1202$ kN

$F_{chain} = \frac{R}{2} \rightarrow 601$ kN

Chain Force per chain is $\frac{F_{chain}}{2} \rightarrow 300.5$ kN

TENSION CHAIN DESIGN RESULT

Sr. No.	CONDITION	PHIL. TENSION FORCE	POS.	PHIL. RING BREAKING LOAD	SELECTED CHAIN SIZE	PHIL. OF CHAIN
01	Low Level Impact	300.5 kN	3.0	961.5 kN	Dim. 35, 15, 100	164 kN

SHACKLE DESIGN RESULT

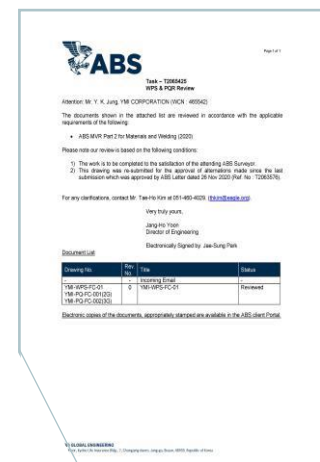
Sr. No.	CONDITION	PHIL. TENSION FORCE	SHACKLE SIZE	PHIL. OF SHACKLE	POS.	WEAKEST LINK
01	Low Level Impact	300.5 kN	Dim. 35	810 kN	2.6 < 3.0	YES

Shackles are used as weak links and therefore their safety factor must be less compared with the safety factor of the selected chain.

6. Chain & Shackle Calculation

2. CAPABILITY.

COMPANY CERTIFICATES



WPS CERTIFICATE



ISO 9001:2015



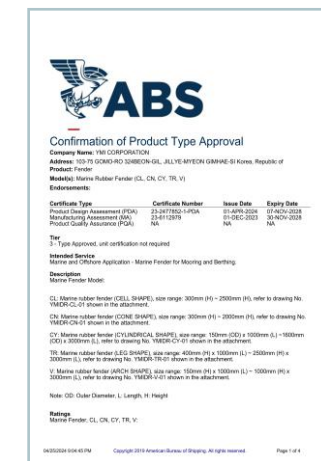
ISO 14001:2015



ISO 14001:2015



ISO 17357-1:2014(E)
PNEUMATIC FENDER



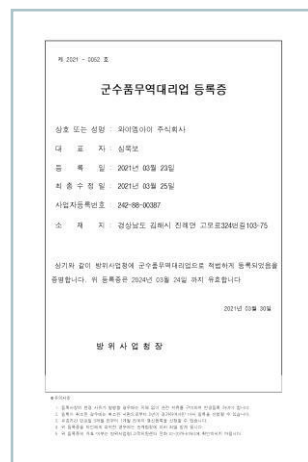
PIANC 2002
RUBBER FENDER

2. CAPABILITY

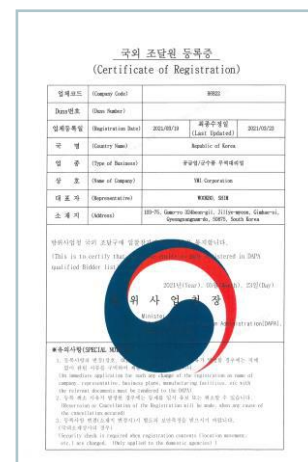
COMPANY CERTIFICATES



CORPORATE R&D CENTER
CERTIFICATE



MUNITIONS TRADES
AGENCY CERTIFICATE



FOREIGN PROCUREMENT
CERTIFICATE



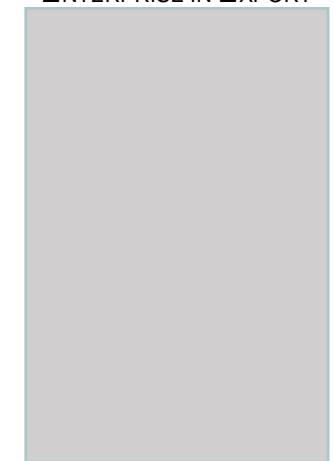
PROMISING SMALL & MEDIUM
ENTERPRISE IN EXPORT



VENTURE BUSINESS
CERTIFICATE



INNO BIZ
CERTIFICATE



-



COMPANY PATENTS & DESIGN



PATENT-BOLLARD



PATENT-Neo COVER



PATENT APPLICATION-FENDER



PATENT APPLICATION-FENDER



DESIGN REGISTRATION-NUT FOR ANCHOR BOLT



PATENT APPLICATION-UNDERWATER FENDER



DESIGN REGISTRATION-SUBMARINE FENDER

3. ITEM LIST.



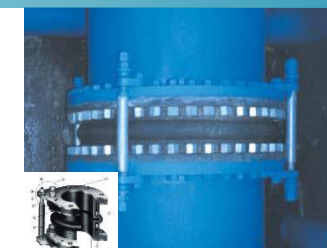
3. ITEM LIST



BERTHING



MOORING



DREDGING LINE



PONTON

3. ITEM LIST.

BERTHING

- SYSTEM FENDER

- Description : Decrease damage of ships in ship to dock accessing the pier.
- Feature : By adjusting frontal system space, required hull pressure can be easily controlled and changed.
- Type : Cell Fender, Cone Fender, TR Fender

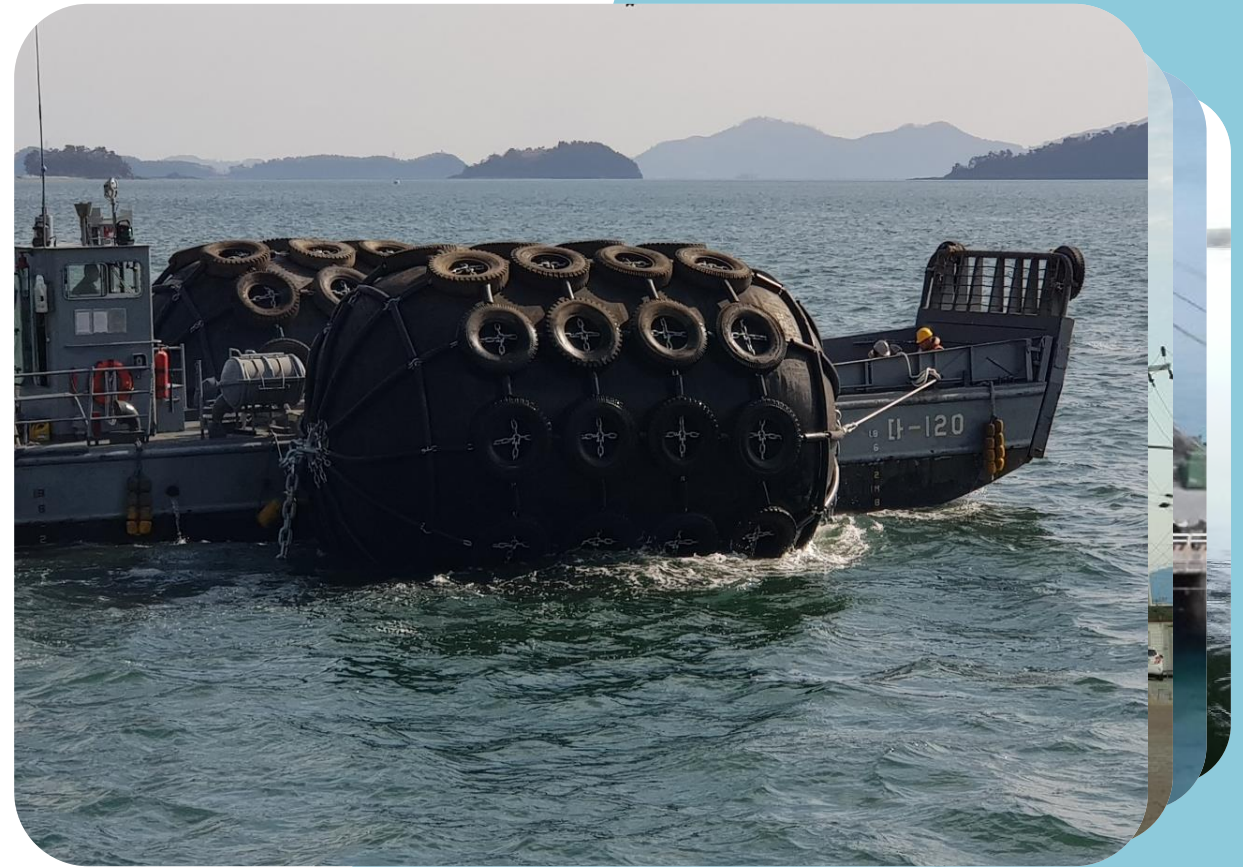


3. ITEM LIST.

BERTHING

- PNEUMATIC FENDER

- Description : Decrease damage of ships in ship to ship / ship to dock accessing the pier.
- Feature : Loadable on ship to use in berthing, repairable for longer lifespan.
- Type : Sling, Chain net tire, Submarine



3.ITEM LIST.

BERTHING

- **F**OAM PRODUCT

- **F**OAM FILLED FENDER

- Description : Decrease damage of ships in ship to ship / ship to dock accessing the pier.
- Feature : Loadable on ship to use in berthing, Unsinkable and long life term and No air leakage
- Type : Sling, Chain net tire



3.ITEM LIST.

BERTHING

- **F**OAM PRODUCT

- **D**ONUT FENDER

- Description : Decrease damage of ships in ship to Mono Pile and dolphin.
- Feature : Unsinkable and long life term and No air leakage
Low shear force, self adjusting with water level
& all tide mooring



3.ITEM LIST.

BERTHING

- **F**OAM PRODUCT

- **F**OAM FENDER

- Description : Decrease damage of ships in ship to dock accessing the pier. and protecting vessel and bridge.
- Feature : Various size and shape as customer requirement.
Low maintenance cost, various color selection



3.ITEM LIST.

BERTHING

- SSOLID FENDER

- Description : Decrease damage of ships in ship to ship / ship to dock accessing the pier.
- Feature : The most common fender in the port.
Easy installation & maintenance.
- Type : OV Fender, NV Fender, CV Fender,
CY Fender, BP Fender, Roller Fender,
Corner Fender



3.ITEM LIST.

BERTHING

- SHIP FENDER

- Description : Decrease damage of ships in ship to ship / ship to dock accessing the pier.
- Feature : For small jetty and wharf.
Easy & quick installation and maintenance.
Applied to works boat and tug boat and service craft
- Type : DC Fender, DD Fender, RC Fender, BC Fender, D & DA Fender, W Fender, Key Hole Fender



3.ITEM LIST.

MOORING

- BOLLARD

- Description : When berthing of ships, a pillar to hang mooring ropes. Fixes a ship on dock completely after berthing.
- Feature : Strong and durable designs , very low maintenance Large line angles possible.
- Type : Tee Head Bollard, Post, Bollard



3.ITEM LIST.

MOORING

- RUBBER LADDER

- Description : The purpose is moving ship to land.
Protecting vessel damage when
vessel berthing a pier
- Type : R-Rubber Ladder, L-Rubber Ladder



3.ITEM LIST.

MOORING

- CAR STOPPER

- Description : The purpose is to stop a vehicle when the brake failed.
- Type : Stainless Car Stopper, P.E Car Stopper
Rubber Car Stopper



3.ITEM LIST.

MOORING

- EEDGE PROTECTOR

- Description : It's protecting for edge of concrete pier.
And protecting mooring rope damage.
- Type : R-Rubber Edge Protector, S-Rubber Edge Protector,
Stainless Edge Protector



3.ITEM LIST.

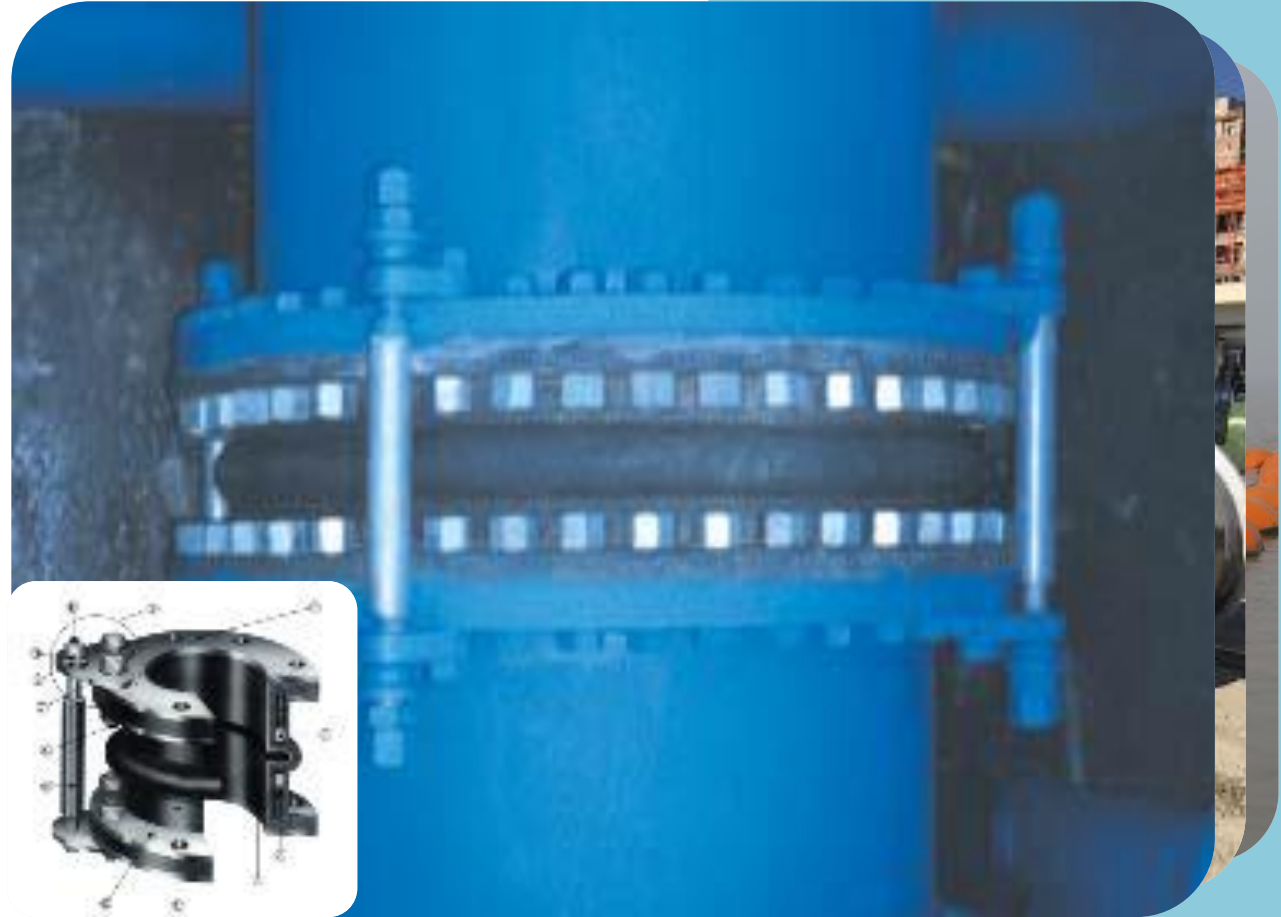
DREDGING LINE

- EXPANSION JOINT

- Description : A expansion joint is a flexible connector fabricated of natural or synthetic elastomers and fabrics.

Noteworthy performance features include flexibility in either single or multiple arch type construction, isolation of vibration and noise resistance to abrasion and chemical erosion.

Expansion joint can solve anticipated problems of vibration, noise, shock, corrosion, abrasion, stresses and space by incorporating rubber expansion joints into designed piping system.



3.ITEM LIST.

DDREDGING LINE

- SSLEEVE RUBBER HOSE

- Description : For suction and discharge of gravel and sand.
For suction and moving of chemical.
- Type : Flange type band, Straight type band,
Enlarged type band



3.ITEM LIST.

DDREDGING LINE

- P.E FLOAT

- Description : Buoyancy to float pipeline.
- Feature : Light weight, easy for transportation, installing and uninstalling
The Color is for warning at night and daytime
Anti-waves, wear resistance, impact resistance, corrosion resistance
Good price compared to performance
- Application : Used in dredging and pipeline
It can be used in dredging pipe line in the sea, lake or river
Particular used in laying the pipes on the water used in dredging project



3.ITEM LIST.

PONTOON

- CONCRETE PONTOON

- Description : Various floating structures such as marine floating structures, pontoon, floating houses, are installed commonly to make a moving route near the coast of the sea, rivers, lakes.
- Feature : High stability against external load
No corrosion
Excellent durability and semi-permanent
Good rolling resistance due to Concrete weight



3. ITEM LIST.

PONTOON

- P.E PONTOON

- Description : Various floating structures such as marine floating structures, pontoon, floating houses, are installed commonly to make a moving route near the coast of the sea, rivers, lakes.
- Feature : Possible to Manufacture various size and shape.
Good shock absorption and no corrosion
Easy installation and short manufacturing time.
Eco Friendly and Low contaminant.



3.ITEM LIST.

PONTOON

- **FRP** PONTON

- Description : Various floating structures such as marine floating structures, pontoon, floating houses, are installed commonly to make a moving route near the coast of the sea, rivers, lakes.
- Feature : Possible to Manufacture various size and shape.
Good shock absorption and no corrosion
Easy installation and short manufacturing time.



4. MAIN CLIENT.





Client
Domestic

YWi YMI Corporation *Your best Maritime Innovation partner-*





Client
Oversea

Yw YMI Corporation
Your best Maritime Innovation partner-



5. REFERENCE.



5. REFERENCE.

Main Project Reference

Customer	Product Name
Hanwha Ocean	Submarine Pneumatic Fender 4500D x 6400L
Hanwha Ocean	Pneu-Fender 3300D x 6500L CTN for hull coating damage protection
HD Hyundai Heavy Industries	Pneu-Fender 3300D x 6500L CTN for hull coating damage protection
HD Hyundai Mipo	Pneu-Fender 3300D x 6500L CTN for hull coating damage protection
DAEWOO E&C	Donut Fender 2210 x 4500L, CY Fender 1000D x 2000L
Samsung Heavy Industries	Foam Filled Fender 1500D x 5500L
HJ Shipbuilding & Construction	Bollard 25T, 70T, 100T, 150T
R.O.K Transportation Command	Bollard 100T
R.O.K Transportation Command	OV Fender 1000H x 2000L
Korean Navy	Foam Filled Buoy 2300D x 1750L
Busan Port Authority	Tee Head Bollard 150T
Busan Port Authority	NV Fender 300H, 500H, 600H, 800H, 1000H
Busan Port Authority	Roller Fender 600D x 3R, 750D x 3R, 900D x 3R
GS Construction - Myanmar	OV Fender 400H x 2000L
Indonesia Pelindo	Cell Fender 1000H
Bangladesh Navy	Wing Fender 200H x 3200L



6. PRINCIPLE.

Our YMI **PRINCIPLE** is,

THE MOST PROFESSIONAL,

THE MOST INNOVATIVE,

THE MOST SAFE.

Thank you.

For your precious time and your attention.