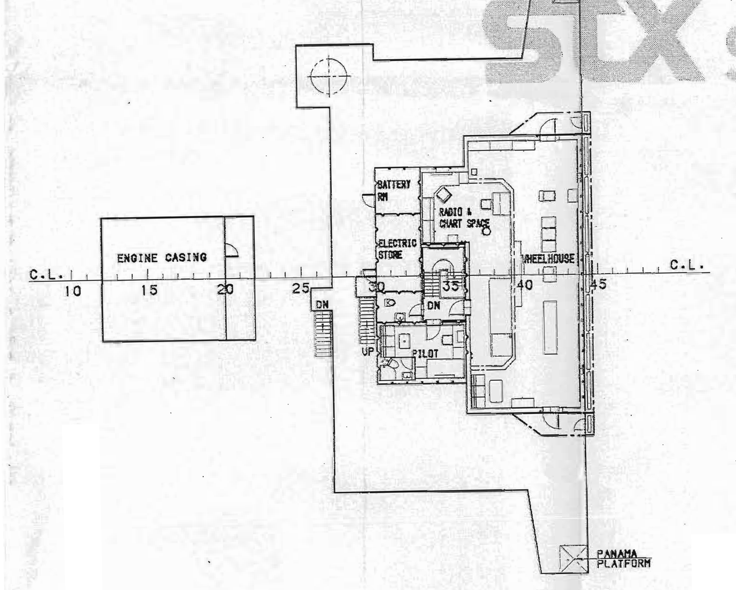
HORIZON DIANA

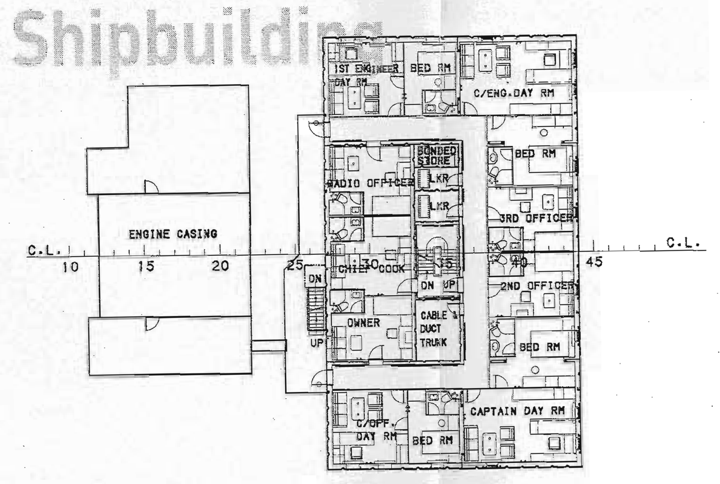
PLAN HISTORY

DATE	REV.	DESCRIPTION	DWN.	CHKD.	MGR.
2007.08.17	A	DRAWN BY BASIC RESEARCH TEAM			

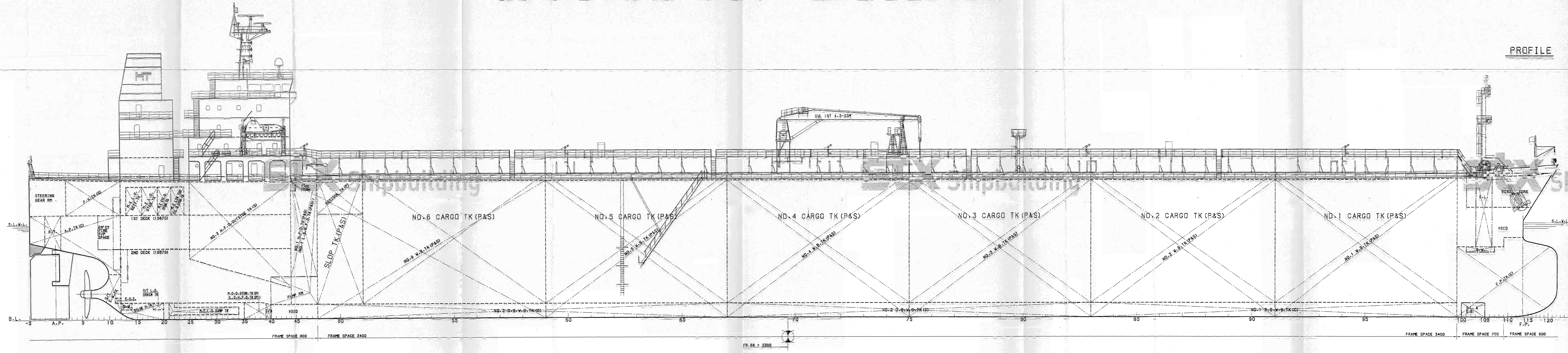
NAV. BRI. DECK

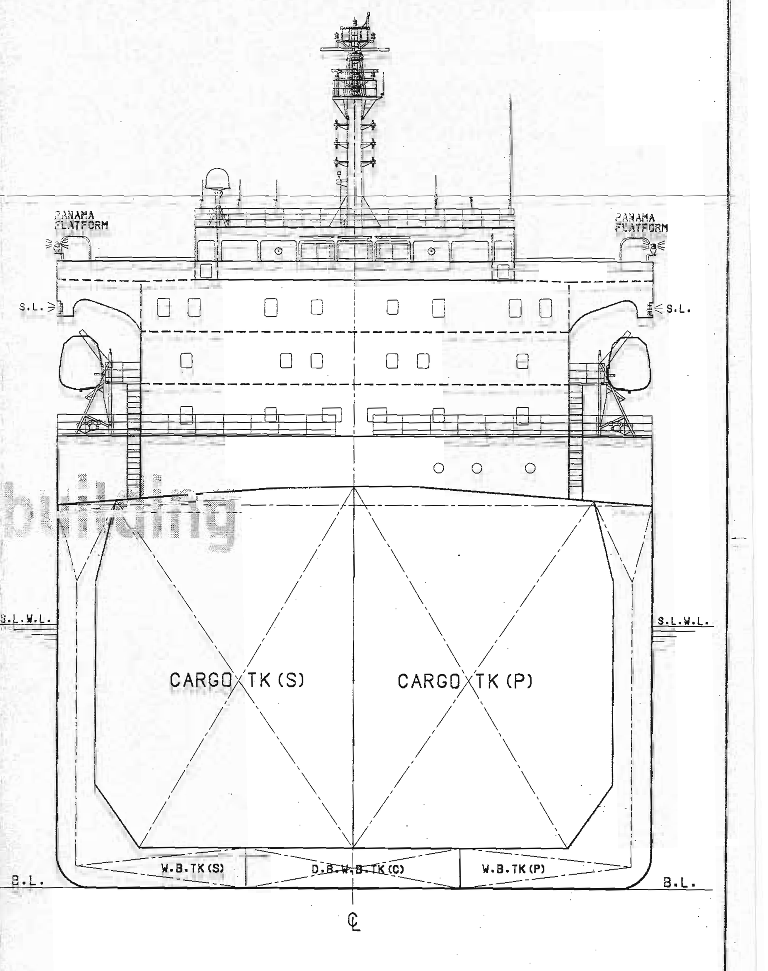


C - DECK



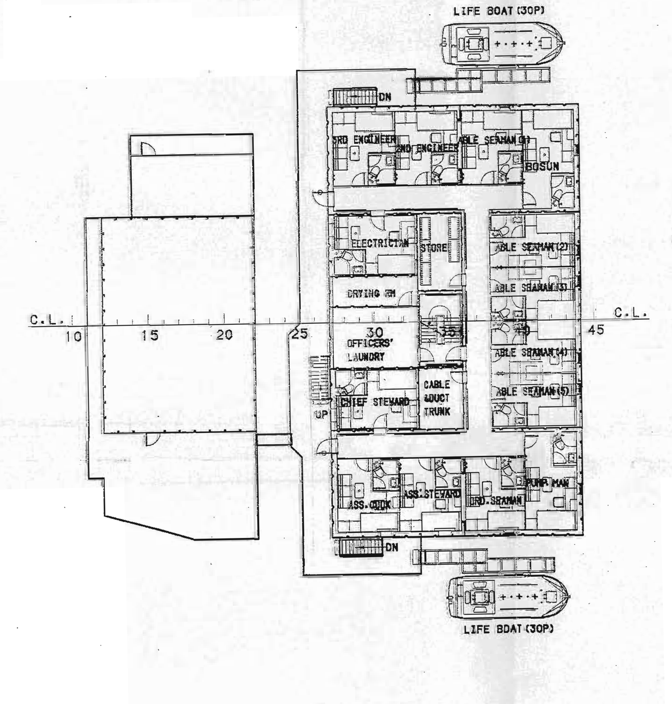
PROFILE





MIDSHIP SECTION

B - DECK



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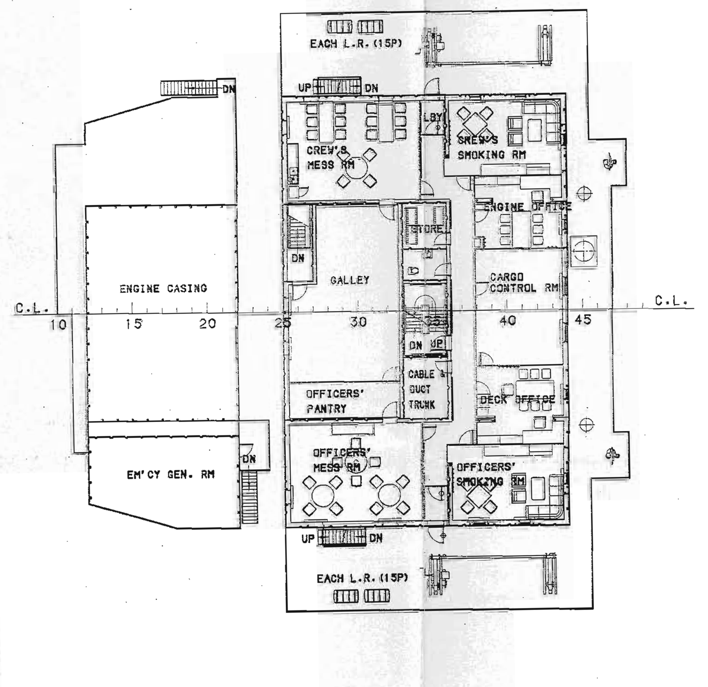
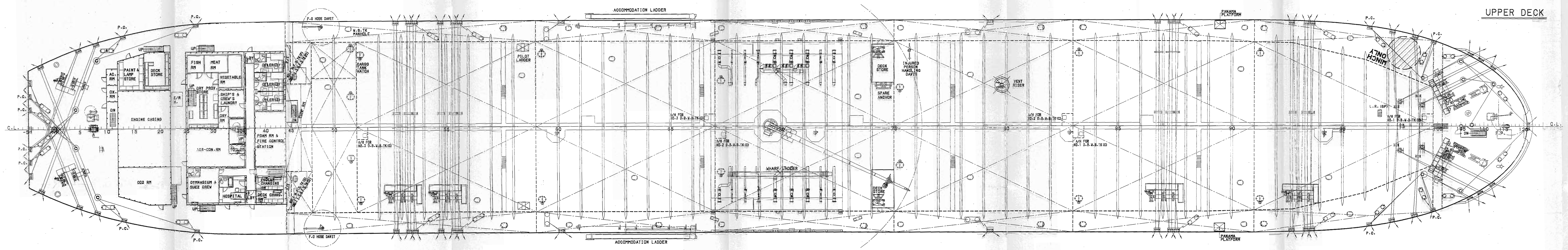


UPPER DECK



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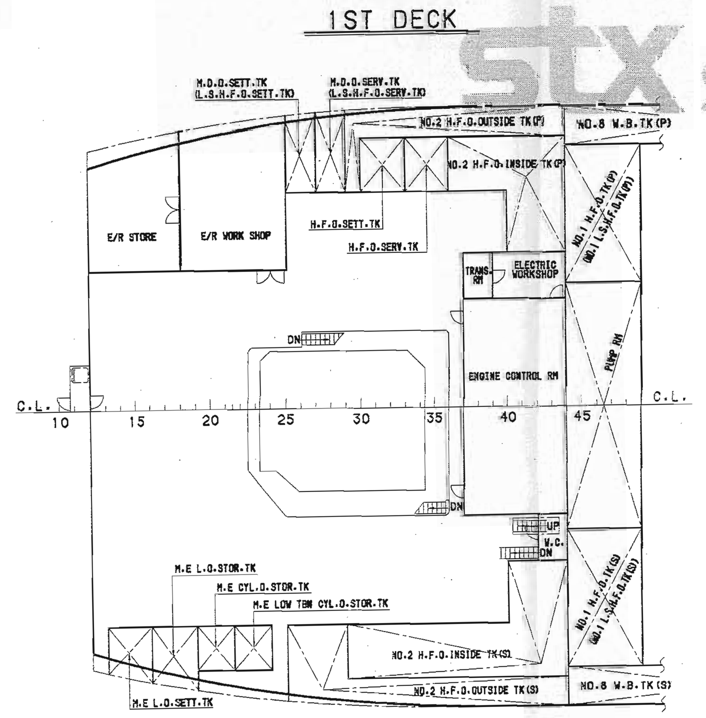
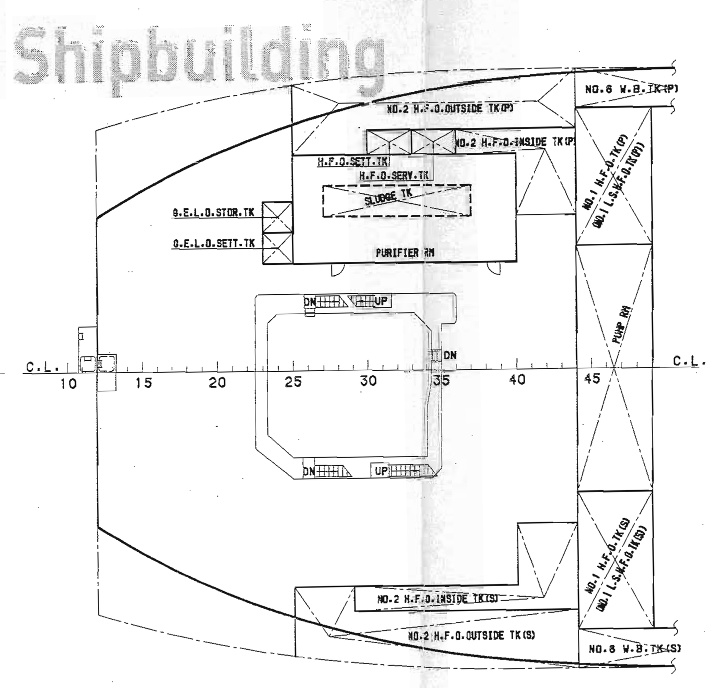


2ND DECK



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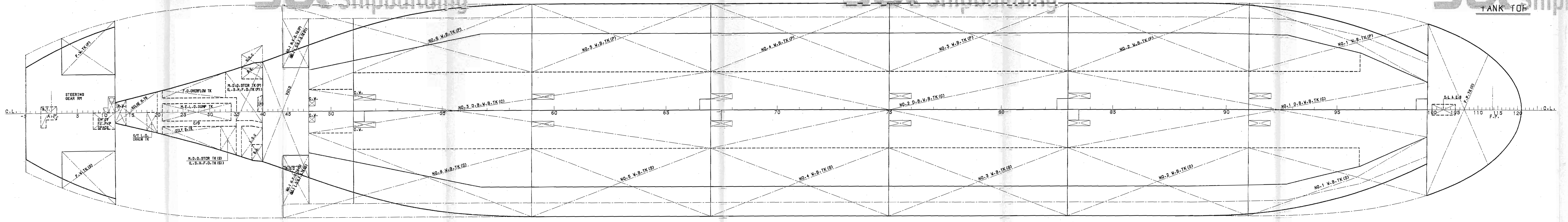


PRINCIPAL PARTICULARS

LENGTH O. A.	228.00 M
LENGTH B. P.	219.00 M
BREADTH (MLD)	32.24 M
DEPTH (MLD)	20.65 M
DRAFT Design (MLD)	12.22 M
Scantling (MLD)	14.20 M

CLASS LR

✠100A1 "Double hull Oil and Product Oil Tanker" ESP, ✠LMC, ShipRight(SDA, FDA(+), CM), LI, SCM, UMS, IGS, with the descriptive notes of SPM, COW, VECS, IWS, BWMP(S), PCWBT, ICE CLASS 1A

FLAG LIBERIA FINAL

COMPLEMENT 27P + ~~6Suez crew~~ HORIZON DIANA

IMO NUMBER 9314193

stx	MODEL NO.	S-1208
	TYPE	74,200 DWT CRUDE/PRODUCT OIL TANKER

MANAGER: C. J. Kim

CHECKED: J. D. Hong

DRAWN : D. J. KANG

TEL. NO. 055) 548-3132

TITLE **GENERAL ARRANGEMENT**

DEP'T	SCALE	DATE	DWG. NO.	REV. NO.
BASIC RESEARCH TEAM	1/200	2007.08.17	B0171000	A

STX Shipbuilding Co.,Ltd. B7

FORM NAME : PB302 (L) 1890 MM X (B) 840 MM

STXSE-PC302(200603)

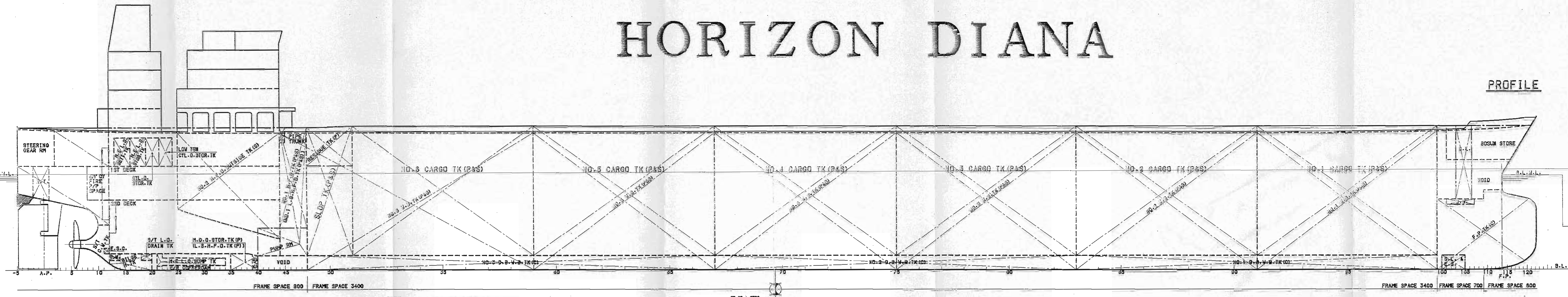
B0171000-FGA-S1

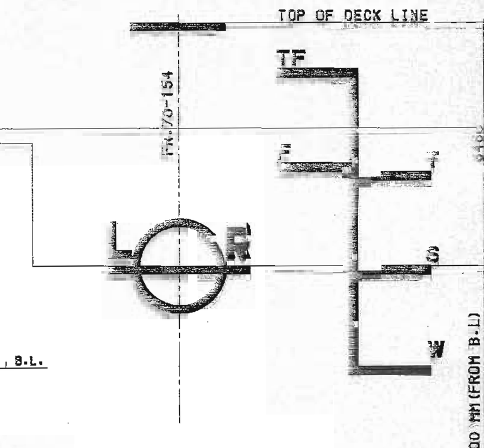
HORIZON DIANA

PLAN HISTORY

DATE	REV.	DESCRIPTION	DWN.	CHKD.	MGR.
2007.09.11	0	DRAWN BY BASIC RESEARCH TEAM			

PROFILE





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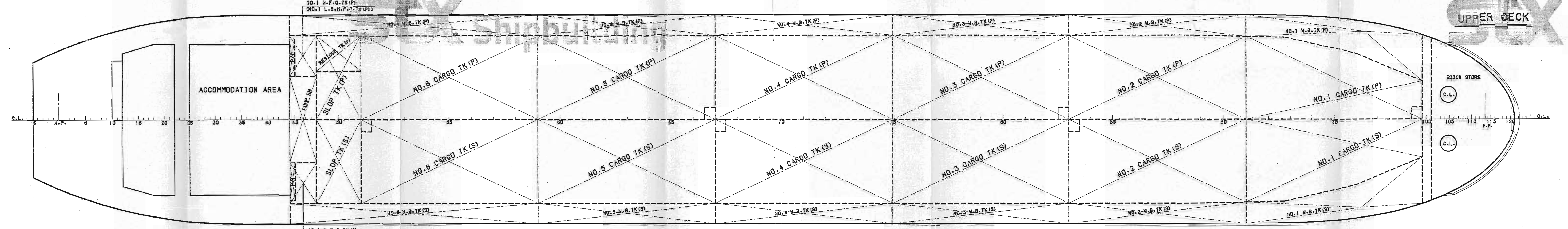

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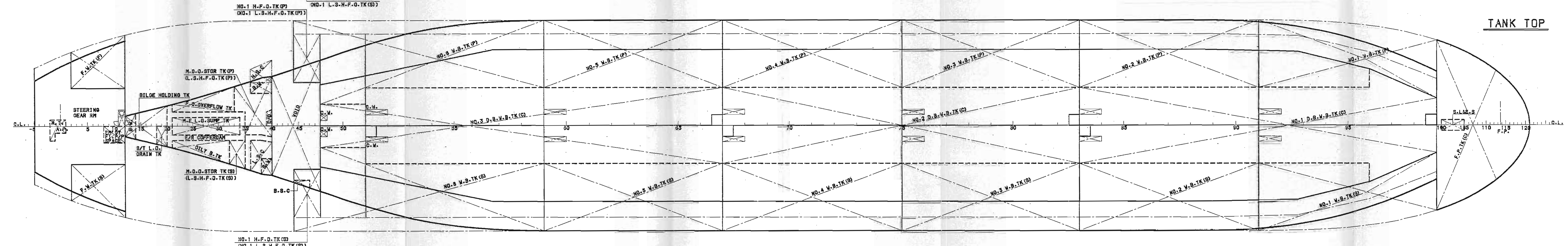
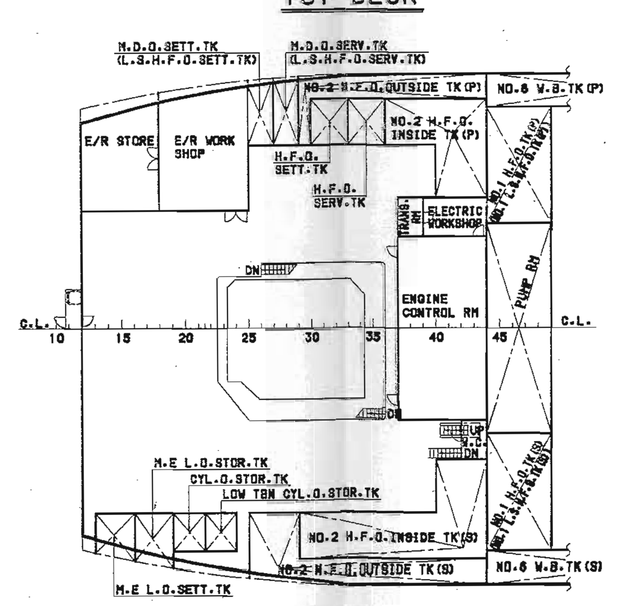
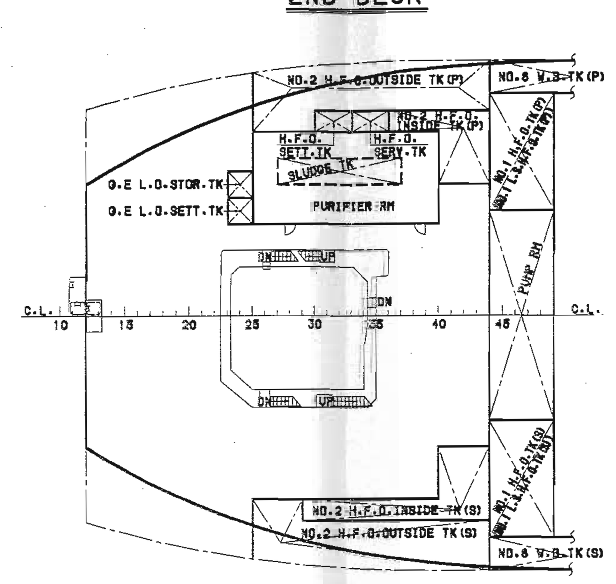


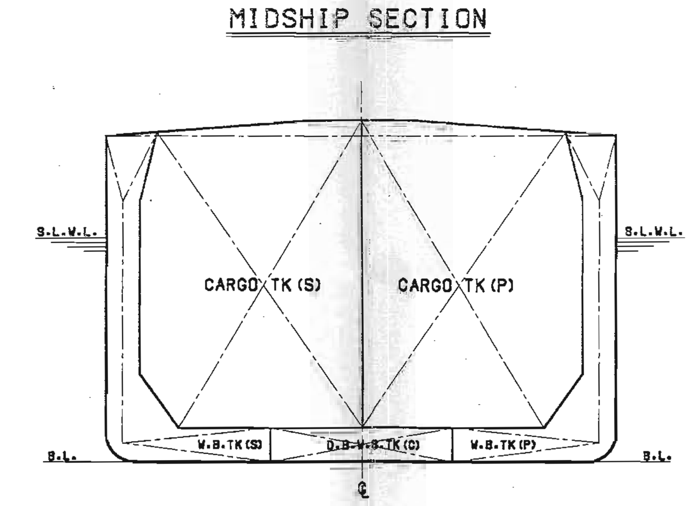
1ST DECK



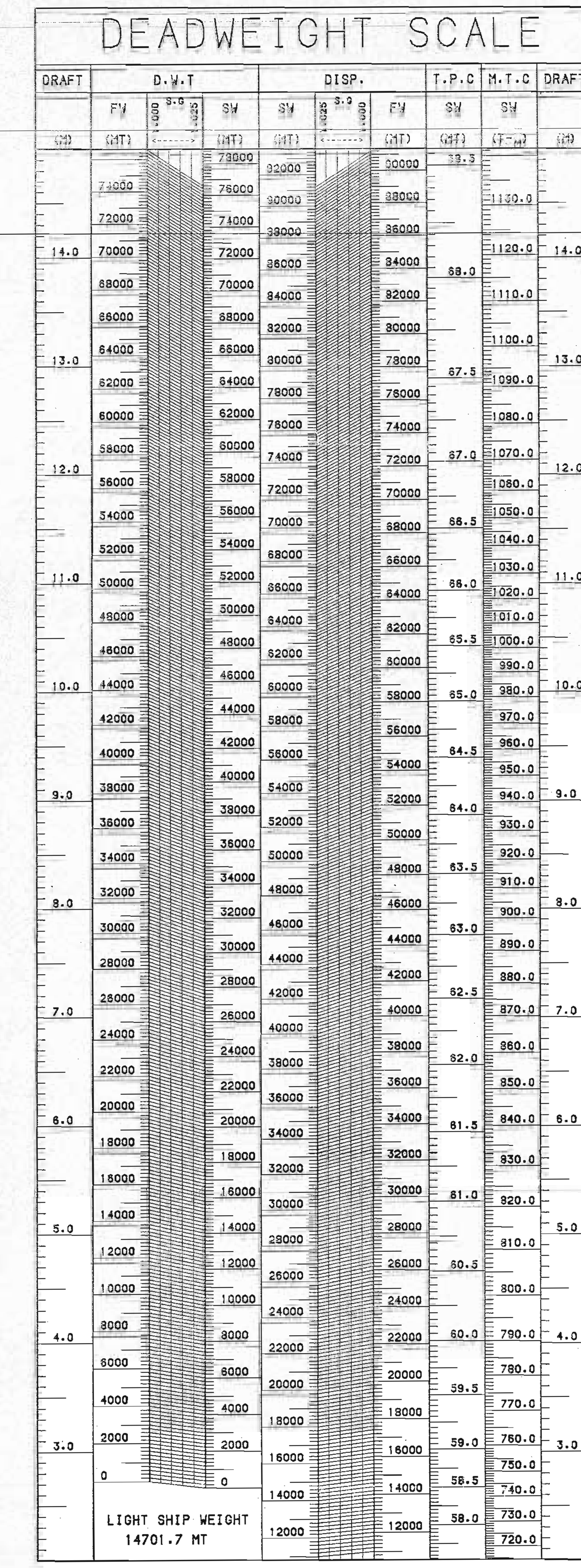
2ND DECK



MIDSHIP SECTION



DEADWEIGHT SCALE



TANK NO.	TANK NAME	FRAME NO. FROM	FRAME NO. TO	100% VOLUME	W.B 100% WEIGHT	F.W 100% WEIGHT	HEAVY FUEL OIL 98% VOLUME	HEAVY FUEL OIL 98% WEIGHT	MARINE GAS OIL 98% VOLUME	MARINE GAS OIL 98% WEIGHT	LUB. OIL 98% VOLUME	LUB. OIL 98% WEIGHT	MISC. 50% WEIGHT	CENTER OF GRAVITY (M) 100% L.C.G	V.C.G	T.C.G	MAX MOMENT OF INERTIA (M^4)
201	F.P.TK(C)	99	F.E	1429.7	1465.4									104.900	5.845	0.000	2734.2
202	NO.1 W.B.TK(P)	91	99	1864.4	1911.0									86.347	10.072	-11.886	1181.3
203	NO.1 W.B.TK(S)	91	99	1864.3	1910.9									86.347	10.072	11.886	1181.3
204	NO.2 W.B.TK(P)	83	91	1790.0	1834.8									58.917	7.946	-13.528	2455.2
205	NO.2 W.B.TK(S)	83	91	1790.0	1834.8									58.917	7.946	13.528	2455.2
206	NO.3 W.B.TK(P)	75	83	1789.3	1834.0									31.700	7.874	-13.539	2484.1
207	NO.3 W.B.TK(S)	75	83	1789.3	1834.0									31.700	7.874	13.539	2484.1
208	NO.4 W.B.TK(P)	67	75	1789.3	1834.0									4.500	7.874	-13.539	2484.1
209	NO.4 W.B.TK(S)	67	75	1789.3	1834.0									4.500	7.874	13.539	2484.1
210	NO.5 W.B.TK(P)	59	67	1788.5	1833.2									-22.695	7.877	-13.538	2483.5
211	NO.5 W.B.TK(S)	59	67	1788.5	1833.2									-22.695	7.877	13.538	2483.5
212	NO.6 W.B.TK(P)	44	59	2525.3	2588.4									-55.196	8.482	-13.098	2536.3
213	NO.6 W.B.TK(S)	44	59	2525.3	2588.4									-55.196	8.482	13.098	2536.3
214	NO.1 D.B.W.B.TK(C)	83	99	1474.6	1511.5									72.761	1.865	0.000	7778.1
215	NO.2 D.B.W.B.TK(C)	67	83	1450.3	1486.6									18.090	1.882	0.000	7112.7
216	NO.3 D.B.W.B.TK(C)	49	67	1545.6	1584.2									-38.199	1.829	0.000	7278.6
217	A.P.TK(C)	A.E	12	1044.8	1070.9									-105.423	13.269	-0.036	10572.4
	Sub. T O T A L	-	-	30038.5										-	-	-	62725.0
301	F.W.TK(P)	2	12	285.0		285.0								-103.828	18.506	-9.071	235.8
302	F.W.TK(S)	2	12	285.0		285.0								-103.828	18.506	9.071	235.8
	Sub. T O T A L	-	-	570.0										-	-	-	471.6
401	NO.1 H.F.O.TK(P)	44	49	351.8			344.8	337.9						-72.275	14.395	-9.855	135.1
402	NO.1 H.F.O.TK(S)	44	49	351.8			344.8	337.9						-72.275	14.395	9.855	135.1
403	NO.2 H.F.O.OUTSIDE TK(P)	25	44	454.2			445.1	436.2						-80.639	12.658	-13.677	159.6
404	NO.2 H.F.O.OUTSIDE TK(S)	25	44	500.9			490.9	481.1						-81.396	13.267	13.707	159.6
405	NO.2 H.F.O.INSIDE TK(P)	38	44	258.9			253.7	248.6						-76.892	15.781	-11.823	89.0
406	NO.2 H.F.O.INSIDE TK(S)	29	44	402.0			394.0	386.1						-79.252	15.920	12.223	114.0
407	H.F.O.SETT.TK	30	33	60.2			59.0	57.8						-84.300	16.093	-12.964	5.0
408	H.F.O.SERV.TK	33	36	60.2			59.0	57.8						-81.900	16.094	-12.964	5.0
	Sub. T O T A L	-	-	2440.0										-	-	-	802.4
501	M.D.O.STOR.TK(P)	33	40	74.7					73.2	67.3				-80.004	1.309	-2.377	178.5
502	M.D.O.STOR.TK(S)	32	35	17.3					17.0	15.6				-82.658	1.430	3.747	12.5
503	M.G.O.SETT.TK	25	27	31.9					31.3	28.8				-88.695	18.197	-13.700	9.6
504	M.G.O.SERV.TK	27	29	33.1					32.4	29.8				-87.096	18.190	-13.772	10.5
	Sub. T O T A L	-	-	157.0										-	-	-	211.1
601	M.E L.O.SUMP TK	21	34	31.6							31.0	27.9		-87.725	1.298	0.003	16.3
602	CYL.O.STOR.TK	19	19+2m	20.3							19.9	17.9		-93.300	17.795	12.830	2.4
603	LOW TBN CYL.O.STOR.TK	19+2m	19+4m	20.3							19.9	17.9		-91.300	17.795	12.830	2.4
604	M.E L.O.STOR.TK	16	19	30.2							29.6	26.6		-95.467	17.865	13.127	6.8
605	M.E L.O.SETT.TK	13	16	24.7							24.2	21.8		-97.852	17.898	12.863	4.2
606	G.E L.O.STOR.TK	23	25	7.9							7.7	6.9		-90.300	12.070	-8.300	0.6
607	G.E L.O.SETT.TK	23	25	7.9							7.7	6.9		-90.300	12.070	-6.640	0.6
	Sub. T O T A L	-	-	142.9										-	-	-	33.3
701	BILGE HOLDING TK	12	20	48.8									24.4	-96.062	1.319	-0.135	49.1
702	S/T L.O.DRAIN TK	18	20	4.5									2.3	-94.282	1.994	1.442	3.4
703	OILY BILGE TK	21	32	34.8									17.4	-87.417	1.505	3.194	14.0
704	F.O.OVERFLOW TK	21	33	40.2									20.1	-86.894	1.496	-3.254	18.3
705	SLUDGE TK	27	37	13.1									6.8	-83.900	10.070	-9.130	3.0
	T O T A L				30789.3	570.0	2391.3	2343.4	153.9	141.5	140.0	125.9	-	-	-	-	-
	SPECIFIC GRAVITY				1.025	1.000		0.980		0.920		0.900	1.000	-	-	-	-

KIND OF FREEBOARD	TROPICAL FRESH	FRESH	TROPICAL	SUMMER	WINTER
GRID LETTER	[TF]	[F]	[T]	[S]	[W]
FREEBOARD DEPTH [MM]			20666		
FREEBOARD [MM]	5846	6142	6170	[illegible]	[illegible]
DRAFT (EXT.) [MM]	14841	14545	14517	[illegible]	[illegible]
DISPLACEMENT [MT]	90262.7	88288.9	90304.8	88281.6	86263.2
LIGHTWEIGHT [MT]			14701.7		
DEADWEIGHT [MT]	75561.0	73587.2	75603.1	73579.9	71561.5

TANK NO.	TANK NAME	FRAME NO. FROM	FRAME NO. TO	CAPACITIES (100%) CUB.M	CAPACITIES (98%) CUB.M	CENTER OF GRAVITY (M) (100%) L.C.G	V.C.G	T.C.G	MAX MOMENT OF INERTIA (M^4)
101	NO.1 CARGO TK(P)	91	99	5761.9	5646.7	84.545	11.873	-5.794	4019.3
102	NO.1 CARGO TK(S)	91	99	5806.0	5689.9	84.678	11.874	5.749	4092.9
103	NO.2 CARGO TK(P)	83	91	7110.8	6968.6	58.880	11.806	-6.792	6240.3
104	NO.2 CARGO TK(S)	83	91	7051.1	6910.1	58.978	11.805	6.838	6133.7
105	NO.3 CARGO TK(P)	75	83	7071.0	6929.6	31.603	11.805	-6.850	6166.2
106	NO.3 CARGO TK(S)	75	83	7118.9	6976.5	31.700	11.806	6.804	6273.2
107	NO.4 CARGO TK(P)	67	75	7121.7	6979.3	4.500	11.806	-6.804	6273.2
108	NO.4 CARGO TK(S)	67	75	7063.0	6921.7	4.597	11.805	6.850	6166.2
109	NO.5 CARGO TK(P)	59	67	7072.7	6931.2	-22.797	11.805	-6.850	6166.2
110	NO.5 CARGO TK(S)	59	67	7114.7	6972.4	-22.700	11.806	6.804	6273.2
111	NO.6 CARGO TK(P)	51	59	6917.0	6778.7	-49.674	12.007	-6.650	6273.2
112	NO.6 CARGO TK(S)	51	59	6859.2	6722.0	-49.572	12.008	6.696	6166.2
113	SLOP TK(P)	49	51	1331.2	1304.6	-66.858	11.647	-5.461	1568.3
114	SLOP TK(S)	49	51	1553.8	1522.7	-66.864	12.601	6.183	1568.3
115	RESIDUE TK(P)	49	51	223.6	219.1	-66.900	18.297	-10.495	160.7
	T O T A L	-		85176.6	83473.1	-	-	-	-

PRINCIPAL PARTICULARS

LENGTH O.A.		228.00 M
LENGTH B.P.		219.00 M
BREADTH (MLD)		32.24 M
DEPTH (MLD)		20.65 M
DRAFT Design	(MLD)	12.22 M
Scantling	(MLD)	14.20 M

FINAL

IMO NUMBER
9314193

HORIZON DIANA

STX	HULL NO.	S-1208
	TYPE	74,200 DWT CRUDE/PRODUCT OIL TANKER
MANAGER: E. J. Kim	TITLE	CAPACITY PLAN WITH DEADWEIGHT SCALE
CHECKED: J. P. Hong		
DRAWN : D. J. KANG		
TEL. NO. 055) 548-3132		
DEP'T: BASIC RESEARCH TEAM	SCALE 1/300	DATE 2007.09.11
DWG. NO. B0179000	REV. NO. 0	

STX Shipbuilding Co.,Ltd. B10

FILE NAME : 4B110P34CB-1177-FINAL

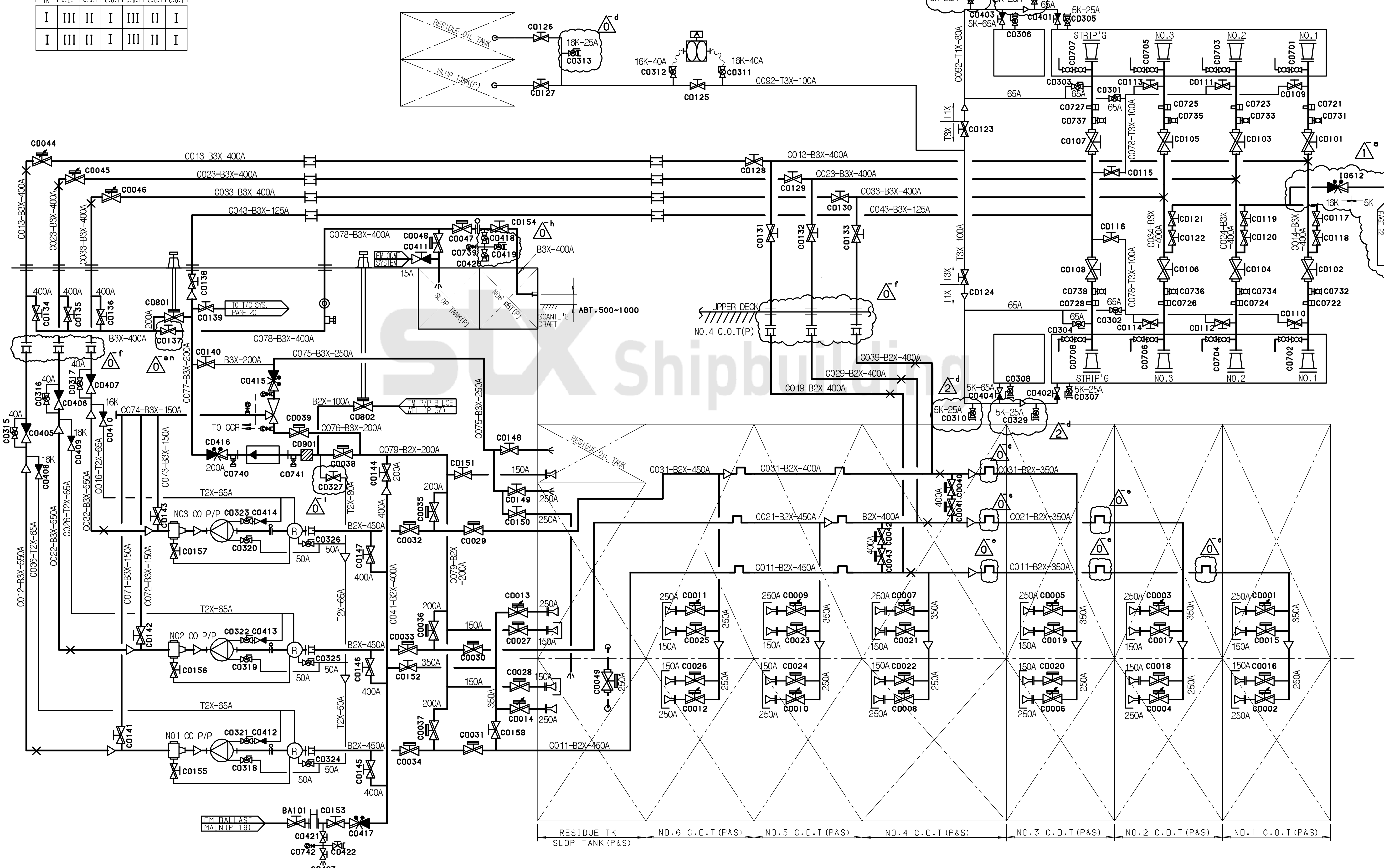
STXSE-C301 (200201)

stx	CARGO HANDLING SYSTEM(1/5)	MODEL NO.	74KPC04
		DWG. NO.	D5000000

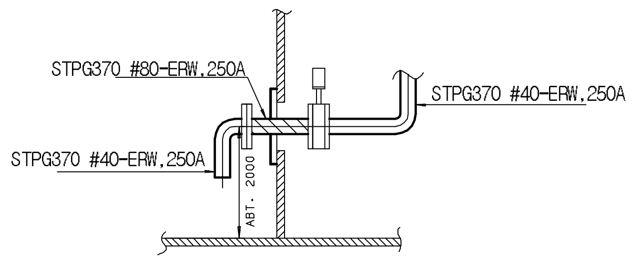
CARGO SEGREGATION

SLOP TK	N06 C.O.T	N05 C.O.T	N04 C.O.T	N03 C.O.T	N02 C.O.T	N01 C.O.T
I	III	II	I	III	II	I
I	III	II	I	III	II	I

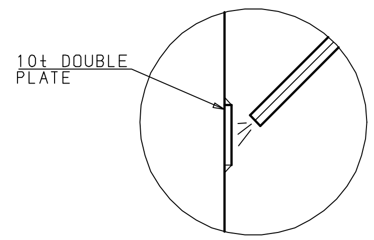
NOTE)
✕(ANCHOR POINT) SHALL BE DECIDED ACCORDING TO ACTUAL ARRANGEMENT.

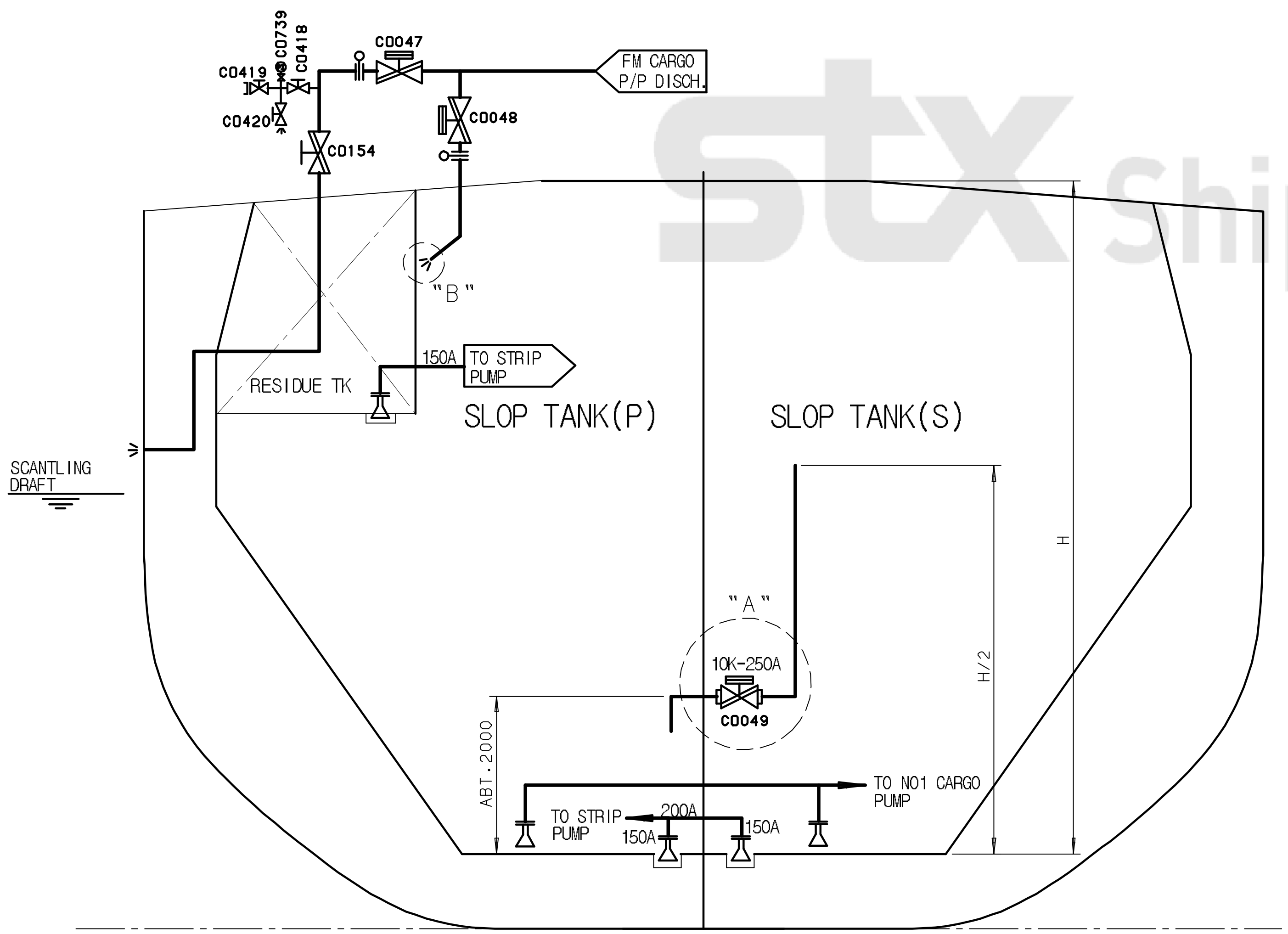


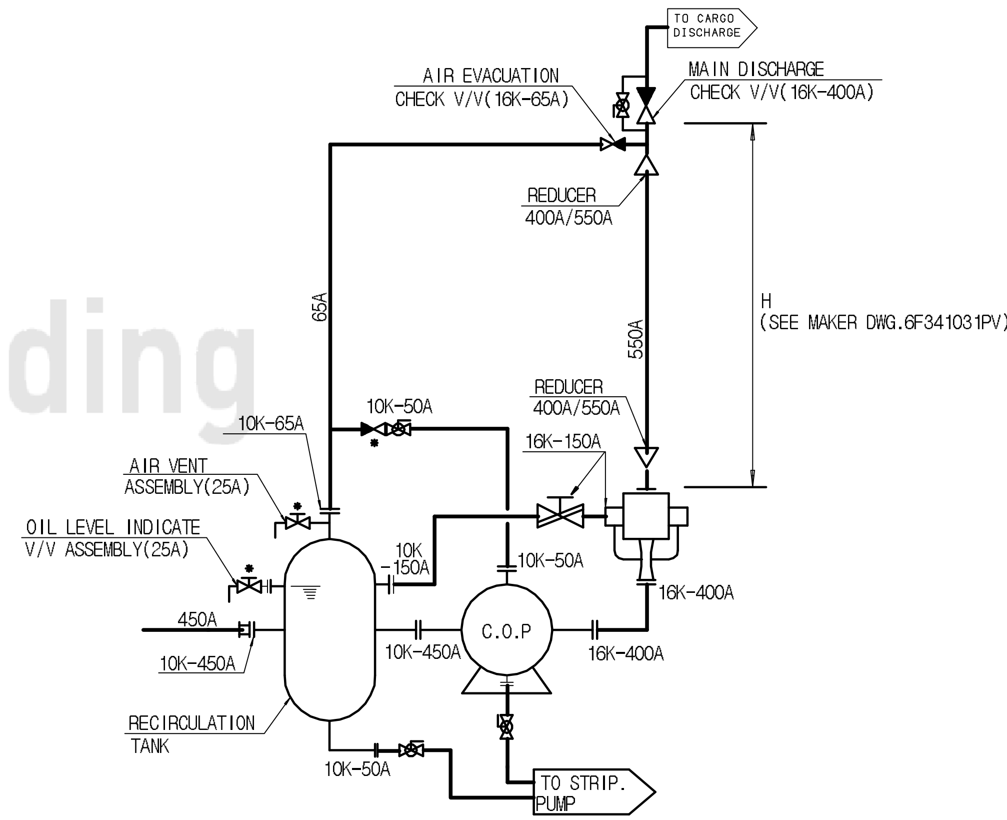
"A" DETAIL



"B" DETAIL



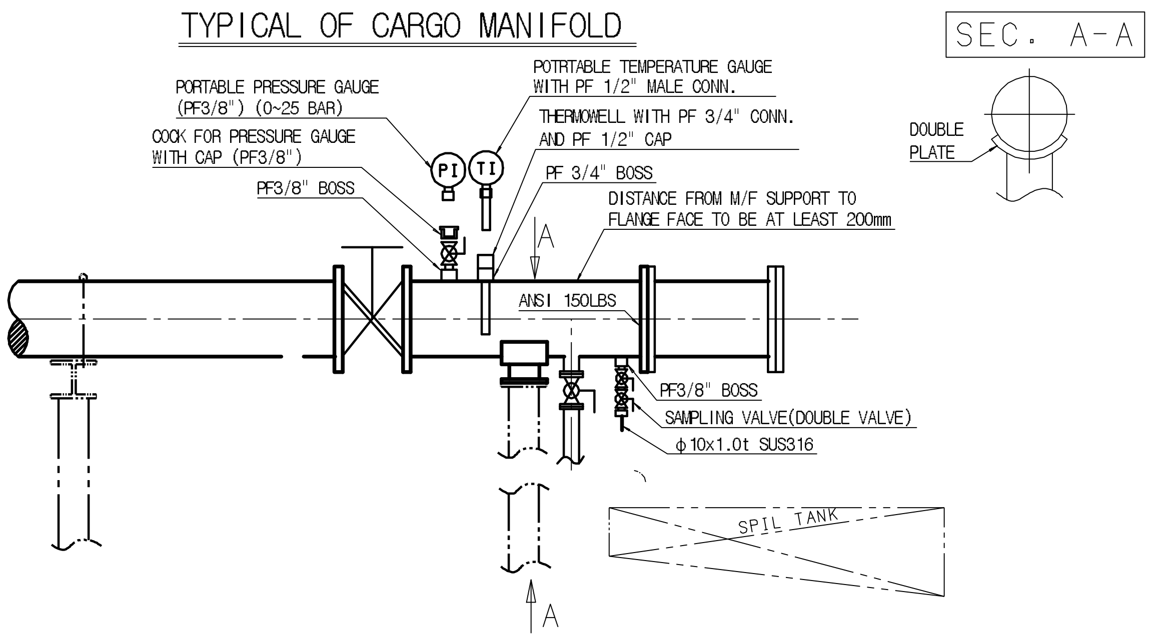




DETAIL OF PRIMAVAC SYSTEM

FORM NAME : STXSE-PC313

TYPICAL OF CARGO MANIFOLD



* THE CARGO MANIFOLD SUPPORTS, DISTANCE PIECES AND REDUCERS SHOULD BE CAPABLE OF WITHSTANDING THE LOADS AT THE PRESENTATION FLANGE

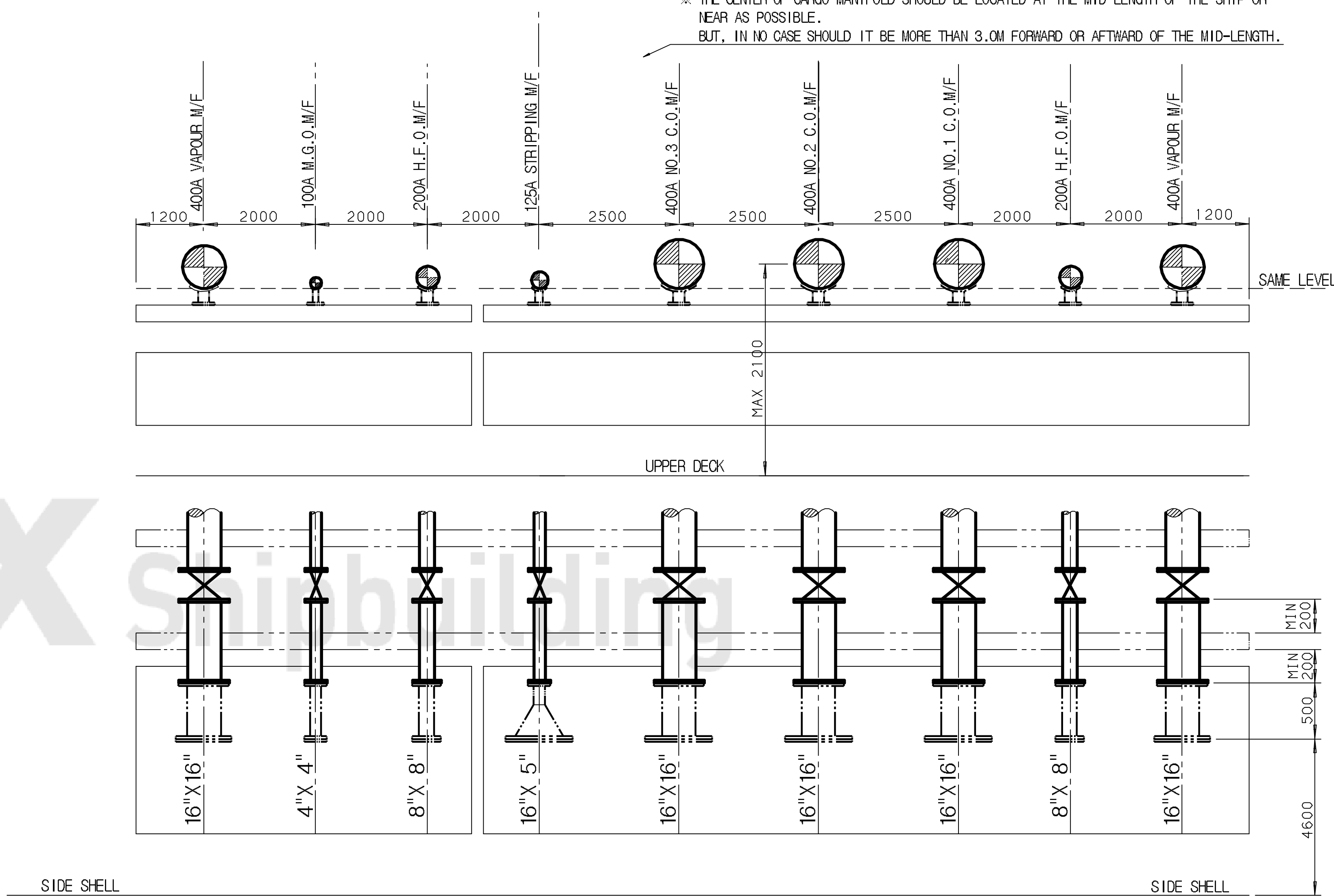
	FOR CARGO	FOR BUNKER
VERTICAL FORCE (TONNES)	15	5
LATERAL FORCE (TONNES)	4	2
AXIAL FORCES (TONNES)	10	5
MOMENT (TONNE METERS)	15	5
FORCES BASED ON MAX. LOADS IMPOSED BY UNSUPPORTED LOADING ARMS OF STATED SIZE	24"	16"

CARGO REDUCER (CONCENTRIC)

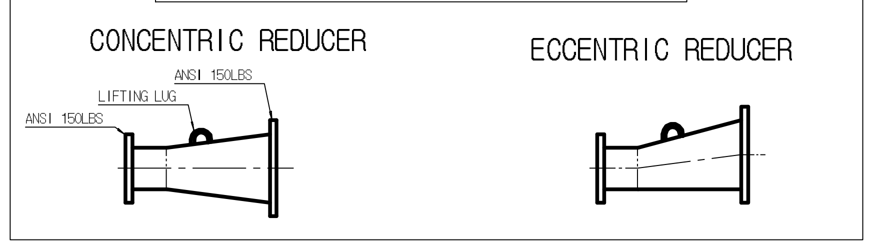
KIND	SIZE PIPE	SIZE SHORE	Q'TY	MATERIAL	REMARK
PRINCIPAL FITTINGS	16"	16"	6	MILD STTEL WITH COATING SAME AS CARGO PIPE	FITTED WITH BLANK FLANGE
	5"	16"	2		
RESERVED REDUCER STOCK	16"	12"	3	MILD STTEL WITH COATING SAME AS CARGO PIPE	STOCKED WITHOUT BLANK FLANGE
	16"	10"	3		
	16"	8"	3		
	5"	12"	1		
	5"	10"	1		
	5"	8"	1		

ARRANGEMENT OF MANIFOLD

※ THE CENTER OF CARGO MANIFOLD SHOULD BE LOCATED AT THE MID-LENGTH OF THE SHIP OR NEAR AS POSSIBLE.
BUT, IN NO CASE SHOULD IT BE MORE THAN 3.0M FORWARD OR AFTWARD OF THE MID-LENGTH.



TYPICAL OF MANIFOLD REDUCER



VAPOUR REDUCER (CONCENTRIC)

KIND	SIZE PIPE	SIZE SHORE	Q'TY	MATERIAL	REMARK
PRINCIPAL FITTINGS	16"	16"	4	MILD STTEL WITH INSIDE COATING : SAME AS C/O TK OUTSIDE COATING : SAME AS SURROUND	
RESERVED REDUCER STOCK	16"	12"	2		

0

BUNKER REDUCER (ECCENTRIC)

KIND	SIZE PIPE	SIZE SHORE	Q'TY	MATERIAL	REMARK
PRINCIPAL FITTINGS	8"	8"	4	MILD STTEL WITH COATING SAME AS BUNKER PIPE	
	4"	4"	2		
RESERVED REDUCER STOCK	8"	12"	1	MILD STTEL WITH COATING SAME AS BUNKER PIPE	
	8"	10"	1		
	8"	6"	1		
	8"	4"	1		

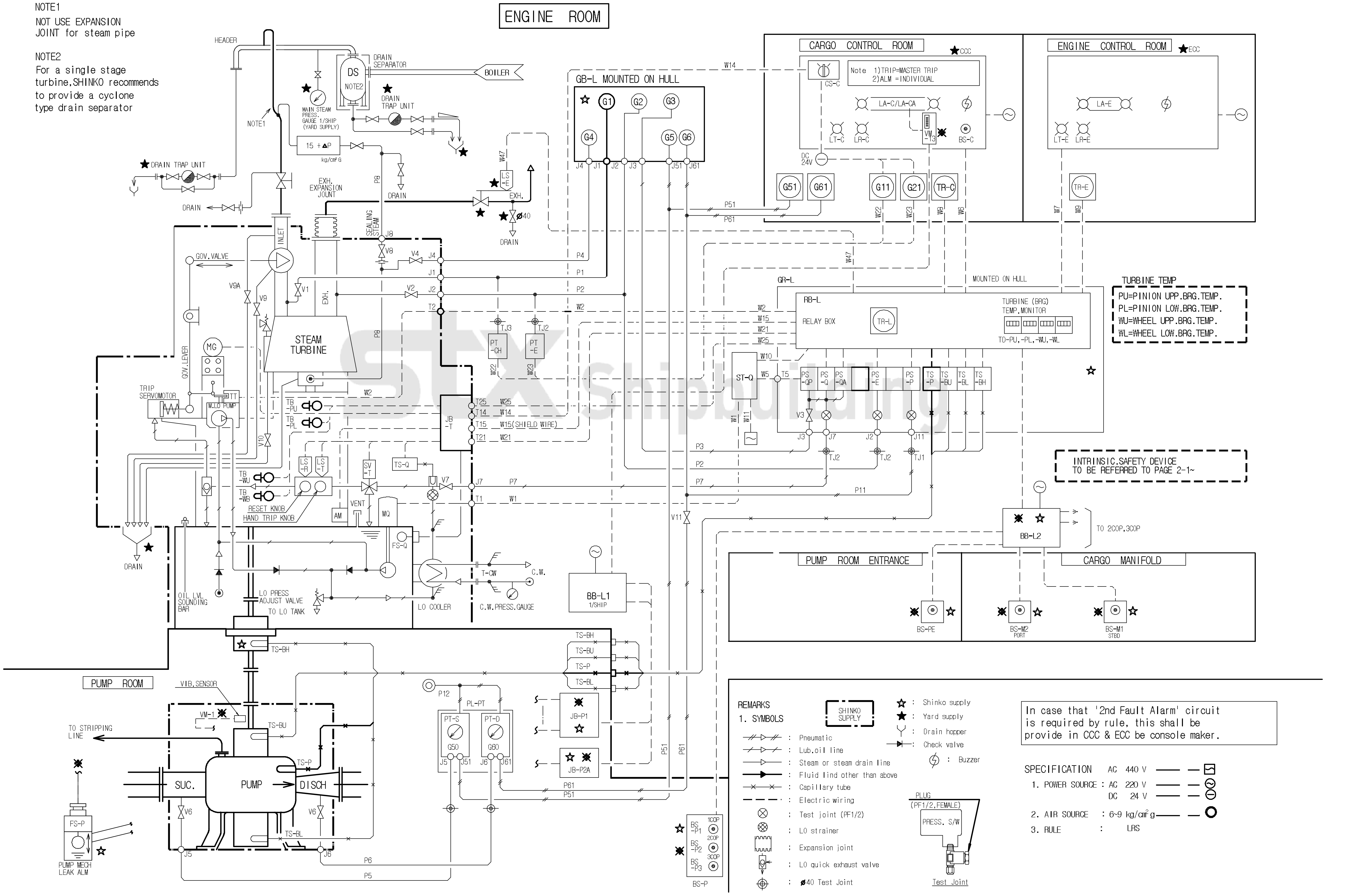
0

FORM NAME : STXSE-PC313

stx	CARGO HANDLING SYSTEM(4/5)	PAGE 17 /
		MODEL NO. 74KPC04
		DWG. NO. D5000000

NOTE1
NOT USE EXPANSION JOINT for steam pipe

NOTE2
For a single stage turbine,SHINKO recommends to provide a cyclone type drain separator



REMARKS

1. SYMBOLS

SHINKO SUPPLY

☆ : Shinko supply
★ : Yard supply
: Drain hopper
: Check valve
: Buzzer

: Pneumatic
: Lub.oil line
: Steam or steam drain line
: Fluid lind other than above
: Capillary tube
: Electric wiring
: Test joint (PF1/2)
: LO strainer
: Expansion joint
: LO quick exhaust valve
: ø40 Test Joint

PLUG (PF1/2.FEMALE)
PRESS. S/W
Test Joint

In case that '2nd Fault Alarm' circuit is required by rule, this shall be provide in CCC & ECC be console maker.

SPECIFICATION

1. POWER SOURCE : AC 440 V / AC 220 V / DC 24 V
2. AIR SOURCE : 6~9 kg/cm²g
3. RULE : LRS

FORM NAME : STXSE-PC313

CARGO HANDLING SYSTEM(5/5)