

Alexandria International Container Terminals (AICT)
Supply new floating fenders at both terminals

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1.0 Introduction:

Alexandria International Container Terminals (AICT) operates two terminals at Alexandria and El Dekheila ports, where both ports are located on the Mediterranean Sea, AICT intend to use the best products available to meet our specific requirements to prevent boats, ships and marine vessels from colliding against Quay wall at both terminals.

2.0 Scope of work:

Scope of work shall include but not limited to:

- Supply new floating foam fenders at both terminals for the berthing and mooring of all container vessels for hull pressure and tidal variations.
 - ALX terminal: 2 new foam fenders.
 - DKT terminal: 4 new foam fenders.
- Fenders should have a good wear and tear resistant to absorb impacts even in an aggressive environment
- Fenders should have Low reaction and high energy options
- 100% closed cell foam core and a tough and thick reinforced polyurethane skin
- Fender must be made of synthetic-cord-reinforced rubber sheets internal and exterior, and work as a shock absorber between vessels and berthing structures.
- A durable, non-marking finish with low maintenance comes as standard, No chain/tyre net required, and designed to be Unsinkable, Fenders can be deployed floated or suspended, against quay wall operations.
- Fenders must suit all sites with small or large tidal changes. They also work just as well on new or old structures.
- Fenders must be manufactured and 3rd party certified in compliance (the certificate must have the same serial of each tested fender) with ISO 17357-1:2014. The stringent requirements of this standard ensure that fenders are of a high quality and can withstand the rigorous environments and applications they are designed to operate in.
- Fender should be tested against ultimate compression, energy absorption, capacity and reaction forces, transverse pull test and longitudinal pull test.
- Synthetic tyre-cord layers must prove to be the best option for strong, efficient reinforcement for foam fenders. Each layer is coated with a rubber compound on both sides that prevents contact between the layers.
- The tough abrasion resistant outer rubber must be designed to protect the inner rubber and tyre-cord layers from damaging external forces. The material has

mechanical properties to withstand the arduous operational conditions for which it is designed.

- All materials and items of plant shall be of good quality (**Hot Deep Galvanized**) and be able to operate in and withstand the environment in which they will be working, see below details in Arc No.04.(**galvanization certificate is required**)
- Supplier should submit with his technical offer a time frame for all project phases including shipping time
- Supplier shall mention clearly the lifetime of his offered fenders system also the manufacturer warranty period.
- Supplier should have a good previous experience with container terminal fender system supply and installation during last 6 years supported with all needed documents and certificate
- 1% will be deducted for each week delay in delivery with maximum of 10% of total value.
- AICT shall retain 10% from the total invoice as a warranty for a period of (24) months which shall be released after the complete satisfaction of AICT at the end of the Warranty period.
- Pricing to according to attached BOQ.

Instructions to tenderers:

1- All offers should comply with attached conditions and specification and be presented within sealed bids envelopes to the following address with Attention of Mr. Darrius Teo (CEO), Supply new foam fenders (T/CIV/.../2022)::

Alexandria International Container Terminal Co. (AICT)
DKH Port
Alexandria, Egypt

2- All offers should be received no later than 2022, the period of validity of the tender, this date will not be considered.

3- All tenderers acknowledge that by submitting their offers that they have confirmed visiting project site and briefed on local conditions that will be the basis for execution of the works included in this tender.

4- The submission of a tender implies the acceptance of the terms and conditions set out in this invitation to tender and in the specifications and, where appropriate, the waiver of the tenderer's own general or specific terms and conditions. It is binding on the tenderer to whom the contract is awarded for the duration of the contract.

5- Tenderers will bear alone all the cost required for preparation and presentation of their offers.

All costs incurred during the preparation and submissions of tenders are to be borne by the tenderers and will not be reimbursed.

6- All offers should be valid and open for acceptance by employer (AICT) for a minimum period of 90 days from the date of offers submission. If the Employer requires the extension of offer validation date after that, the Employer (AICT) will notify tenderers in writing or by Email to do so.

7- Official language of the documents is the English language and the Arabic language may be used only for some parts in the offer documents related to local conditions and codes (if any) and both financial and technical offer should be English languages.

8- The tenderer must submit three (3) full complete sets of the financial and technical offers, one of the three copies must be stamped with the words "original". The other two copies with the word "copy". In case of any differences between the documents, the sealed copy with the word "original" will prevail. In addition, the original copy of the tender documents that have been received from the employer shall be included in the offer with the signature and stamp of all pages by the tenderer.

9- All original documents received by the employer (AICT) should be signed and stamped on each page by the tenderer and included with the submitted offers.

10- All offers should be submitted in two stamped envelope, the first envelope includes technical offer, the second envelope includes financial offer. Both envelopes will be clearly marked in writing outside of the two envelopes.

11- The inner envelope must also contain two separate, sealed envelopes.

12- Each of these envelopes must clearly indicate the content ("Technical", "Financial").

3.0 Technical specifications:

- Vessels Details :

- Type : Containers.
- Deadweight : 72982 (T)
- Displacement : 99577 (T)
- Length overall : 294 (M)
- Length between parps : 276 (M)
- Beam : 40 (M)
- Draft : 14.021 (M)
- Free board : 5.416 (M)

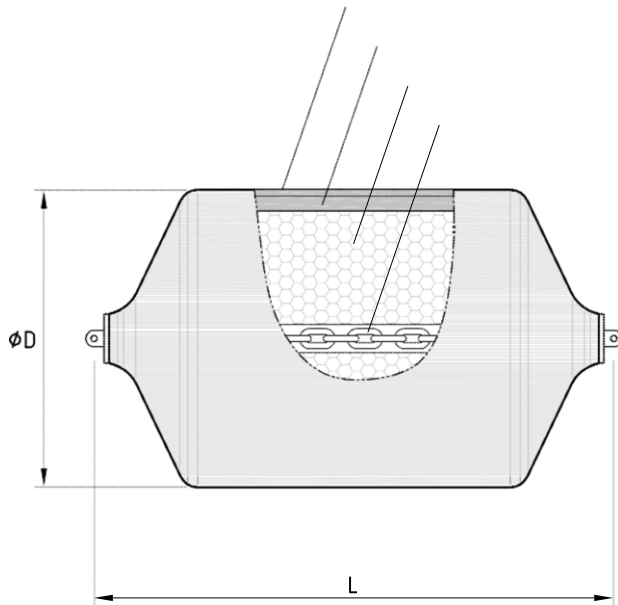
- Berth Details :

- Length of berth : 511 (M) (DKH terminal) and 380 (M) (ALX terminal)
- Fender spacing : 20-25 (M)
- Tidal range : 0.40 to 0.6 (M)
- Highest ast. Tide : 0.61 (M)
- Mean sea level : 0.5 (M)
- Lowest ast. Tide : 0.34 (M)
- Quay level : 2.40 (M)
- Sea bed level : -12.0 (M)

- **Berthing Mode** : Side berthing

- **Berthing Approach** : Difficult berthing

- **Fenders standards and minimum technical requirements**



- outer wear surface, UV resistant, non-marking Polyurethane reinforcement in Polyurethane skin
- Heat laminated closed cell Polyethylene foam
- Heavy duty chain connecting swivel end fitting

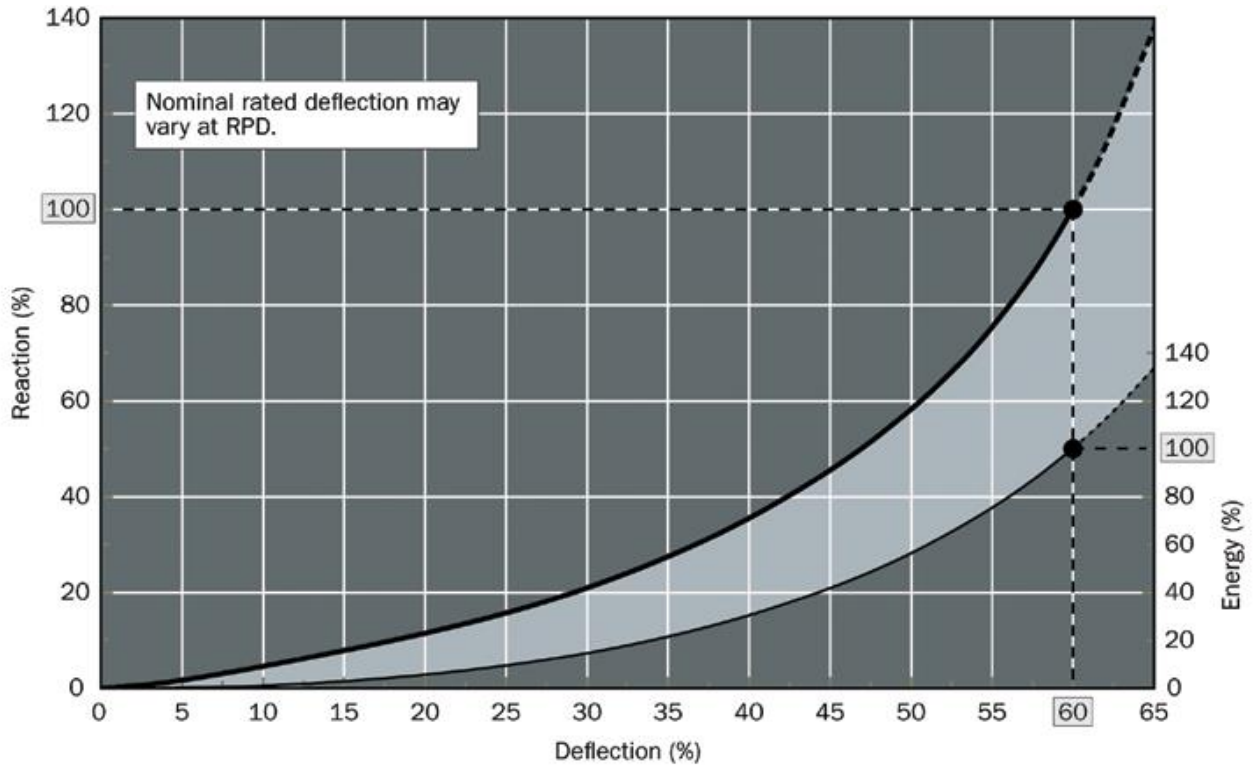
- Outer and Inner Rubber Material Properties;

Test item	Test method	Required value	
		Outer rubber	Inner rubber
Tensile strength	BS ISO 37	18 Mpa or more	10 Mpa or more
Elongation	BS ISO 37	400% or more	400% or more
Hardness	ISO 7619	60 +/- 10 (durometer hardness test type A)	50 +/- 10 (durometer hardness test type A)
After ageing	ISO 188	Air oven ageing. 70°C +/- 1°C. 96 h	Air oven ageing. 70°C +/- 1°C. 96 h
Tensile strength	BS ISO 37	Not less than 80% of the original property	Not less than 80% of the original property
Elongation	BS ISO 37	Not less than 80% of the original property	Not less than 80% of the original property
Hardness	ISO 7619	Not to exceed the original property by more than 8	Not to exceed the original property by more than 8
Tear	BS ISO 34-1	400 N/cm or more	-
Compression set	ISO 815	30% (70°C +/-1°C for 22h) or less	-
Static ozone resistance	ISO 1431-1	No cracks after elongation by 20% and exposure to 50 pphm1 at 40°C for 96 h.	-

- Performance Data;

Initial Pressure	50kPa = 0.5kgf/cm ² = 7.1psi			80kPa = 0.8kgf/cm ² = 11.4psi		
	Size (OD x L) (mm)	Energy (kNm)	Reaction (kNm)	Pressure (kNm)	Energy (kNm)	Reaction (kNm)
1350 x 2500	102	427	130	142	561	170
1500 x 3000	153	579	132	214	761	174

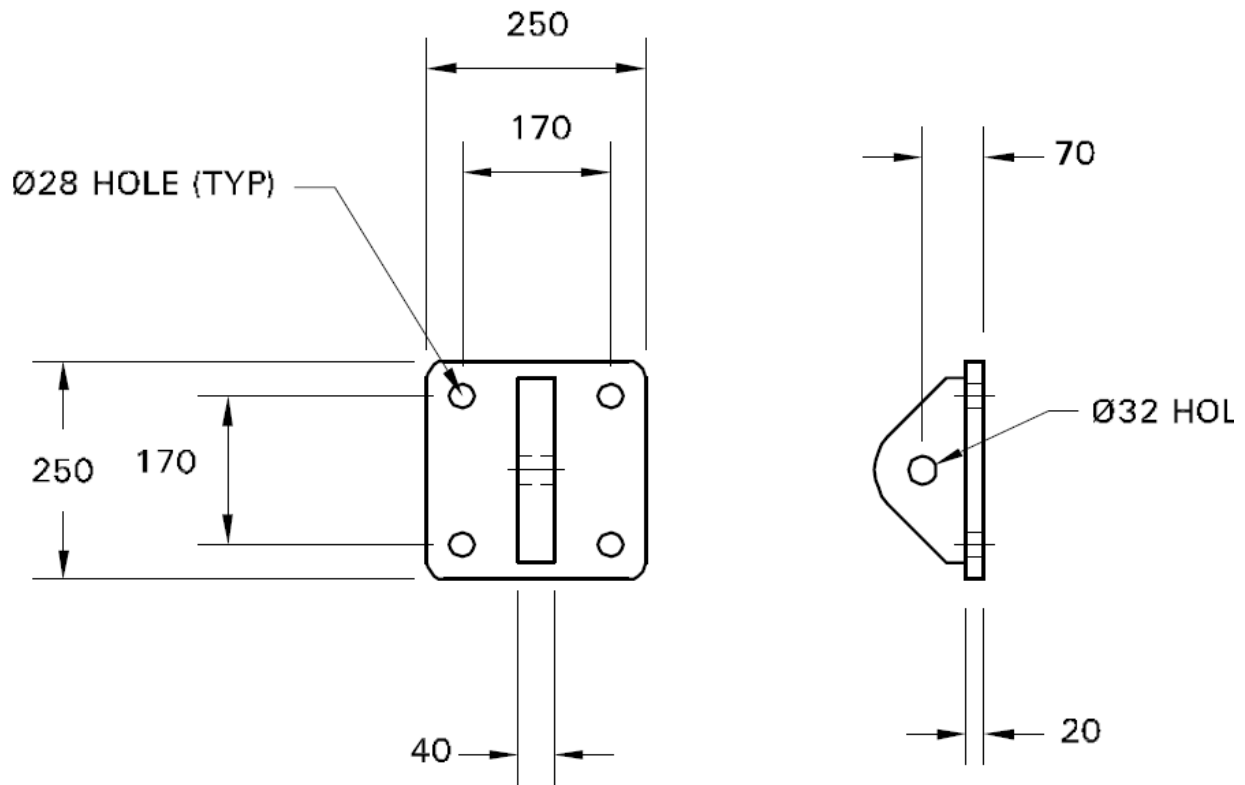
- Performance Curve;



4.0 Accessories:

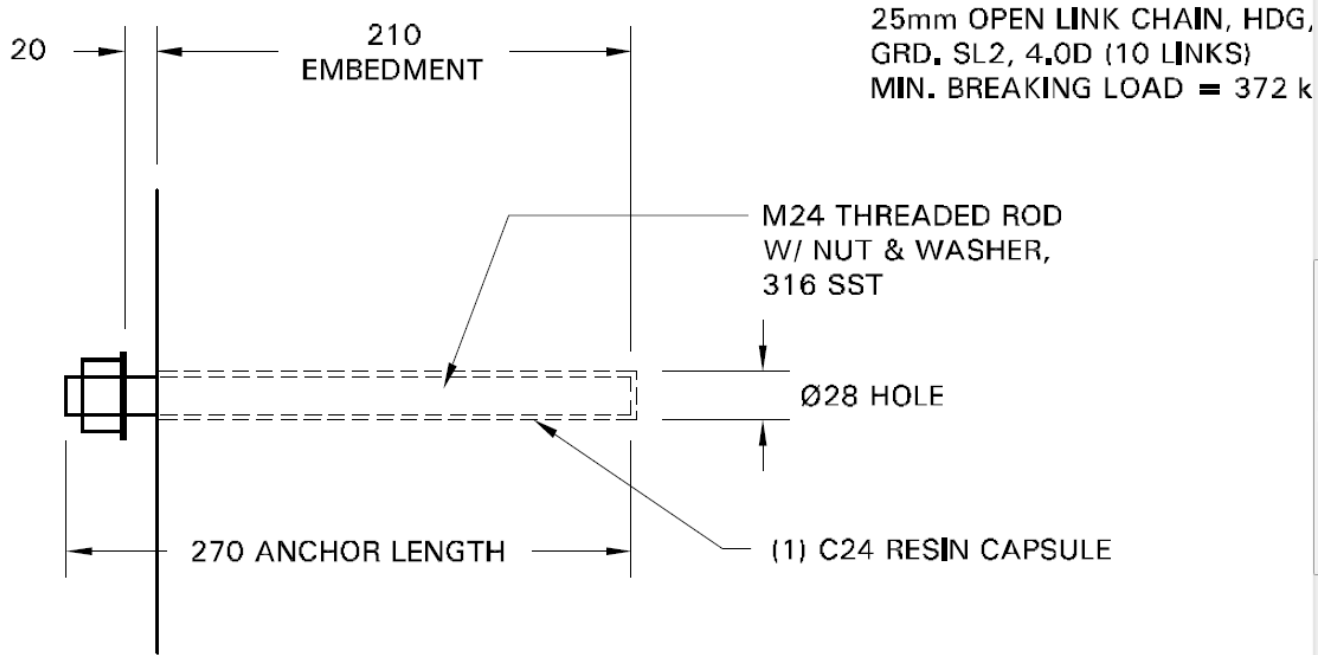
- **For Fender 1350 x 2500**

1. Dock Plate :

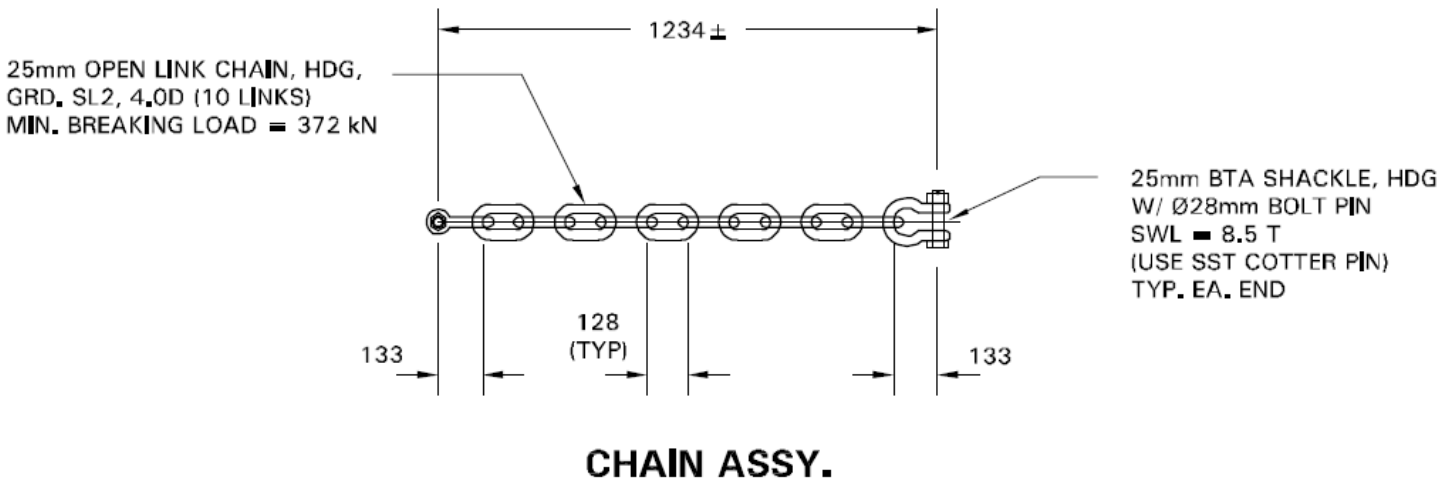


DOCK PLATE ASSY.

2. Anchors :



3. Chains :

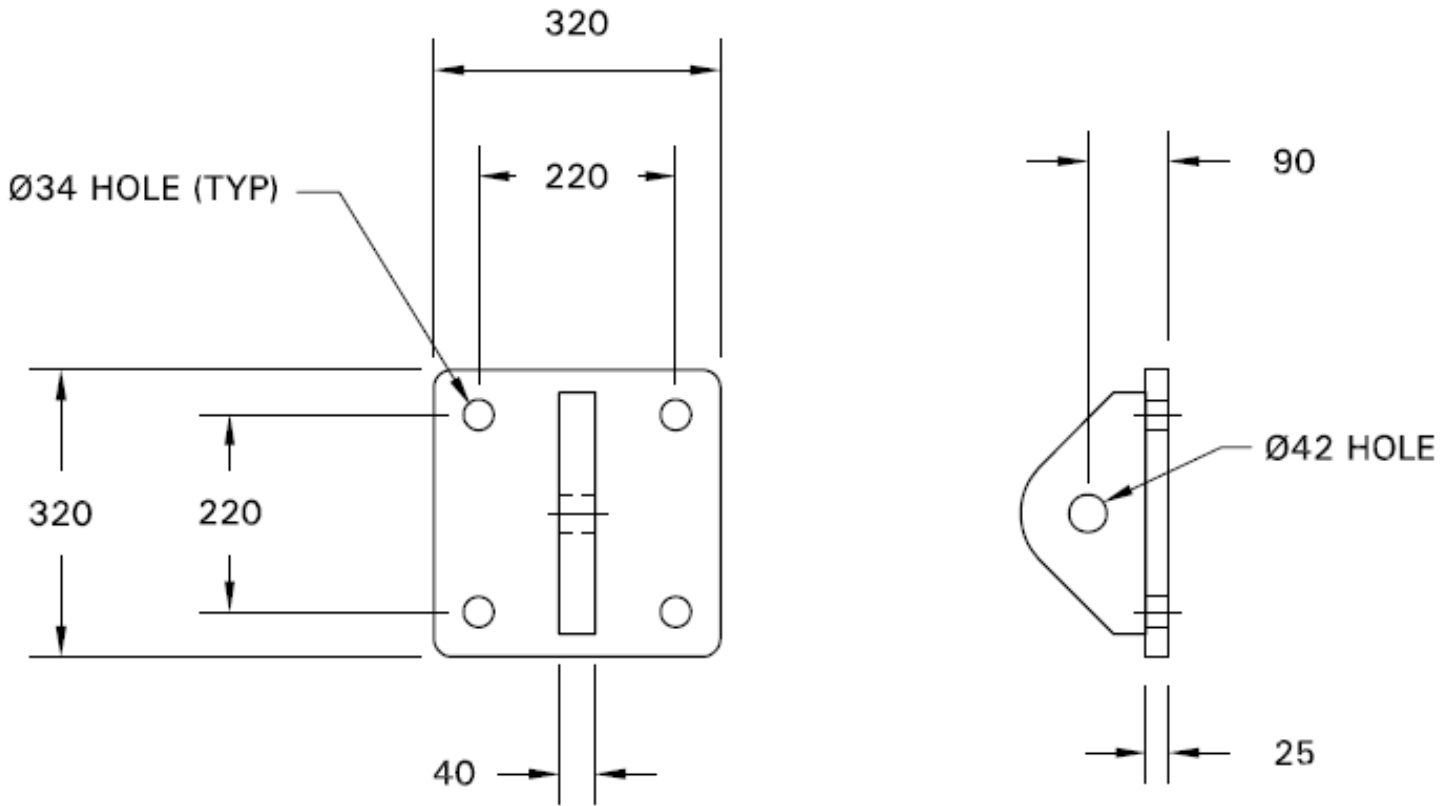


4. Bill of Material “Accessory “/One fender :

Item	Item Description	Material	QTY/F	Total Price
1	M24 Resin Capsule.		8	
2	M24 Anchor bolt assy, EC-2, W/Nut & Washer	316 SST	8	
3	CB-2 Dock Plate	Q235, HDG	2	
4	25mm BTA Shackle	HDG	4	
5	25mm Open link Chain 4.0D, 10 Links	HDG	2	

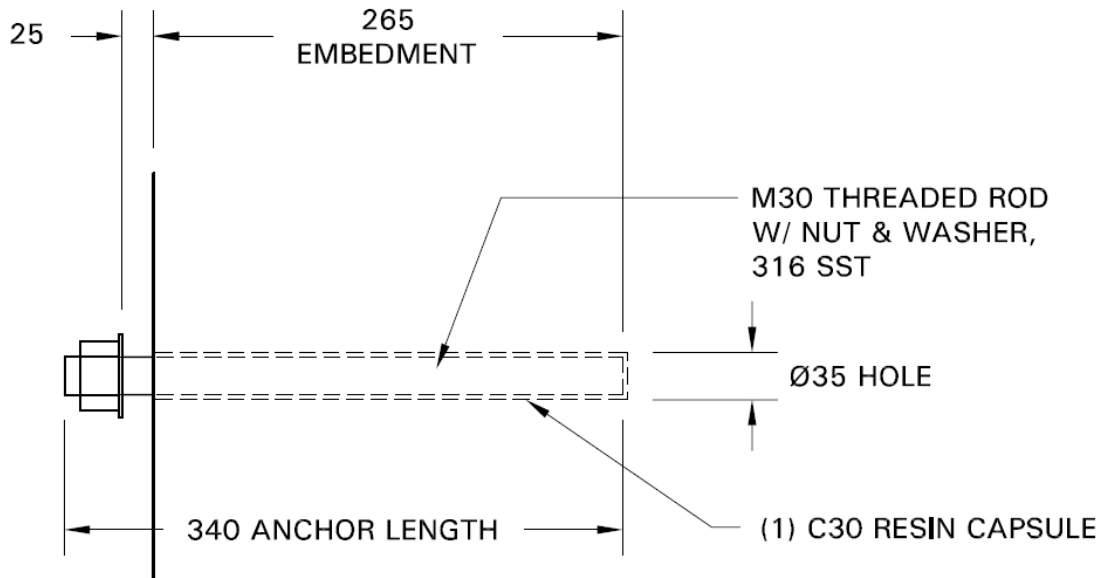
- For Fender 1500 x 3000

1. Dock Plate :

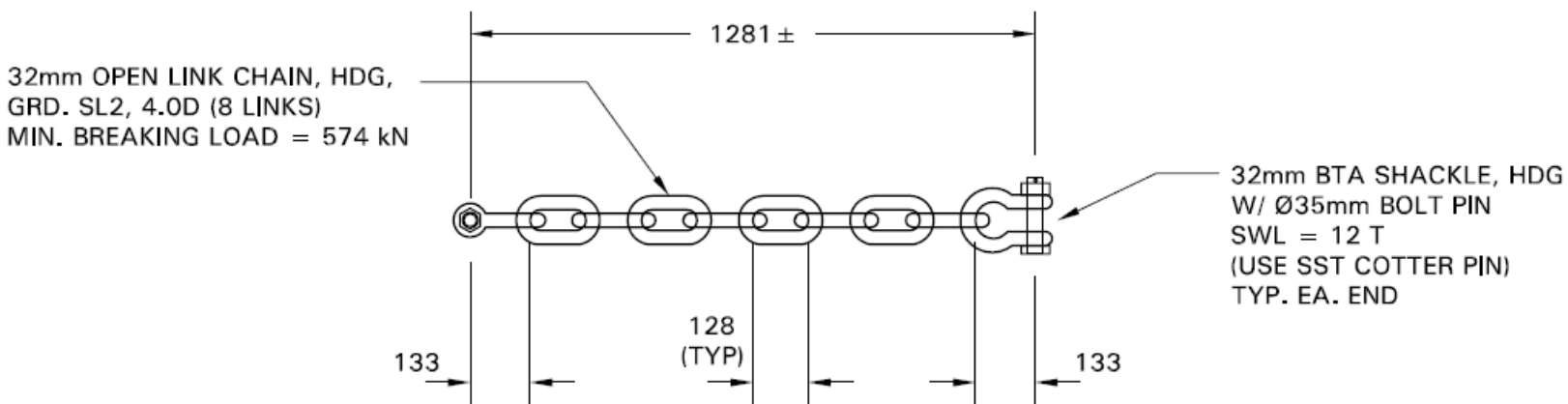


DOCK PLATE ASSY.

2. Anchors :



3. Chains :



CHAIN ASSY.

5. Bill of Material “ Accessory “/One fender :

Item	Item Description	Material	QTY/F	Total Price
1	M30 Resin Capsule.		8	
2	M30 Anchor bolt assy, EC-2, W/Nut & Washer	316 SST	8	
3	CB-2 Dock Plate	Q235, HDG	2	
4	32mm BTA Shackle	HDG	4	
5	32mm Open link Chain 4.0D, 10 Links	HDG	2	

5.0 BOQ

First Option using standard foam grades

Item No.	Item Description	Unit	ALX QTY	DKH QTY	Unit Price	Total Price
0..	General					
	The item price includes supplying, delivery to site, erection, connection, testing, and handover of the item as per the specifications and the Engineer instructions.					
0.1.	Supply floating foam fenders for berthing and mooring of all container vessels for hull pressure and tidal variations.	Each	2	4		
0.2.	Complete set of accessories as per table (1-1)	Each	2	4		
	Total					

Second Option using super high-capacity foam grades

Item No.	Item Description	Unit	ALX QTY	DKH QTY	Unit Price	Total Price
0..	General					
	The item price includes supplying, delivery to site, erection, connection, testing, and handover of the item as per the specifications and the Engineer instructions.					
0.1.	Supply floating foam fenders for berthing and mooring of all container vessels for hull pressure and tidal variations.	Each	2	4		
0.2.	Complete set of accessories as per table (1-1)	Each	2	4		
	Total					