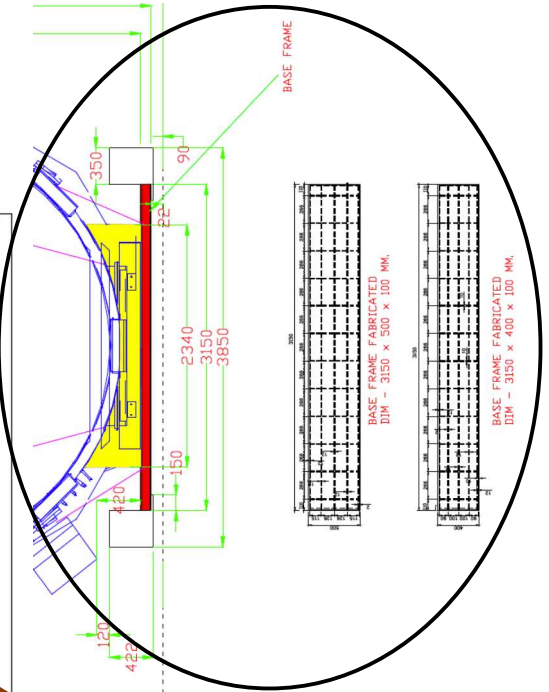
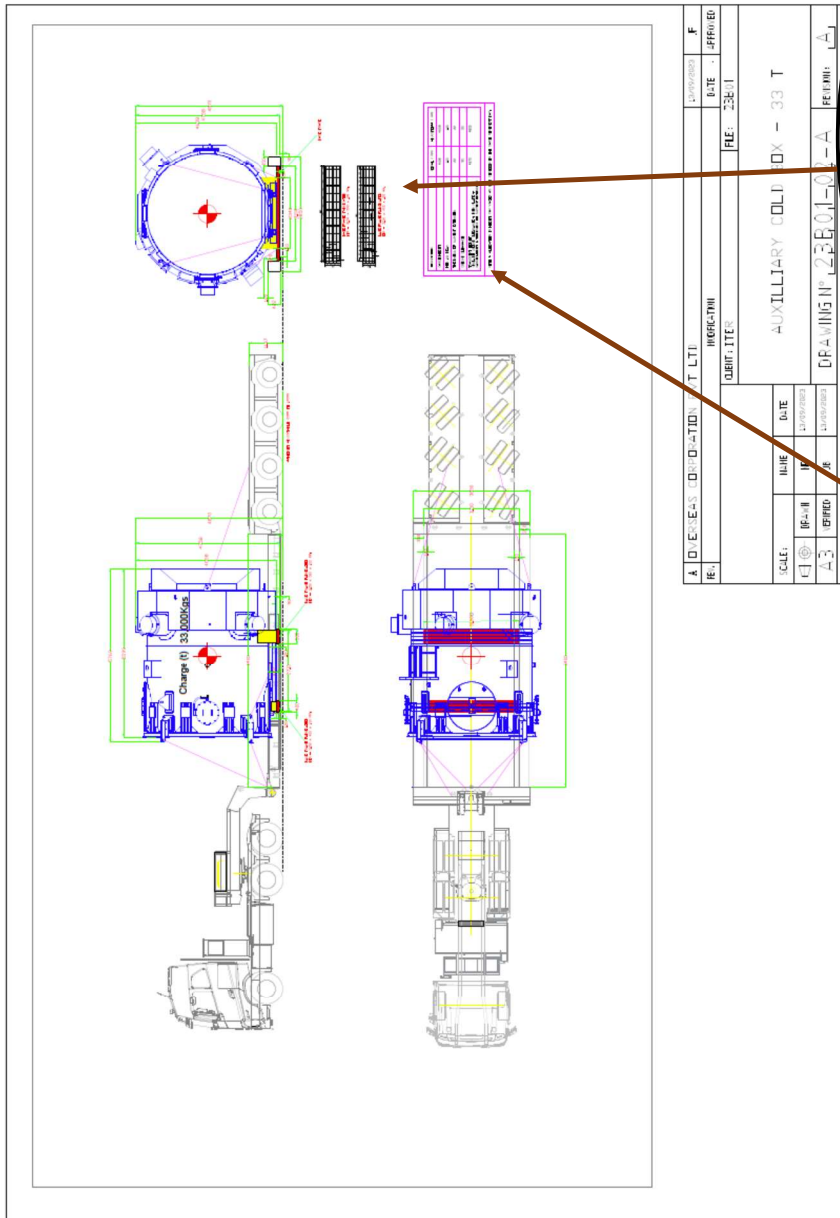


TI-000912_MS_CDS
ACB Cold boxes

Version:
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1.1
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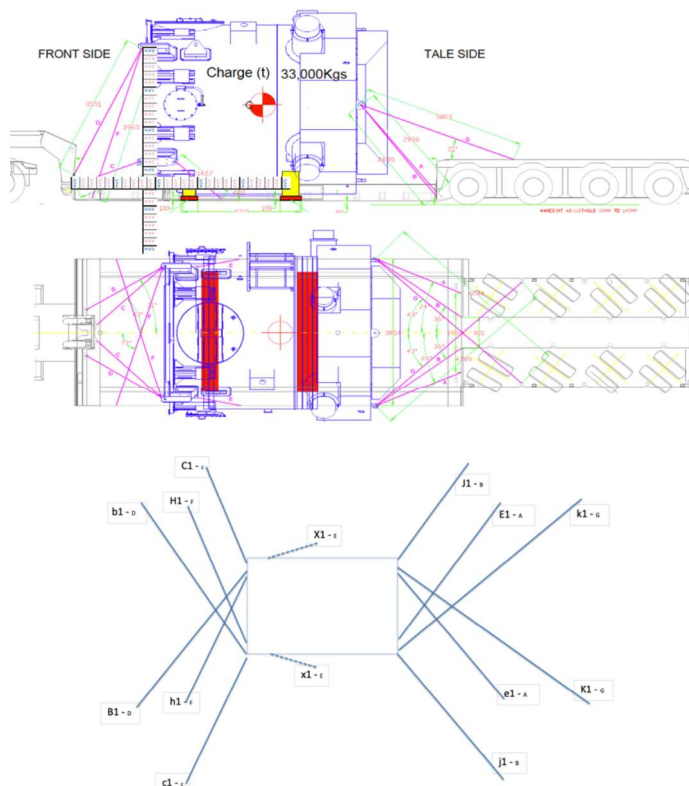
5. Pre-carriage (Italy): Trailer stowage & lashing plan
5.1. Stowage plan (Support frames detail)



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5.2. Pre-carriage (Italy): Lashing plan



	Backward	Lateral	Heigh
J1 - b	2,1	1,4	2,4

	Backward	Lateral	Heigh
E1 - A	2,10 m	0,80 m	2,40 m

	Backward	Lateral	Heigh
k1 - G	3,55 m	3,20 m	1,40 m

	Backward	Lateral	Heigh
j1 - b	2,10 m	1,40 m	2,40 m

	Backward	Lateral	Heigh
e1 - A	2,10 m	0,80 m	2,40 m

	Backward	Lateral	Heigh
K1 - G	3,55 m	3,20 m	1,40 m

	Forward	Lateral	Heigh
C1 - C	1,60 m	1,40 m	0,55 m

	Forward	Lateral	Heigh
H1 - F	1,10 m	3,55 m	3,80 m

	Forward	Lateral	Heigh
b1 - D	1,80 m	0,80 m	3,20 m

	Forward	Lateral	Heigh
c1 - C	1,60 m	1,40 m	0,55 m

	Forward	Lateral	Heigh
h1 - F	1,10 m	3,55 m	3,80 m

	Forward	Lateral	Heigh
B1 - D	1,80 m	0,80 m	3,20 m

Remark: The calculation note with 5mt SWL chains / belts shows the fact of a downward global force corresponding to 2.11G that could over bent the supports.

3D directions of the lashing resultant forces	Total of lashing forces mt	Friction coef	Acc. due to the vessel motions x G	Strain Acc x Weight x (D-Friction) mt	Factor Component Force / Strain
Vertical (anti-rebond)	13,9 mt	-	0,20 G	6,600 mt	2,11
Lateral SS	16,8 mt	0,30	0,50 G	11,550 mt	1,45
Lateral PS	16,8 mt	0,30	0,50 G	11,550 mt	1,45
Longitudinal Forward	21,3 mt	0,30	0,80 G	18,480 mt	1,15
Longitudinal Backward	21,3 mt	0,30	0,50 G	11,550 mt	1,84

So it is important to adjust the lashing chains at the only limit to not have curve on its own weight.

Note: In case of acceleration, the chain tension will absorb the strain with the minimum necessary value.