

**Elemento Strutturale N.1: Piattaforma esagonale**

Quota	Dimensione (mm)	Indicazione tubi acciaio		Peso per m (kg/m)	Peso (Kg)
		saldati	Spessore (mm)		
A	10650				
B	4600				
C	5130				
D	4546				
E	5677				
F	711.2	DN700	8	138.7	638.02
G	508	DN500	4	49.7	1529.77
H	323.9	DN300	3.6	28.4	967.36
L	323.9	DN300	3.6	28.4	774.64
M	1020				

**Peso max totale struttura**

	3909.7852
con rinforzi	4157.75kg

Struttura saldata per utilizzo continuativo in mare per 5 anni. Si chiede garanzia sulla tenuta stagna dei tubi su ogni giuntura saldata e resistenza alla corrosione per l'intero periodo di utilizzo senza manutenzione (zincatura a caldo, verniciatura e installazione di anodi sacrificali). Il tubo centrale di diametro 711mm dovrà essere chiuso e stagno ed avere nella parte superiore una flangia circolare di spessore adeguato e opportunamente forata. Tale flangia avrà uno spessore di 40 mm ed un diametro esterno di 850 mm, con 16 fori passanti per bulloni M27. Sulla parte laterale, sulla dimensione M indicata in figura, sarà realizzata una apertura da definire di piccole dimensioni.

**Elemento Strutturale N.2: Cilindro immerso****Dimensioni (mm)**

Peso ferro                  670 kg

Per l'elemento strutturale nr. 2 si fa riferimento al disegno allegato alle pag 8-10 dell'allegato. Il cilindro, completamente saldato sarà riempito con materiale di appesantimento (Magmadense S8) che verrà fornito dal committente

## APPENDIX A COATING TABLES

**Table A-1 Summary of the requirements: Coating system for external hull and ballast tanks**

Coating System <sup>1)</sup>	Epoxy (e.g., pure epoxy or modified epoxy) based Other recognised hard coating which is pre-qualified <sup>2)</sup>
Coats and Thickness	2 to 3 coats <sup>3)</sup> Total nominal dry film thickness (NDFT) 300-400 microns <sup>4)</sup>
Primary surface preparation	Zinc containing, silicate based pre-fabrication primer on surface blast cleaned to minimum Sa 2,5 with surface roughness: ISO 8503 grade medium G(50 to 85 $\mu\text{m}$ R)
Secondary surface preparation	Sharp edges to be removed Damaged shop primer blast cleaned to ISO 8501 Sa 2,5, including welds and burns. Intact shop primer to be sweep blasted. (Intact and sufficiently cleaned shop primer may be kept as the first coat in the paint system if recommended by the paint producer and accepted by the owner.) Mechanical cleaning to St 3 acceptable on block joints and damages to the applied coating system
Clean conditions	Any visible salt contamination, oil, grease, dust, weld smoke or dirt on shop primed or other surface to be coated, to be removed by cleaning The chloride content on surfaces to be coated shall be less than 30 mg/m <sup>2</sup> (as NaCl) according to Bresle conductimetric method, or an equally recognised method
Thermal and hygrometric conditions	Air humidity $\leq 85\%$ and steel temperature $\pm 3^\circ\text{C}$ above the dew point during blast cleaning and coating application operations
Comments to coating system	
<sup>1)</sup> Light coloured coatings are recommended. Tar containing coatings are dark. If coal tar epoxy is used the epoxy to tar ratio shall not be less than 60 to 40. <sup>2)</sup> The selection of a recognised coating may depend on the type of compartment and it's function. <sup>3)</sup> One stripe coat to be applied prior to or after each full coat on edges, welds and in areas where spraying may not be fully effective. Stripe coating shall always be applied by brush. <sup>4)</sup> Nominal dry film thickness shall follow the "90/5 rule" defined as follows: <ul style="list-style-type: none"> <li>- The average DFT based on measurements shall always be equal to or larger than the NDFT. Up to 5% of the area (measured points) may have a thickness between 100% and 90% of the NDFT, but the measured dry film thickness shall always be larger than 90% of the NDFT.</li> <li>- The measured DFT shall not exceed the maximum dry film thickness defined by the paint manufacturer or as specified by the owner.</li> </ul> <sup>5)</sup> Only applicable for a reasonable amount of damages. Otherwise the basic surface preparation to be re-applied.	

**Table A-2 External hull: Alternative coating systems**

<i>Allocation</i>	<i>Coating type</i>	<i>Total average DFT microns</i>	<i>Number of coats</i>
External hull, under water including boot-top area up to ballasted water line <sup>1)</sup>	Abrasion resistant Epoxy or Aluminium pigmented Epoxy or other Epoxy anticorrosive + Anti-fouling paint <sup>1)</sup>	300 - 450	2 - 3
		250 - 350	2 - 3
	Epoxy anticorrosive	200 - 300	1 - 2
	Aluminium pigmented Vinyl Anti-fouling paint <sup>1)</sup>	100 250 - 350	1 2 - 3
External hull, Adjacent to waterline in a zone of about +/- 2 m	Epoxy or Polyester based glass flake or glass fibre reinforced <sup>2)</sup>	600 - 1500	1 - 2
	Abrasion resistant Epoxy or Aluminium pigmented Epoxy or other Epoxy anticorrosive	300 - 350	2 - 3
External hull, above ballasted water, and deck, deckhouse, superstructure	Zinc Ethyl Silicate or Zinc Epoxy	50	1
	Epoxy	200 - 300	1 - 2
	Polyurethane, Acryl polyurethane or Polysiloxan topcoat	50 - 100	1
	Zinc Ethyl Silicate or Zinc Epoxy Polysiloxan <sup>3)</sup>	50 200 - 300	1 2
	Epoxy	250 - 300	2
	Polyurethane, Acryl polyurethane or Polysiloxan topcoat	50 - 100	1
<b>Note:</b>			
<sup>1)</sup> The benefit of applying an antifouling needs to be evaluated.			
<sup>2)</sup> To provide a flexible heavy duty coating with resistant to some mechanical impact on the hull in a zone around the water line may be considered e.g. glass flake reinforced epoxy 500 microns DFT.			
<sup>3)</sup> Polysiloxan may be applied in thicker coats. Consequently, a higher film thickness may be achieved with a reduced number of coats.			

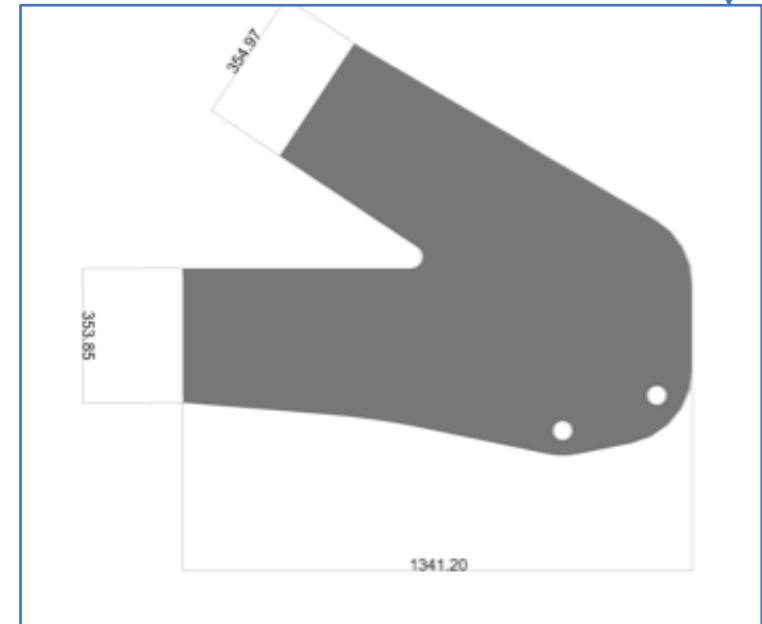
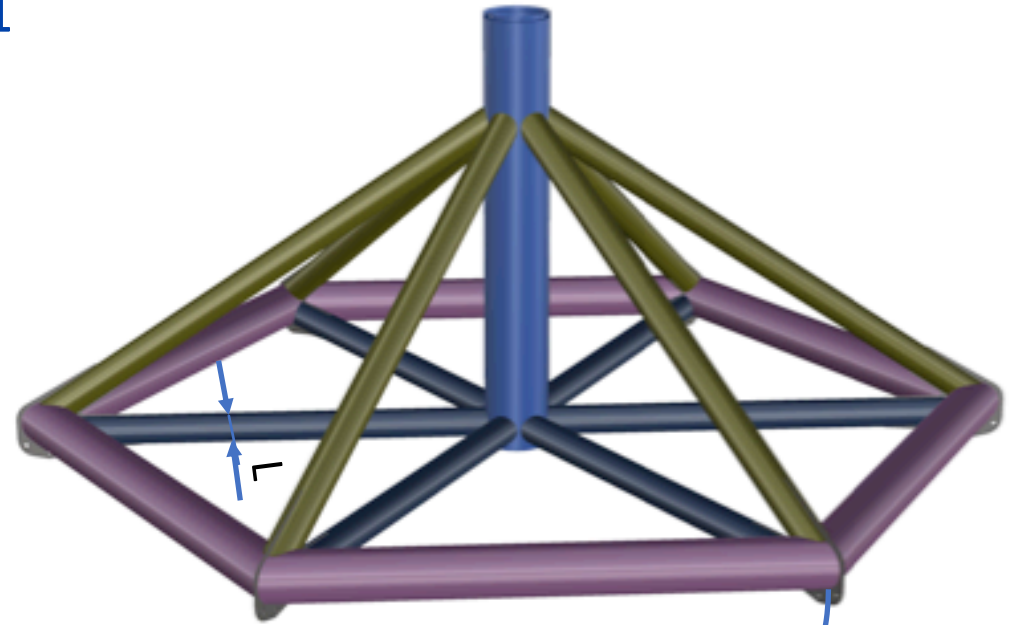
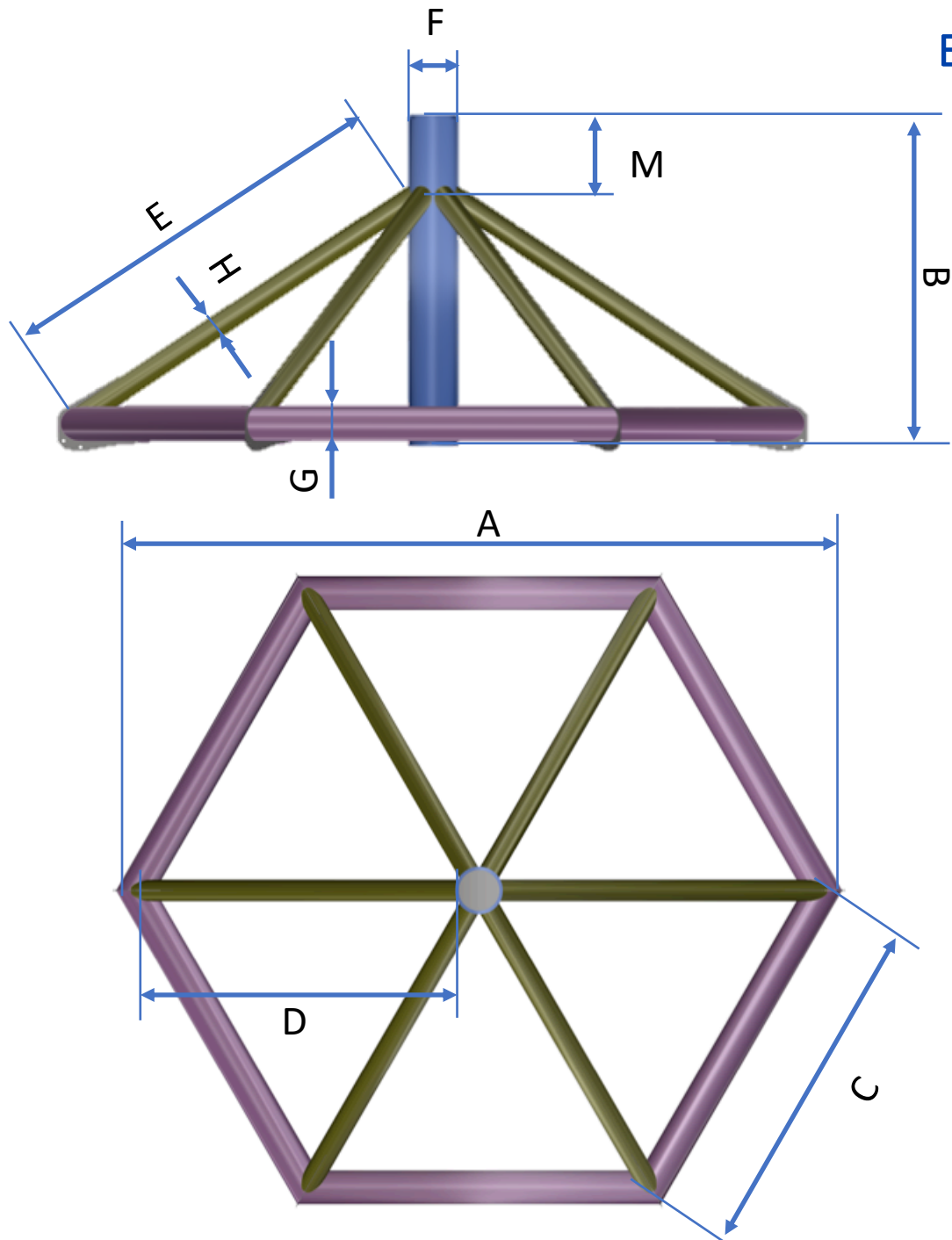
**Table A-3 Basic coating system: Ballast tanks and internal voids**

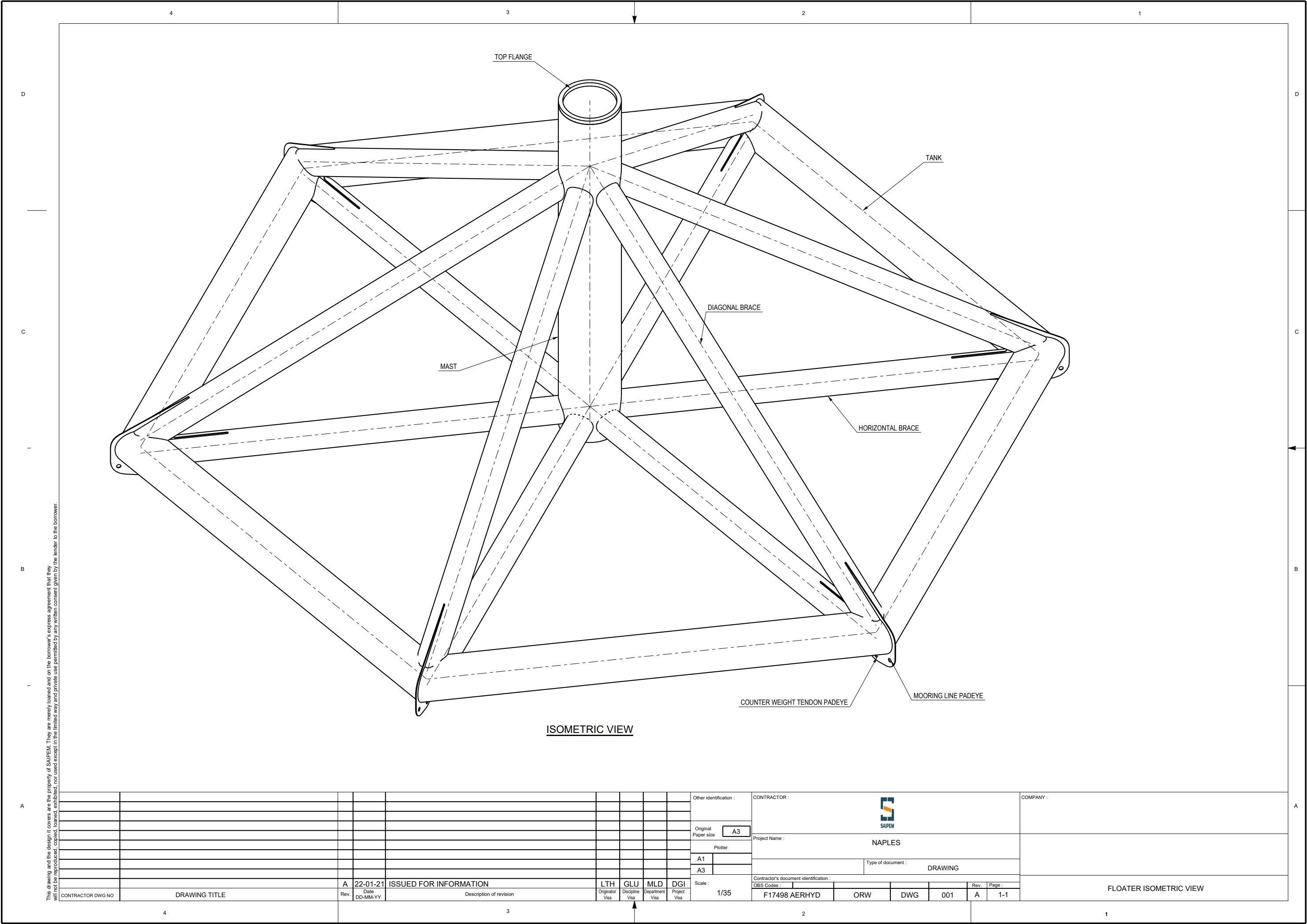
<i>Allocation</i>	<i>Coating type</i>	<i>Total average DFT microns</i>	<i>Number of coats</i>
Ballast tanks and voids exposed to seawater	Epoxy based (pure epoxy or modified epoxy) or other recognized hard coating	300 - 400	2 - 3

**Table A-4 Basic coating system: Oil tanks and miscellaneous areas**

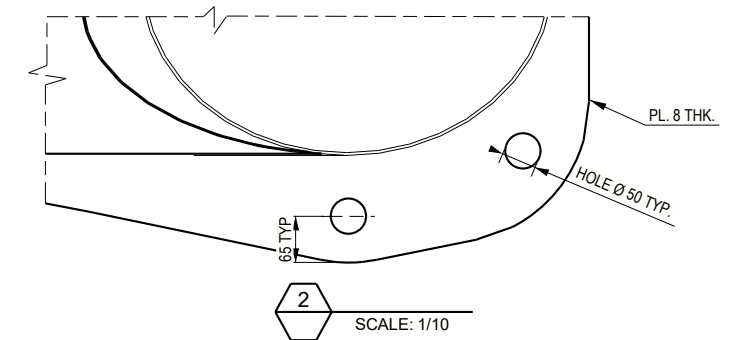
<i>Allocation</i>	<i>Surface preparation</i>	<i>Coating type</i>	<i>Nominal DFT microns</i>	<i>Number of coats minimum</i>
Oil cargo tanks	Sa 2.5	Epoxy based or other qualified hard coating	300 - 400	2 - 3
Fresh water tanks	Sa 2.5	Epoxy	200	2
Product tanks	Sa 3	Epoxy	300 - 350	2 - 3
		Phenolic Epoxy	300 - 350	2 - 3
		Zinc silicate	75 - 100	1
Accommodation and engine rooms	Sa 2 - St 3	Alkyd, etc.	100 - 150	2
Underneath thermal insulation on tank top or inner bottom plate	Sa 2.5	Epoxy	300	2
Void spaces (except dry, sealed-off compartments)	Sa 2.5 - St 3	Epoxy based	200 - 300	2
Exposed decks <sup>1)</sup>	Sa 2.5	Epoxy based with topcoat	300 - 350	2 - 3
Areas with restricted access for visual inspection and areas with restricted space for fitting of anodes or areas suffering from both corrosion impact and wear	Sa 2.5	Thermally sprayed aluminium (99.5 Al or Al5Mg9)	200	<sup>2)</sup>
<sup>1)</sup> In walkways, escape routes a non skid epoxy should be used (particles in non skid areas should be 1 -5 mm).				
<sup>2)</sup> See NORSOK M-501 coating system No. 2.				

Elemento N.1









Technical drawing of a mechanical component, likely a flange or bracket, showing a side view and a cross-section.

**Side View Dimensions:**

- Total width:  $\varnothing 711$
- Central hole diameter:  $\varnothing 110$
- Top flange thickness: 110
- Top flange width: 70
- Top flange radius: 70
- Base thickness: 10
- Base width: 135
- Base radius: 125
- Base hole diameter: 70

**Cross-section Dimensions:**

- Central hole diameter:  $\varnothing 110$
- Thickness: 10
- Radius: 125
- Base hole diameter: 70
- Base width: 135
- Base radius: 125
- Base hole diameter: 70

**Labels:**

- PL. 10 THK.
- PL. 12 THK.
- PL. 15 THK. (CHEEK PLATE)
- PL. 20 THK.

**Scale:** SCALE: 1/10

Technical drawing showing a side view and a detail view of a structural connection.

**Side View Dimensions:**

- Overall width:  $\varnothing 711$
- Vertical dimensions: 110, 70, 40, 70
- Horizontal dimensions: 70, 80
- Labels: PL. 10 THK., PL. 12 THK., PL. 15 THK (CHEEK PLATE)

**Detail View Dimensions:**

- Hole diameter:  $\varnothing 88$
- Hole diameter:  $\varnothing 50$
- Horizontal dimensions: 15, 20, 15
- Labels: PL. 15 THK (CHEEK PLATE), TYP

**Notes:**

- SEE NOTE 1

**Section Line:**

- B

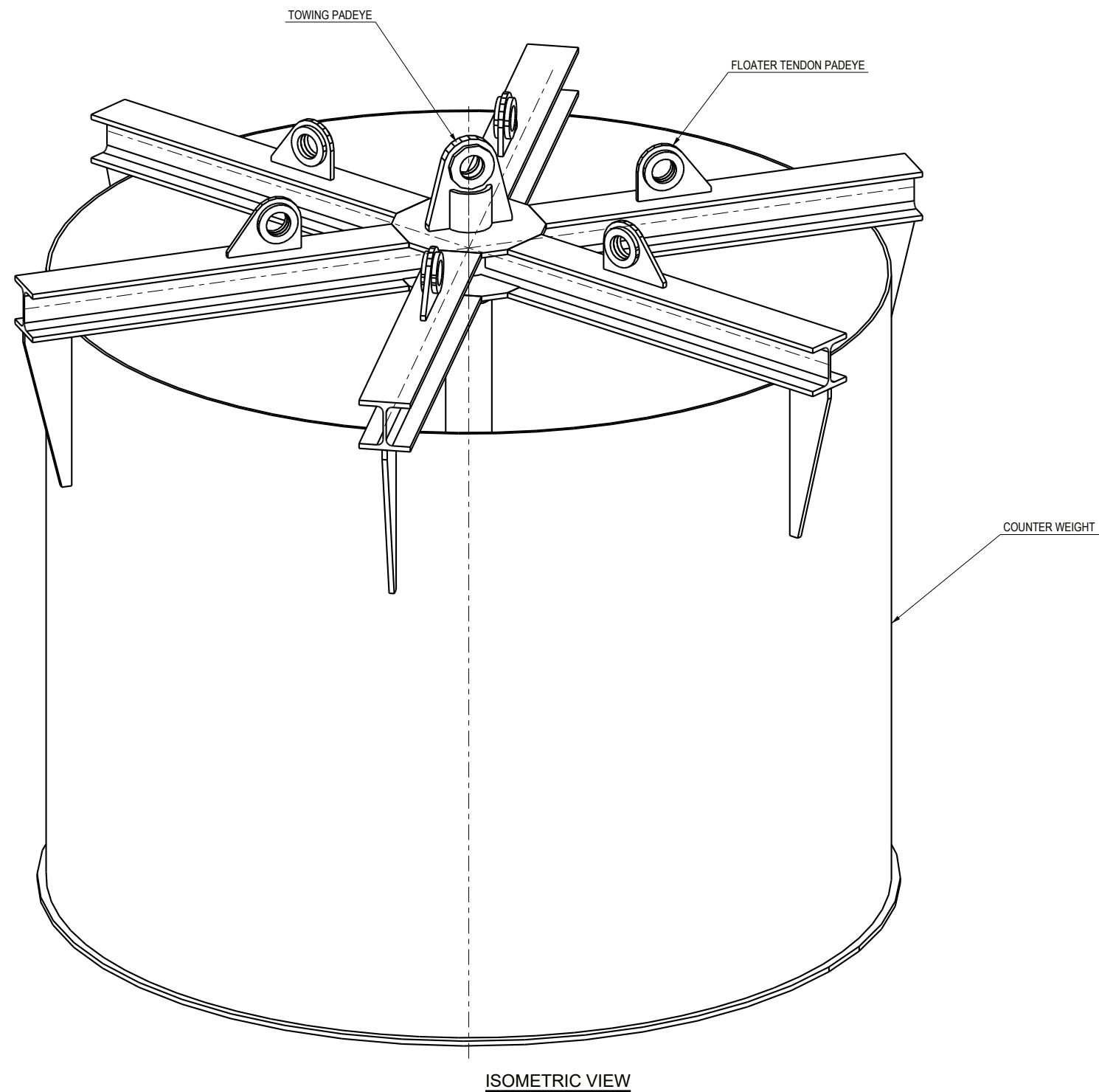
**Scale:**

- SCALE : 1/10

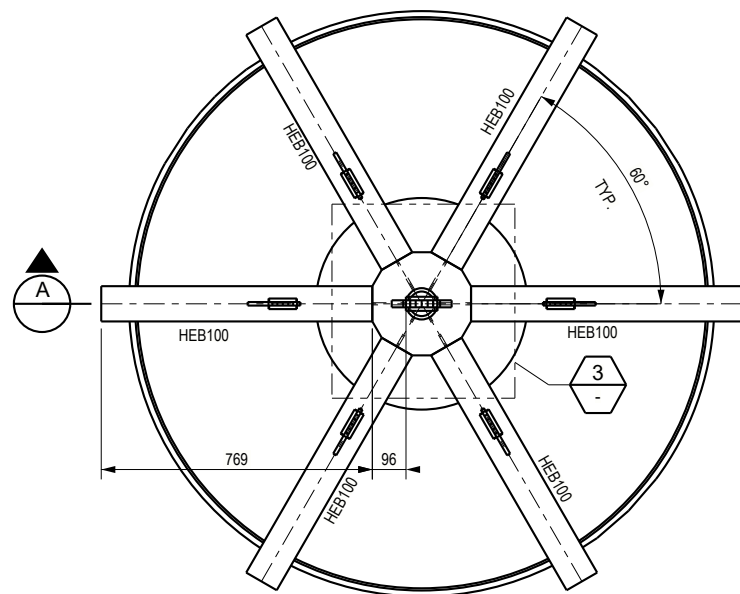
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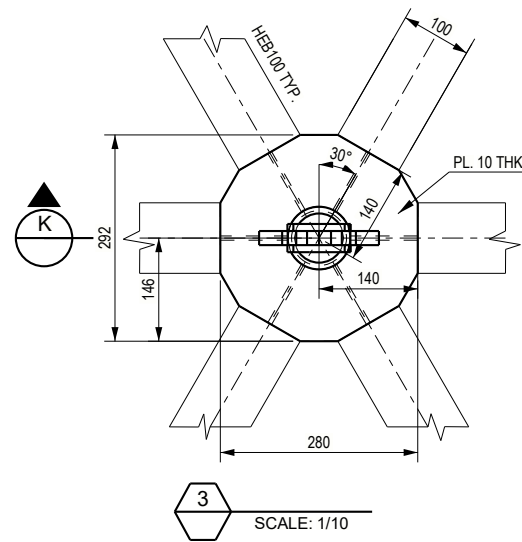
## Elemento N.2

ISOMETRIC VIEW[illegible]

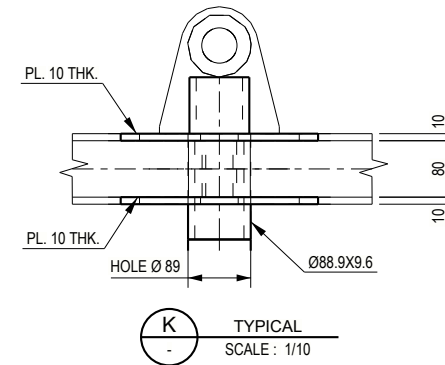




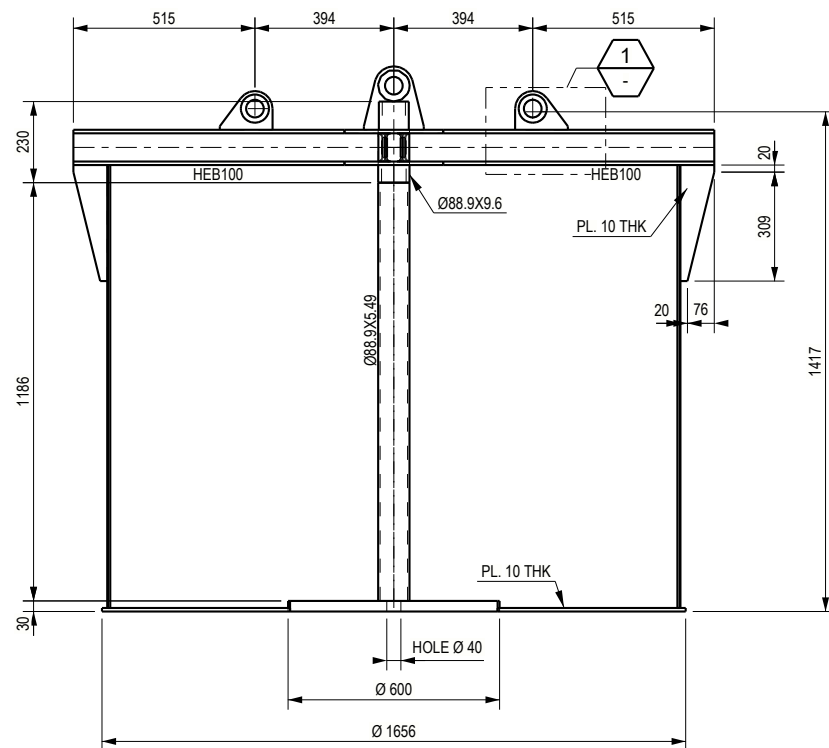
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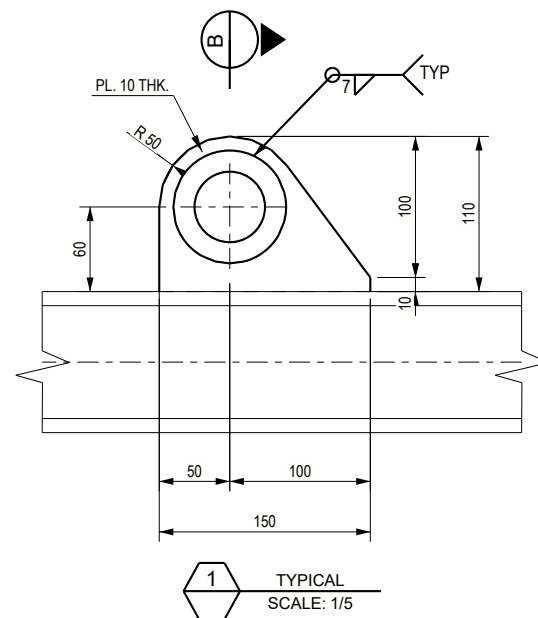
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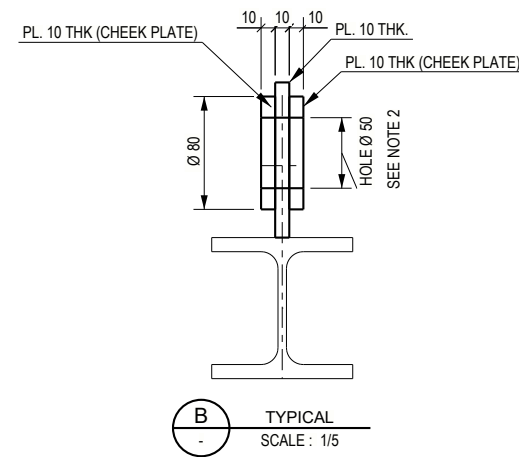
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A  
TYPICAL  
SCALE : 1/20



1  
TYPICAL  
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B  
TYPICAL  
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NOTE :

- 1 - ALL WELDS ARE FULL PENETRATION U.N.O
- 2 - HOLE 50 SHALL BE BORED LINE AND MACHINED AFTER WELDING OF THE CHEEK PLATE

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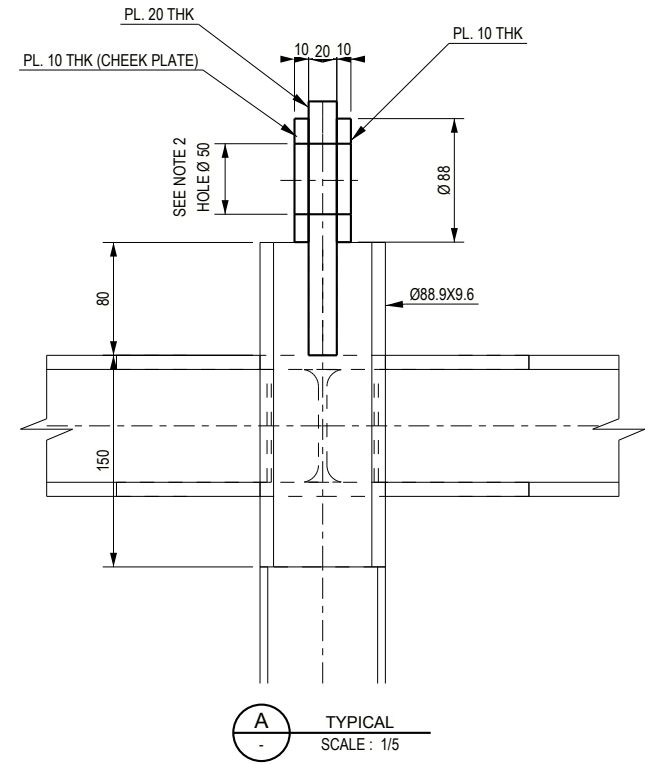
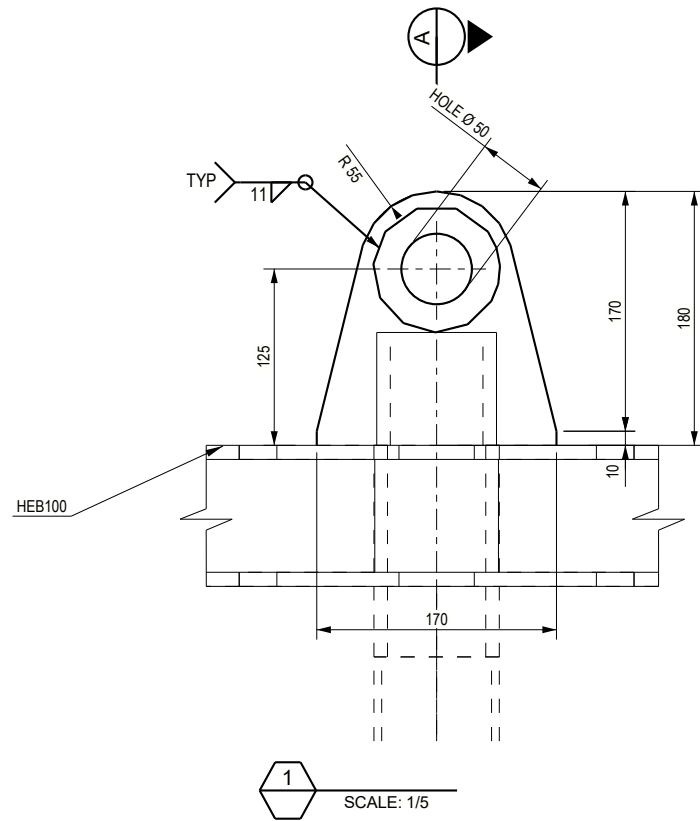
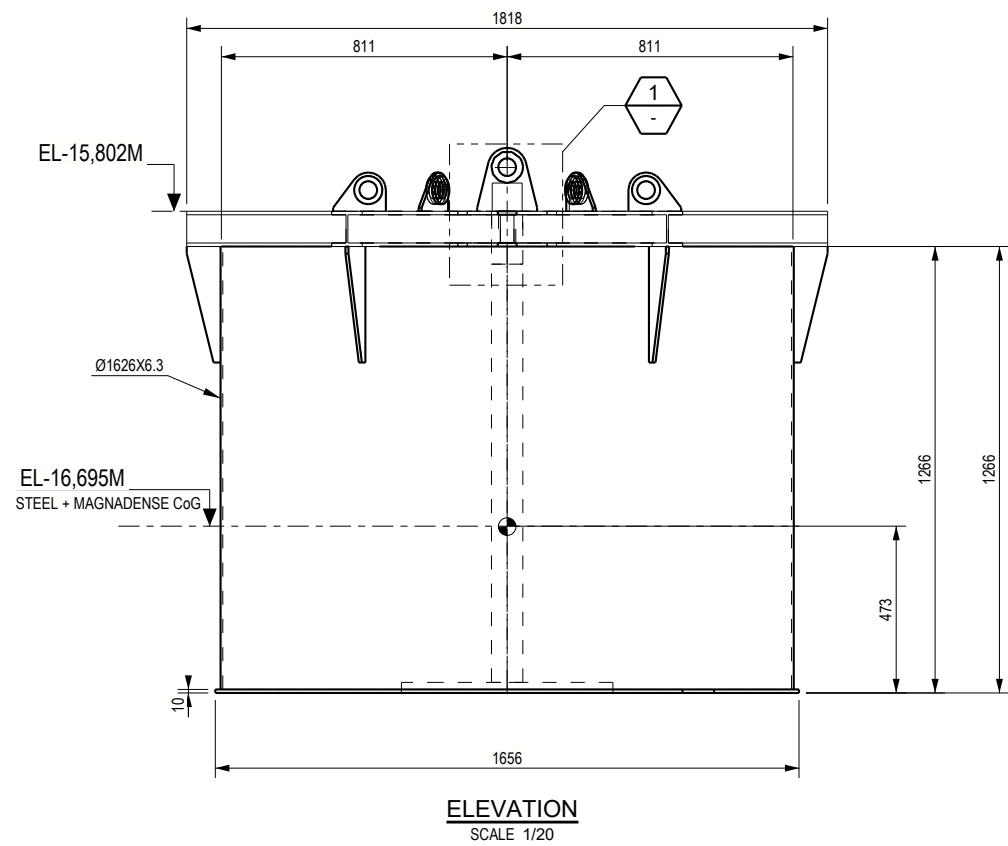
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