

CHINESE-POLISH
JOINT-STOCK SHIPPING COMPANY

32,000 DWT MULTI-PURPOSE
HEAVYLIFT VESSEL

CHIPOLBROK PACIFIC

FLAG: Hong Kong

PORT OF REGISTRY: Hong Kong

IMO NO: 9710177

OFFICIAL NUMBER : HK-4463

CALL SIGN: VRPC3

CLASS NOTATION:

LR ⚡ 100A1 strengthened for heavy cargoes, Ice Class 1C FS, Container Cargoes in all Holds and on Upper Deck and on all Hatch Covers, ShipRight(ACS(B)), *IWS, LI, NAV1, with the descriptive notes "ShipRight(BWMP(T), SCM, IHM)", strengthened for regular discharge by heavy grabs

⚡ LMC, UMS

BUILT BY:

SHANGHAI SHIPYARD CO.,LTD

DEC.2015 HULL NO. S1224

PRINCIPAL PARTICULARS

LENGTH O.A.	189.90m
LENGTH B.P.	184.00m
LENGTH REGISTERED	184.97m
BREADTH MLD.	28.0m
DEPTH MLD.	15.5m
DESIGNED DRAFT	9.5m
SCANTLING DRAFT	10.5m
MAX. HEIGH WITH ANTENNA	52.463m
DEADWEIGHT AT DESIGNED DRAFT	26836.1t
DEADWEIGHT AT SCANTLING DRAFT	31615.5t
CARGO HOLD CAPACITY	
TWEEN DECK PANELS IN HOLDS	39482m ³
TWEEN DECK PANELS OUT OF HOLDS	43022m ³
CONTAINER CAPACITY	
IN HOLD	891TEU
ON DECK	1028TEU
TOTAL	1919TEU

MAIN ENGINE

Wartsila6RT-flex50-DTierII, with Delta Tuning	1 SET
CMCR 8350 kW x 99.0 r/min	
CSR(90%CMCR) 7515 kW x 95.6 r/min	

SERVICE SPEED (T=9.5m,at CSR with 15%S.M.)	15.79kn
ENDURANCE	18000n.miles
COMPLEMENT	28P

TONNAGE MEASUREMENT	INTERNATIONAL (1969)	PANAMA CANAL	SUEZ CANAL
GROSS TONNAGE	24778	—	29721.30
NET TONNAGE	10318	21553	25571.69

DESCRIPTION

The vessel is designed and built as a single deck, double skin, box shape cargo holds, highly flexible multi-purpose heavy lifting general dry cargo ship for worldwide service.

The vessel is designed as an ocean going single screw vessel with a two stroke low speed diesel engine, a fixed pitch type propeller and a semi-balanced type rudder.

The vessel is constructed and fitted up so as to be capable of carrying wide range of commodities, e.g. containers, dry bulk cargoes, grain, general cargoes, project cargoes, steel coil, heavy cargoes and long pieces, etc.

The following IMDG dangerous goods can be loaded

No.1 hold: Bulk cargoes, package form of class 1-9

No.2 & 3 hold: Bulk cargoes, package form of class 1.4S & 2-9

On deck: all dangerous cargoes in package form

Remarks:

a) in class 4.2&4.3: seed cake (b)&(c), aluminum ferrosilicon, aluminum silicon, ferrosilicon, zinc ashes, etc. which require continuous ventilation to be not loaded.

b) class 5.2 only to be loaded on deck.

c) in class 6.1 liquids and 8 liquids, only with flashpoint $23^{\circ}\text{C} < \text{FP} \leq 61^{\circ}\text{C}$ to be carried.

d) in class 7: only UN2912 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-1) and UN2913 : RADIOACTIVE MATERIAL SURFACE CONTAMINATED OBJECTS (SCO-1) can be loaded.

The dangerous goods to be restricted by the actual equipment installation as per the description in other parts in the Spec. explosion grade to be II CT5.

RULES AND REGULATIONS

a) Rules and Regulations of Classification Society

b) Maritime Laws and Regulations of Flag Authority

c) International Rules and Regulations

1. International Convention on Load Lines, 1966 with the Protocol of 1988 and the latest amendments

2. International Convention for the Safety of Life at Sea, 1974, and protocol 1978, 1988 and the latest amendments

3. International Convention for the Prevention of Pollution from Ships 1973 (MARPOL 1973) with protocol 1978 Annex I, IV, V, VI, and all latest amendments

4. Convention on the International Regulations for Preventing Collisions at Sea, 1972 and the latest amendments

5. International Tele-communication Union Radio Regulation, 2008

6. International Regulation for the Tonnage Measurement of the vessel, 1969

7. IMO Resolution MSC.137(76) Standards for ship maneuverability, and MSC/Circ. 1053-Explanatory Notes to the Standards for Ship Maneuverability, and IMO Res.A.601 (15), "Provision and display of maneuvering information on board ships", and A.751(18) "Interim Standards for Ship's Maneuverability"

8. IMO Resolution MSC.337(91) The Code on Noise Levels onboard Ships

9. ISO 6954 "Mechanical vibration - Guidelines for the measurement, reporting and evaluation of vibration with regard to habitability on passenger and merchant ships 2000"

10. MSC.277(85) "Clarification Of The Term 'Bulk Carrier' And Guidance For Application Of Regulations In SOLAS To Ships Which Occasionally Carry Dry Cargoes In Bulk And Are Not Determined As Bulk Carriers In Accordance With Regulation XII/1.1 And Chapter II-1"
11. IMO Resolution MSC.268(85) (International Maritime Solid Bulk Cargoes (IMSBC) Code)
12. IMDG Code
13. Maritime Labor Convention (MLC) 2006
14. International Marine Pilots Association requirements including IMO Res.A1045(27)–for operating in Australian Waters and SOLAS Chapt.V Reg.23 amended by MSC.308(88), on the pilot transfer arrangement
15. MSC.1/CirC.1331, accommodation ladder in way of accommodation area
16. International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001
17. MSC.267(85)–International code on intact stability 2008 (2008 IS Code)
18. Ballast Water Management Convention 2004 and the associated Guidelines and USCG requirements
19. MEPC.1/Circ.511, revised guidelines for handling oily wastes in machinery space
20. IMO Resolution MSC.282 (86)–"SOLAS V, Reg. V/19, requirement of ECDIS
21. IEC 60092 where required by the Classification Society
22. IMO Resolution A.1021(26)–Code on Alerts and Indicators, 2009
23. IMO Resolution A.962(23)–IMO Guidelines on Ship Recycling as amended by IMO Resolution A.980(24), or Ship Recycling Convention 2009
24. MSC.333(90) REVISED PERFORMANCE STANDARDS FOR SHIPBORNE VOYAGE DATA RECORDERS (VDRs)
25. MSC.334(90) AMENDMENTS TO THE PERFORMANCE STANDARDS FOR DEVICES TO MEASURE AND INDICATE SPEED AND DISTANCE

d) Special Rules and Regulations

1. Rules of navigation of Suez Canal Authority, including the regulation for measurement of tonnage.
2. Rules and Regulation governing navigation of the Panama Canal, including the regulation for the measurement of tonnage, Panama chock, mooring arrangement, visibility, etc.
3. U.S. Coast Guard Regulations Applying to foreign flag vessel operating in navigable waters of the United States (CFR Title33–Part 155, 156, 159 and 164 without certificate or inspection)
4. CFR title 33–part 155: Oil Pollution Prevention Regulations of Vessels
5. CFR title 33–part 156: Oil and Hazardous Material Transfer Operation Subpart a Pollution Prevention Regulation for Oil Transfer Operations
6. CFR title 33–part 159: Marine Sanitation Devices
7. CFR title 33–part 164: Navigation Safety Regulation only for Section 164.35 Equipment
8. CER title 33–part 151: Vessels carrying oil, noxious liquid substances, garbage, municipal or commercial waste and ballast water
9. CFR title 29, Part 1918 : Safety and Health Regulations for longshoring
10. Australian Maritime Safety Authority MARINE ORDERS Part 32 "Cargo Handling Equipment" Issue 3, 27 November 2011 (concerning ladders in cargo hold / deck and deck crane access) and for materials handling equipment
11. EU Directive EC 2005/33 amending 1999/32/EC of 26 April 1999 in relating to introduce 0.1% sulphur limit for marine fuel.
12. CARB (California Air Resources Board) – California Code of Regulations 13 CCR 2299.2, and 17 CCR 93118.2 regarding Regulation on Fuel Sulphur and Other Operational Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles of the California Baseline

HATCH COVERS TTS

CARGO SPACE	HATCH ON	HATCH DIMENSIONS LXB(m)	Description of hatch covers
No.1 HOLD	MAINDECK	25280x20324/15324 27650x20324/15324/10284	FOLDING TYPE HYDRAULICALLY OPERATED WEATHERTIGHT
No.1 HOLD	PONTOON TYPE TWEEN DECK TWO DIFFERENT LEVELS	27650x20324/15324/10284	LIFT AWAY POONTOON TYPE NON-WEATHERTIGHT
No.2 HOLD P/S No.3 HOLD P/S	MAINDECK	50.560X11.250	FOLDING TYPE HYDRAULICALLY OPERATED WEATHERTIGHT
No.2 HOLD P/S	PONTOON TYPE TWEEN DECK FOUR DIFFERENT LEVELS	50.560X11.250	LIFT AWAY POONTOON TYPE NON-WEATHERTIGHT
No.3 HOLD P/S	PONTOON TYPE TWEEN DECK FOUR DIFFERENT LEVELS	50.560X11.250/8.772(P) 50.560X11.250/8.142/8.772(S)	LIFT AWAY POONTOON TYPE NON-WEATHERTIGHT

DECK CRANE

Three(3) Electro-hydraulic wire luffing type single deck cranes (swl350Tons each), made by "MACGREGOR"

Item	Location	Type	Capacity Max Slewing Radius
1	At port of the hatch No.2 fore	single	SWL 350x18m/180tx33m/45tx36m
2	At port of the hatch No.2 aft	single	SWL 350x18m/180tx33m/45tx36m
3	At port of the hatch No.3 middle	single	SWL 350x18m/180tx33m/45tx36m

Maximum 700t heavy cargo(including lifting beam)can be tandem lifted by adjacent two cranes with auto-team to be added.

MAIN ENGINE

No. of set	:	One (1)
Type	:	Wartsial 6RT-flex50-D with delta tuning method & FAST Nozzle, fully electronically controlled common rail fuel injection system, direct reversible, two stroke, crosshead, high efficient turbocharged type slow speed marine diesel engine.
C.M.C.R.	:	8350 KW X99 r/min
C.S.R.(90 % CMCR)	:	7515 KW X95.6 r/min
No. of cylinder	:	6
Cylinder bore	:	500 mm
Stroke	:	2050 mm
Fuel oil consumption guarantee refers to ISO ambient condition and lower calorific value for the fuel of 42707 kJ/kg	:	166.2g/kWh + 5% at CSR shop test. NOx Emission shall comply with the IMO Tier II limit.

PROPELLER

Material	Ni-Al Bronze Cu3
type	Fixed pitch
Propeller diameter	6500 mm
Number of blades	4
Mean Pitch	5439 mm

BUNKER STATION ON STERN

BUNKER STATION ON STERN UPPER DECK STARBOARD SIDE. HEIGHT ABOVE KEEL: 15.9m AND PORT SIDE. HEIGHT ABOVE KEEL: 15.9m

HOSE CONNECTION FOR 100mm ARE AVAILABLE FOR DIESEL OIL WITH FLANGE AND FOR 250mm ARE AVAILABLE FOR HEAVY OIL WITH FLANGE

FIRE FIGHTING SYSTEM

220 CO2 BOTTLES 68L FOR ENGINE ROOM AND CARGO HOLD

MAKER: WILHELMSSEN

SMOKE TYPE FIRE DETECTOR FOR CARGO HOLD

IONIZATION/THERMAL TYPE FIRE DETECTOR FOR ENGINE ROOM

AIR CONDITIONING FOR ACCOMMODATION

AIR HANDLING UNIT: MAHK-1413 MAKER: DMA

A/C PLANT COMPRESSOR: FX18/2735 QUANTITY: 2SETS MAKER: DMA

REFRIGERATION MACHINERY

COMPRESSOR: FX5 QUANTITY: 2SETS MAKER: DMA

CONDENSER: CND44AF QUANTITY: 2SETS MAKER: DMA REFRIGERANT: R417A

RADIO & NAVIGATION EQUIPMENT

RADIO STATION: SAILOR6320

GYRO COMPASS: RAYTHEON
ANSCHUTZ/STD22

AUTOPILOT: RAYTHEON
ANSCHUTZ/NAUTOPILOT5400

RADAR: RAYTHEON ANSCHUTZ/SYNAPSIS
RADAR

EPIRB: SAILOR/SE406-II

INMARSAT F: SAILOR/FBB500

AIS: FURUNO/FA-150

INMARSAT C: SAILOR 6110

GPS: SAAB/R5

SPEED LOG: CONSILIUM/T2+

ECHO SOUNDER: SKIPPER/GDS101

VHF: SAILOR 6222

NAVTEX RECEIVER: JRC/NCR-333

VHF TWO WAY TELEPHONE: SAILOR/SP3520

FACSIMILE RECEIVER: TAIYO/TF-708

AIS TRANSPONDER: SAILOR 5051

CREW AND CABIN LOCATION

CABINS	BERTHS	ROOMS	DECK
CAPTAIN	1	2	E-DECK
C.ENG.	1	2	E-DECK
PILOT	1	1	E-DECK
OWNER	1	2	D-DECK
C.OFF.	1	2	D-DECK
2nd ENG.	1	2	D-DECK
2nd OFF.	1	1	D-DECK
ELE.ENG.	1	1	D-DECK
3rd ENG.	1	1	C-DECK
BOATSWAIN	1	1	C-DECK
3rd OFF.	1	1	C-DECK
4th ENG.	1	1	C-DECK
CADET	2	2	B-DECK
MOTORMAN	4	4	B/C-DECK
SEAMAN	5	5	B/C-DECK
DECKFITTER	1	1	B-DECK
STOREKEEPER	1	1	B-DECK
SPARE	1	1	A-DECK
COOK	1	1	A-DECK
STEWARD	1	1	A-DECK

LOADING COMPUTER

Sea Control System Corporation Limited, CHINA; WITH CLOAD SOFTWARE

SHORE CONNECTION

ELECTRIC POWER: AC440V; 3PHASE 60Hz 500A

WINCHES

MANUFACTURE:HATLAPA; 2ELECTRIC COMB. ANCHOR-DOUBLE DRUM MOORING WINCHES

POWERED FOR RATED PULL AT WINDLASS PART: 253knX9m/min

POWERED FOR RATED PULL AT MOORING PART: 147knX15m/min(1st layer)

MAX BRAKE LOADING FORCE: 528kn; ELECTRIC SELFTENSIONING MOORING WINCH

POWERED FOR RATED PULL AT MOORING PART: 147knX15m/min(1st layer)

WARPING HEAD NO_LOAD SPEED: 37m/min

MAIN/EMERGENCY DIESEL GENERATOR ENGINE

3 MAIN DIESEL GENERATOR ENGINES:CMF-MAN 6L23/30H

MAIN ENGINE POWER/REVOLUTION:960KW AT 900RPM

MAIN GENERATOR:CAPACITY 910KW AT 900RPM

1 EMERGENCY DIESEL GENERATOR ENGINE: CCFJ170-E

AUXILIARY GENERATOR: CAPACITY 170KW AC450V 60HZ

FRESH WATER GENERATOR

TYPE:JWP-26-C100; CAPACITY:20tons/day; MAKER:ALFA LAVAL

MAIN AIR COMPRESSOR

2 MAIN AIR COMPRESSORS:J.P.SAUER

ELECT, MOTOR DRIVER, 3-STAGES AIR OR FRESH WATER COOLED TYPE,WITH BUILT IN COOLING WATER SOLENOID SHUT OFF VALVE; CAPACITY:120m³/h/3.0MPa

OLY WATER SEPARATION

IMO APPROVED TYPE: 3SEP OWS-2.5M³/h; MAKER: Jowa

BOILER

TYPE: OS TCI & XS-2V MAKER:AALBORG

1 EXHAUST ECONOMIZER, CAPACITY:abt.1430kg/h

1 FUEL OIL ECONOMIZER, CAPACITY:abt.1500kg/h

LIFE SAVING APPLIANCE

1 SET FOR 30 PERSONS WJ67FC TOTALLY ENCLOSED LIFE BOAT

MAKER: WUXI WENJIAO GFRP FACROTY; MAIN DEMENSION: 6.7X2.7X1.2(LXBXD)

1 SET FOR 6 PERSONS WJ45KR-11 RESCUE BOAT

MAKER: WUXI WENJIAO GFRP FACROTY; MAIN DEMENSION: 4.5X1.86X0.85(LXBXD)

2 DAVIT INFLATABLE LIFERAFTS(16P)

2 THROW-OVERBOARD INFLATABLE LIFERAFTS (15P)

1 THROW-OVERBOARD INFLATABLE LIFERAFT (6P)

PERMISSIBLE MAX LOAD ON HATCH COVER

WEATHERDECK: WEATHER LOAD:3.5t/m² PAY LOAD:3t/m²

CONTAINER STACK LOAD TO BE: 70t for TEU/90t for FEU

TWEENDECK: PAY LOAD: 4 t/m²

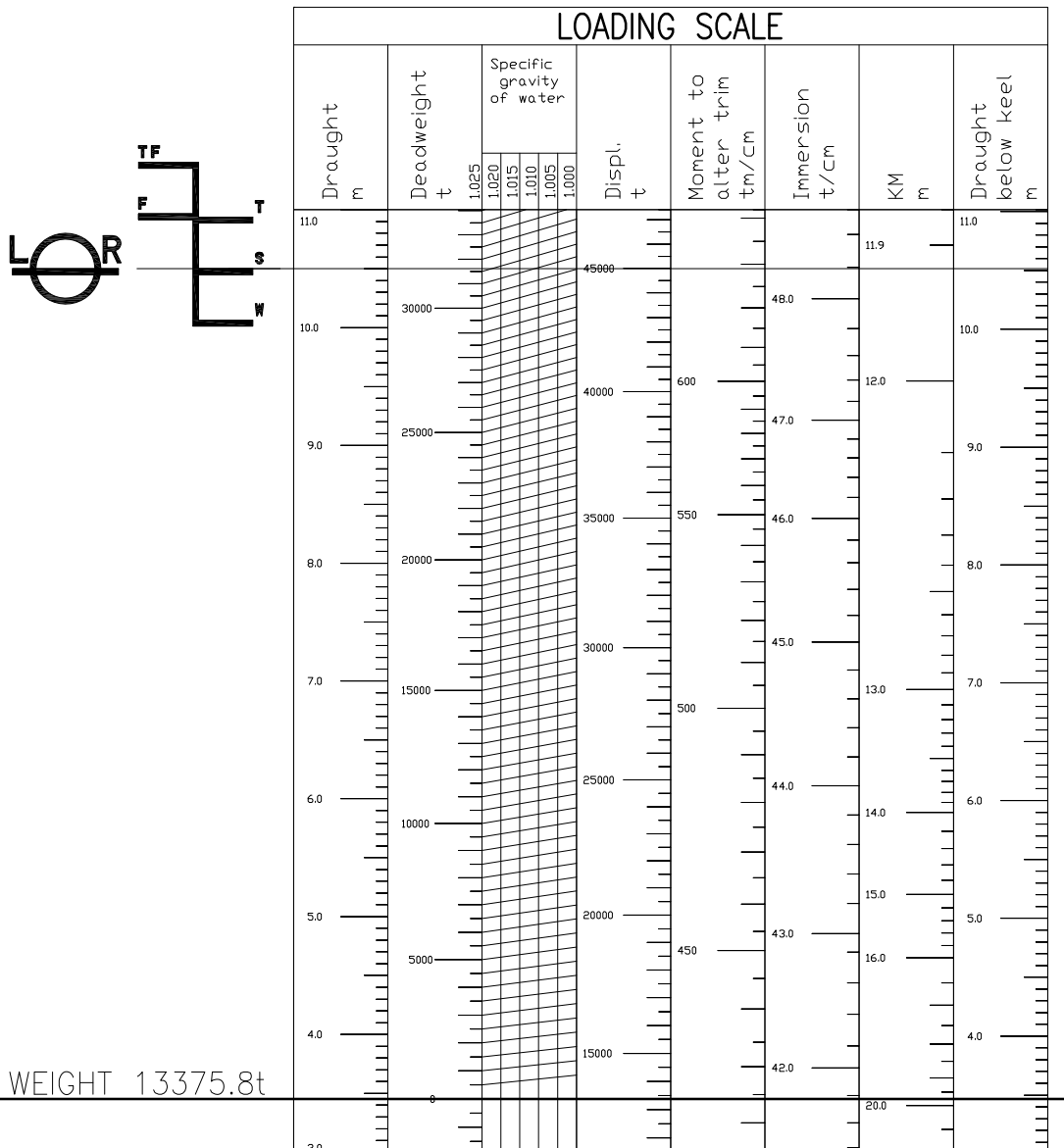
AIR DRAFT

	HEIGHT ABT. B.L.L.	AIR DRAFT dAP=10.5m dFP=10.5m	AIR DRAFT dAP=6.87m dFP=5.616m
FORE MAST (FR229)	29.315m	18.815m	23.649m
RADAR MAST (FR16)	52.463m	41.963m	45.661m
STERN LIGHT (FR5+500)	24.500m	14.000m	17.613m
TOP OF CRANE NO.1(FR181+0.189)	47.05m	36.550m	41.138m
TOP OF CRANE NO.2(FR128+0.188)	47.05m	36.550m	40.852m
TOP OF CRANE NO.3(FR75+0.189)	47.05m	36.550m	40.567m

FREEBOARD MARK AND DEADWEIGHT SCALE

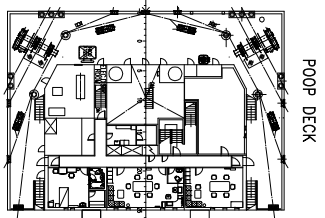
Mark	Description	Freeboard (mm)	Draft(Moulded) (m)	Displacement (t)	Deadweight (t)
S	Summer	5017	10.500	44991.3	31615.5
F	Summer fresh water	4784	10.733	44991.3	31615.5
T	Tropic	4798	10.719	46048.4	32672.6
TF	Tropic fresh water	4565	10.952	46026.2	32650.4
W	Winter	5236	10.281	43937.6	30561.8

LOADING SCALE

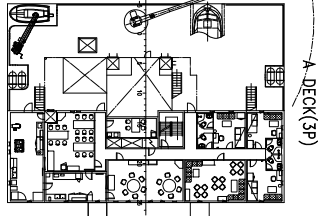


LIGHT WEIGHT 13375.8t

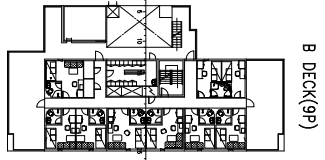
GENERAL ARRANGEMENT



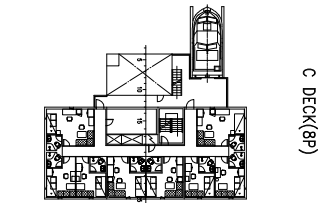
POOP DECK



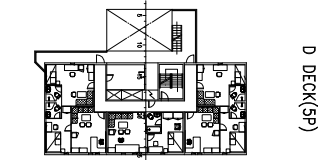
A-DECK(3P)



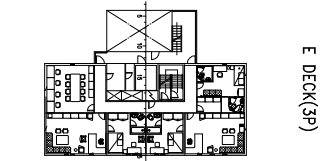
B DECK(9P)



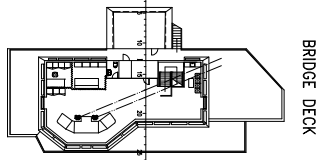
C DECK(8P)



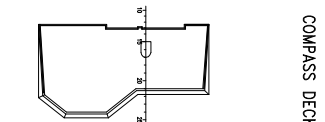
D DECK(5P)



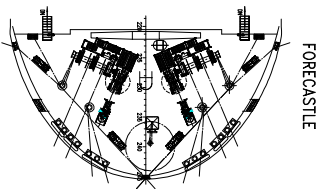
E DECK(3P)



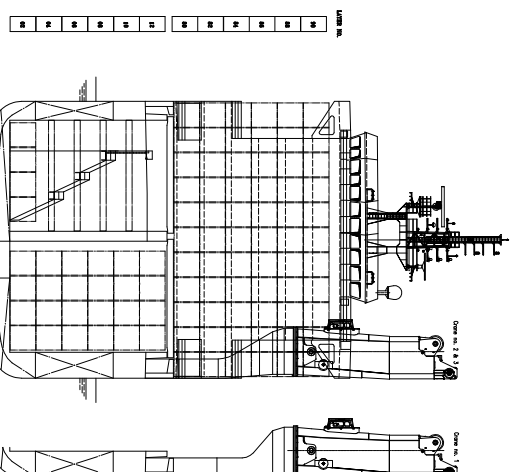
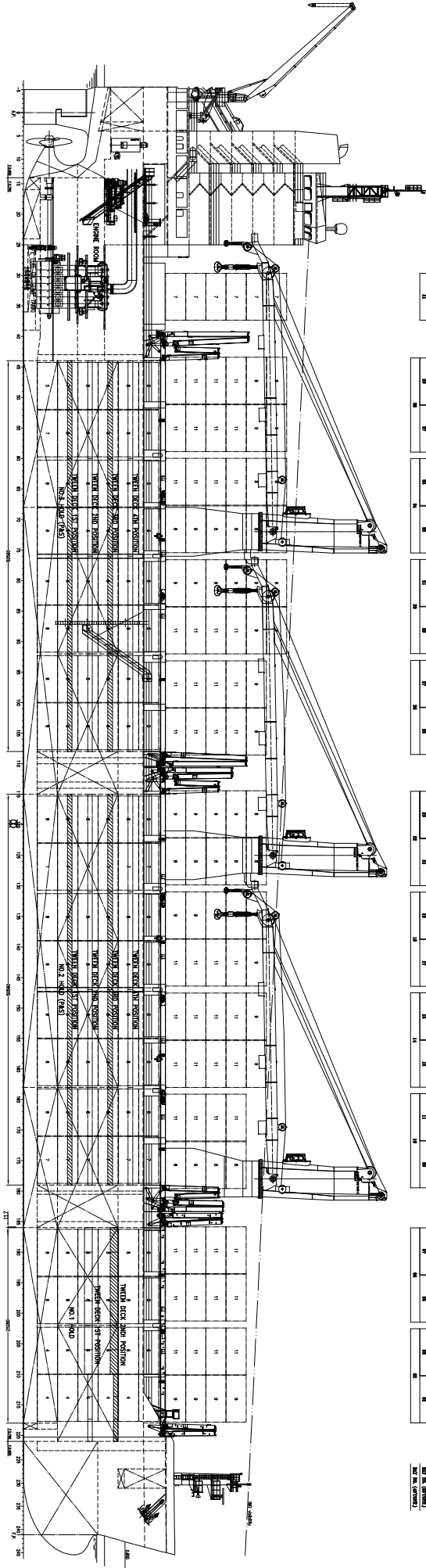
BRIDGE DECK



COMPASS DECK

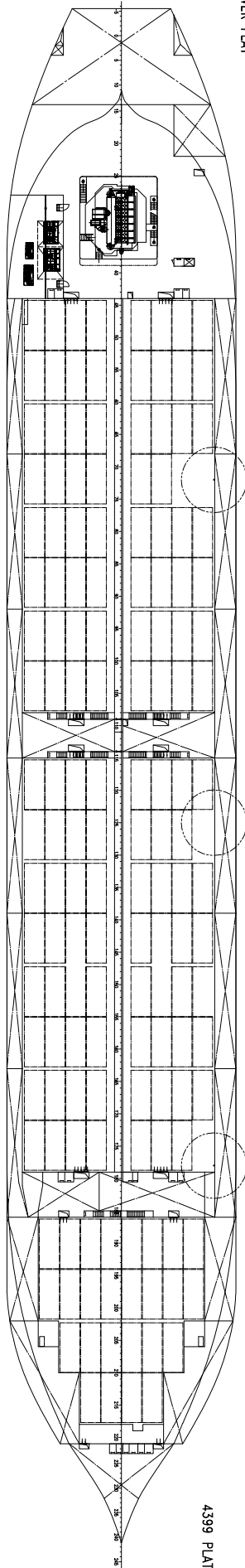
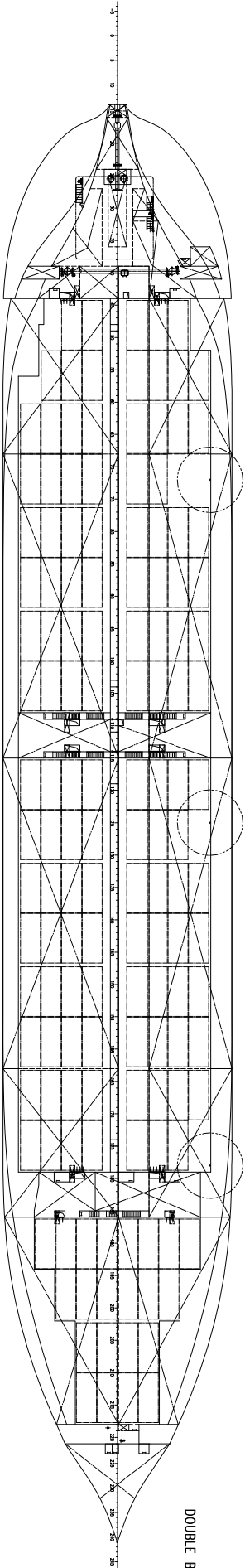


FORECASTLE

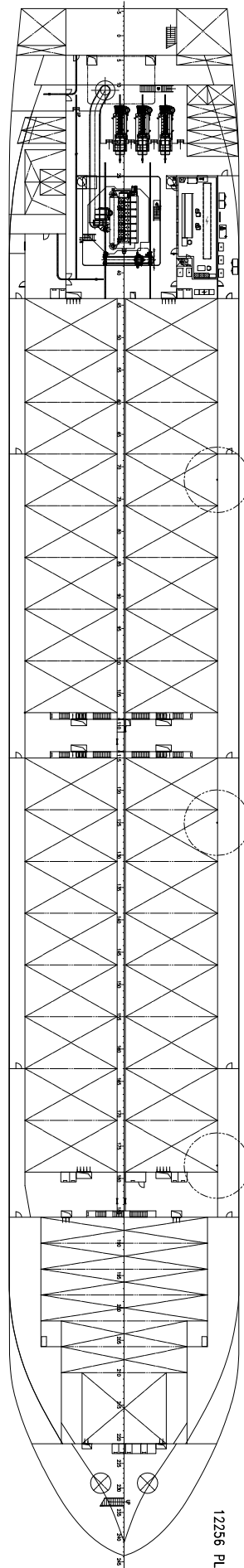


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 CHECKED BY: [Name]

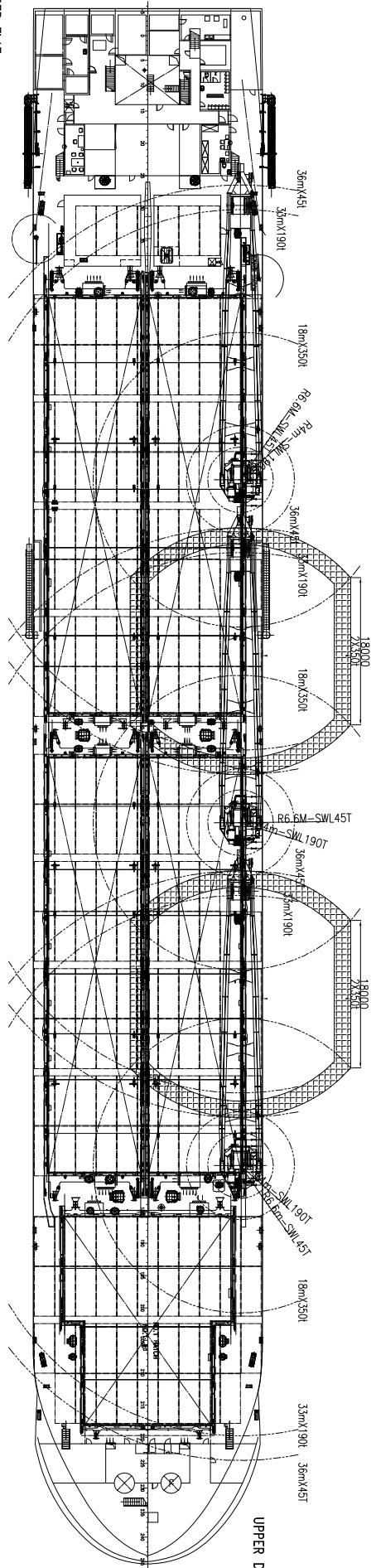
GENERAL ARRANGEMENT



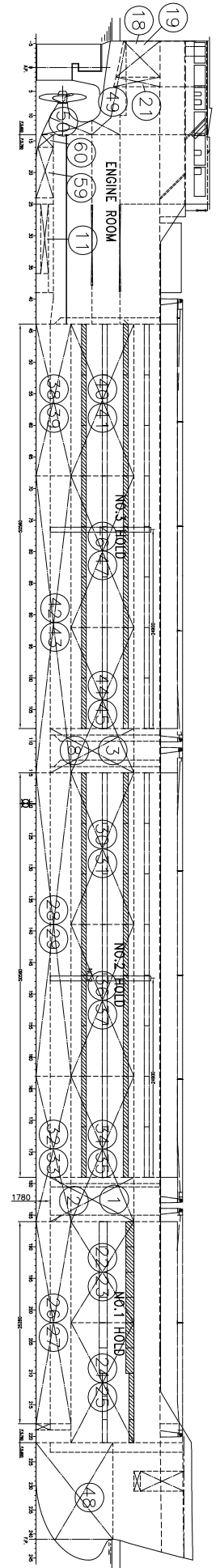
E/R LOWER FLAT



E/R UPPER FLAT

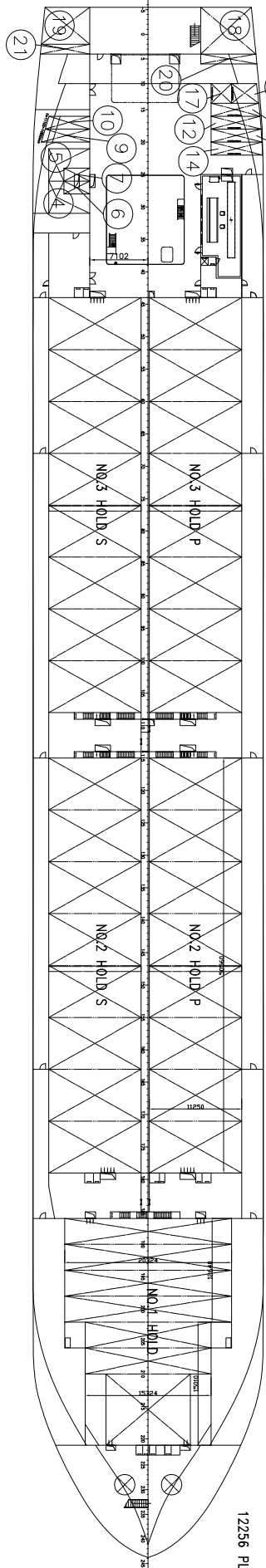


CAPACITY PLAN



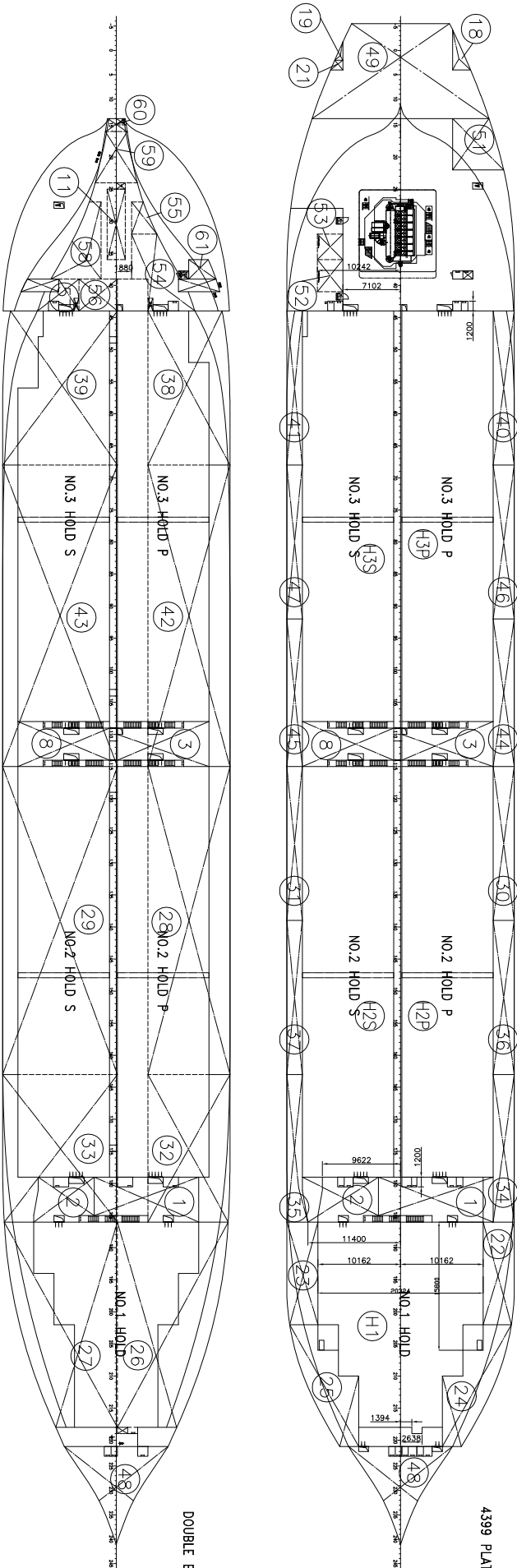
E/R UPPER FLAT

12256 PLATFORM



E/R LOWER FLAT

4399 PLATFORM



DOUBLE BOTTOM

NO.1 HOLD (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
TWEEN DECK AT 1st POSITION							
NO.1 HOLD 1st LOWER PART	RT1.011L	186~221	2527.6	2522.6	155.93	0.00	5.05
NO.1 HOLD 1st UPPER PART	RT1.011U	186~221	4056.4	4048.3	156.31	0.00	13.35
TWEEN DECK AT 2nd POSITION							
NO.1 HOLD 2nd LOWER PART	RT1.012L	186~221	4005.0	3997.0	156.02	0.00	6.76
NO.1 HOLD 2nd UPPER PART	RT1.012U	186~221	2576.3	2571.1	156.54	0.00	14.93

NO.2 HOLD P (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
TWEEN DECK AT 1st and 3rd POSITION							
NO.2 HOLD P 1st LOWER PART	RT1.02P1L	115~179	2230.3	2225.8	113.47	5.77	3.74
NO.2 HOLD P 1st and 3rd MID PART	RT1.02P13M	115~179	2638.1	2632.8	113.47	5.77	8.62
NO.2 HOLD P 3rd UPPER PART	RT1.02P3U	115~179	3504.4	3497.4	113.47	5.77	14.62
TWEEN DECK AT 1st and 4th POSITION							
NO.2 HOLD P 1st LOWER PART	RT1.02P1L	115~179	2230.3	2225.8	113.47	5.77	3.74
NO.2 HOLD P 1st and 4th MID PART	RT1.02P14M	115~179	4127.8	4119.5	113.47	5.77	9.93
NO.2 HOLD P 4th UPPER PART	RT1.02P4U	115~179	2014.7	2010.7	113.47	5.77	15.93
TWEEN DECK AT 2nd and 3rd POSITION							
NO.2 HOLD P 2nd LOWER PART	RT1.02P2L	115~179	3720.0	3712.5	113.47	5.77	5.05
NO.2 HOLD P 2nd and 3rd MID PART	RT1.02P23M	115~179	1148.4	1146.1	113.47	5.77	9.93
NO.2 HOLD P 3rd UPPER PART	RT1.02P3U	115~179	3504.4	3497.4	113.47	5.77	14.62
TWEEN DECK AT 2nd and 4th POSITION							
NO.2 HOLD P 2nd LOWER PART	RT1.02P2L	115~179	3720.0	3712.5	113.47	5.77	5.05
NO.2 HOLD P 2nd and 4th MID PART	RT1.02P24M	115~179	2638.1	2632.8	113.47	5.77	11.24
NO.2 HOLD P 4th UPPER PART	RT1.02P4U	115~179	2014.7	2010.7	113.47	5.77	15.93

NO.2 HOLD S (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
TWEEN DECK AT 1st and 3rd POSITION							
NO.2 HOLD S 1st LOWER PART	RT1.02S1L	115~179	2230.3	2225.8	113.47	-6.48	3.74
NO.2 HOLD S 1st and 3rd MID PART	RT1.02S13M	115~179	2638.1	2632.8	113.47	-6.48	8.62
NO.2 HOLD S 3rd UPPER PART	RT1.02S3U	115~179	3504.4	3497.4	113.47	-6.48	14.62
TWEEN DECK AT 1st and 4th POSITION							
NO.2 HOLD S 1st LOWER PART	RT1.02S1L	115~179	2230.3	2225.8	113.47	-6.48	3.74
NO.2 HOLD S 1st and 4th MID PART	RT1.02S14M	115~179	4127.8	4119.5	113.47	-6.48	9.93
NO.2 HOLD S 4th UPPER PART	RT1.02S4U	115~179	2014.7	2010.7	113.47	-6.48	15.93
TWEEN DECK AT 2nd and 3rd POSITION							
NO.2 HOLD S 2nd LOWER PART	RT1.02S2L	115~179	3720.0	3712.5	113.47	-6.48	5.05
NO.2 HOLD S 2nd and 3rd MID PART	RT1.02S23M	115~179	1148.4	1146.1	113.47	-6.48	9.93
NO.2 HOLD S 3rd UPPER PART	RT1.02S3U	115~179	3504.4	3497.4	113.47	-6.48	14.62
TWEEN DECK AT 2nd and 4th POSITION							
NO.2 HOLD S 2nd LOWER PART	RT1.02S2L	115~179	3720.0	3712.5	113.47	-6.48	5.05
NO.2 HOLD S 2nd and 4th MID PART	RT1.02S24M	115~179	2638.1	2632.8	113.47	-6.48	11.24
NO.2 HOLD S 4th UPPER PART	RT1.02S4U	115~179	2014.7	2010.7	113.47	-6.48	15.93

NO.3 HOLD P (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
TWEEN DECK AT 1st and 3rd POSITION							
NO.3 HOLD P 1st LOWER PART	RT1.03P1L	44~108	2189.2	2184.9	57.79	5.69	3.75
NO.3 HOLD P 1st and 3rd MID PART	RT1.03P13M	44~108	2638.1	2632.8	57.38	5.77	8.62
NO.3 HOLD P 3rd UPPER PART	RT1.03P3U	44~108	3504.4	3497.4	57.38	5.77	14.62
TWEEN DECK AT 1st and 4th POSITION							
NO.3 HOLD P 1st LOWER PART	RT1.03P1L	44~108	2189.2	2184.9	57.79	5.69	3.75
NO.3 HOLD P 1st and 4th MID PART	RT1.03P14M	44~108	4127.8	4119.5	57.38	5.77	9.93
NO.3 HOLD P 4th UPPER PART	RT1.03P4U	44~108	2014.7	2010.7	57.38	5.77	15.93
TWEEN DECK AT 2nd and 3rd POSITION							
NO.3 HOLD P 2nd LOWER PART	RT1.03P2L	44~108	3678.9	3671.6	57.63	5.73	5.07
NO.3 HOLD P 2nd and 3rd MID PART	RT1.03P23M	44~108	1148.4	1146.1	57.38	5.77	9.93
NO.3 HOLD P 3rd UPPER PART	RT1.03P3U	44~108	3504.4	3497.4	57.38	5.77	14.62
TWEEN DECK AT 2nd and 4th POSITION							
NO.3 HOLD P 2nd LOWER PART	RT1.03P2L	44~108	3678.9	3671.6	57.63	5.73	5.07
NO.3 HOLD P 2nd and 4th MID PART	RT1.03P24M	44~108	2638.1	2632.8	57.38	5.77	11.24
NO.3 HOLD P 4th UPPER PART	RT1.03P4U	44~108	2014.7	2010.7	57.38	5.77	15.93

NO.3 HOLD S (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

DESCRIPTION	NAME	FRAME	VOLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
TWEEN DECK AT 1st and 3rd POSITION							
NO.3 HOLD S 1st LOWER PART	RT1.03S1L	44~108	2161.8	2157.5	58.04	-6.34	3.76
NO.3 HOLD S 1st and 3rd MID PART	RT1.03S13M	44~108	2638.1	2632.8	57.38	-6.48	8.62
NO.3 HOLD S 3rd UPPER PART	RT1.03S3U	44~108	3504.4	3497.4	57.38	-6.48	14.62
TWEEN DECK AT 1st and 4th POSITION							
NO.3 HOLD S 1st LOWER PART	RT1.03S1L	44~108	2161.8	2157.5	58.04	-6.34	3.76
NO.3 HOLD S 1st and 4th MID PART	RT1.03S14M	44~108	4127.8	4119.5	57.38	-6.48	9.93
NO.3 HOLD S 4th UPPER PART	RT1.03S4U	44~108	2014.7	2010.7	57.38	-6.48	15.93
TWEEN DECK AT 2nd and 3rd POSITION							
NO.3 HOLD S 2nd LOWER PART	RT1.03S2L	44~108	3651.5	3644.2	57.77	-6.39	5.09
NO.3 HOLD S 2nd and 3rd MID PART	RT1.03S23M	44~108	1148.4	1146.1	57.38	-6.48	9.93
NO.3 HOLD S 3rd UPPER PART	RT1.03S3U	44~108	3504.4	3497.4	57.38	-6.48	14.62
TWEEN DECK AT 2nd and 4th POSITION							
NO.3 HOLD S 2nd LOWER PART	RT1.03S2L	44~108	3651.5	3644.2	57.77	-6.39	5.09
NO.3 HOLD S 2nd and 4th MID PART	RT1.03S24M	44~108	2638.1	2632.8	57.38	-6.48	11.24
NO.3 HOLD S 4th UPPER PART	RT1.03S4U	44~108	2014.7	2010.7	57.38	-6.48	15.93

CARGO HOLD WITH TWEEN DECKS STORED IN HOLD (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

DESCRIPTION	NAME	FRAME	VOLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
NO.1 HOLD WITH TD	RT1.01	186~221	6427.0	6414.2	157.23	0.00	10.44
NO.2 HOLD P WITH TD	RT1.02P	115~179	8310.9	8294.2	115.45	5.77	9.99
NO.2 HOLD S WITH TD	RT1.02S	115~179	8310.8	8294.2	115.45	-6.47	9.99
NO.3 HOLD P WITH TD	RT1.03P	44~108	8269.8	8253.3	55.50	5.75	10.02
NO.3 HOLD S WITH TD	RT1.03S	44~108	8242.4	8225.9	55.56	-6.44	10.05

CARGO HOLD WITH TWEEN DECKS ERECT (AS BULKHEAD) (RED=0.002, RHO=1t/m3, Max.Fill Cap.=100%)

DESCRIPTION	NAME	FRAME	VOLM	VNET	LCG	TCG	VCG
			m3	m3	m	m	m
NO.2 HOLD P FORE WITH TD ERECT	RT1.02PF	148~179	4399.8	4391.0	126.47	5.77	9.74
NO.2 HOLD P AFT WITH TD ERECT	RT1.02PA	115~147	4548.1	4539.0	100.89	5.77	9.74
NO.2 HOLD S FORE WITH TD ERECT	RT1.02SF	148~179	4399.8	4391.0	126.47	-6.48	9.74
NO.2 HOLD S AFT WITH TD ERECT	RT1.02SA	115~147	4548.1	4539.0	100.89	-6.48	9.74
NO.3 HOLD P FORE WITH TD ERECT	RT1.03PF	77~108	4399.8	4391.0	70.38	5.77	9.74
NO.3 HOLD P AFT WITH TD ERECT	RT1.03PA	44~76	4507.0	4498.0	44.88	5.74	9.80
NO.3 HOLD S FORE WITH TD ERECT	RT1.03SF	77~108	4399.8	4391.0	70.38	-6.48	9.74
NO.3 HOLD S AFT WITH TD ERECT	RT1.03SA	44~76	4479.6	4470.7	44.92	-6.41	9.84

CARGO HOLD WITHOUT TWEEN DECKS ERECT (RED=0.002, RHO=1t/m3, Max.Fill Capacity=100%)

Num.	DESCRIPTION	NAME	FRAME	VOLM	VNET	LCG	TCG	VCG
				m3	m3	m	m	m
H1	NO.1 HOLD	R1.01	186~221	6996.8	6982.8	155.98	0.00	10.06
H2P	NO.2 HOLD P	R1.02P	115~179	9055.3	9037.2	113.47	5.77	9.74
H2S	NO.2 HOLD S	R1.02S	115~179	9055.3	9037.2	113.47	-6.48	9.74
H3P	NO.3 HOLD P	R1.03P	44~108	9014.3	8996.3	57.48	5.76	9.77
H3S	NO.3 HOLD S	R1.03S	44~108	8986.9	8968.9	57.54	-6.44	9.79
	SUBTOTAL			43108.5	43022.3	97.00	-0.29	9.81

Heavy Fuel Oil (RED=0.02, RHO=0.98t/m3, Max.Fill Capacity=98%)

Num.	DESCRIPTION	NAME	FRAME	VOLM	VNET	LCG	TCG	VCG	FRSM
				m3	m3	m	m	m	tm
1	NO.1 HFO DEEP TK. P	R3.01P	179~186	671.9	658.5	141.49	4.46	7.12	1109.5
2	NO.1 HFO DEEP TK. S	R3.01S	179~186	435.2	426.5	141.55	-7.30	7.28	307.7
3	NO.2 HFO DEEP TK.	R3.02	108~115	480.5	470.9	85.44	6.33	7.02	501.8
4	NO.1 HFO SETT. TK.	R3.11	26~31	52.2	51.2	20.26	-9.88	13.03	30.1
5	NO.2 HFO SETT. TK.	R3.12	21~26	52.2	51.2	15.50	-9.88	13.03	30.1
6	NO.1 HFO SERV. TK.	R3.21	26~28	17.9	17.5	18.67	-8.66	13.00	3.9
7	NO.2 HFO SERV. TK.	R3.22	24~26	17.9	17.5	17.09	-8.66	13.00	3.9
	SUBTOTAL			1727.9	1693.3	115.89	0.88	7.61	1986.9

Diesel Oil (RED=0.02, RHO=0.85t/m3, Max.Fill Capacity=98%)

Num.	DESCRIPTION	NAME	FRAME	VOLM	VNET	LCG	TCG	VCG	FRSM
				m3	m3	m	m	m	tm
8	MGO TK.	R4.01	108~115	485.7	476.0	85.43	-6.97	7.02	449.2
9	MGO SETT. TK.	R4.11	18~20	29.2	28.6	12.36	-9.61	13.03	20.0
10	MGO SERV. TK.	R4.21	16~18	26.4	25.9	10.78	-9.38	13.04	15.4
	SUBTOTAL			541.2	530.4	77.85	-7.23	7.64	484.5

Lubricating Oil (RED=0.02, RHO=0.9t/m3, Max.Fill Capacity=98%)

Num.	DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG	FRSM
				m3	m3	m	m	m	tm
11	M/E LO SUMP TK.	R5.01	25~36	18.8	18.4	21.44	0.00	1.09	7.0
12	M/E LO STORE. TK.	R5.11	16~18	35.5	34.8	10.78	10.31	12.79	25.5
13	LOW TBN CYL.O. STOR. TK.	R5.12	18~20	37.3	36.5	12.36	10.43	12.76	27.0
14	HIGH TBN CYL.O. STOR. TK.	R5.13	20~22	38.8	38.0	13.93	10.53	12.73	28.1
15	M/E LO SETT. TK.	R5.21	14~16	33.5	32.8	9.20	10.18	12.82	23.7
16	G/E LO STORE. TK.	R5.31	10~14	20.8	20.4	7.25	11.34	13.15	5.7
17	G/E LO SETT. TK.	R5.41	10~14	25.8	25.3	7.20	8.91	12.65	2.8
	SUBTOTAL			210.5	206.3	11.55	9.36	11.75	119.7

Fresh Water (RED=0.02, RHO=1t/m3, Max.Fill Capacity=100%)

Num.	DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG	FRSM
				m3	m3	m	m	m	tm
18	FRESH WATER TK. P	R6.01P	-6~4	126.1	123.6	-0.27	8.79	13.52	124.2
19	FRESH WATER TK. S	R6.01S	-6~2	78.8	77.3	-0.93	-9.18	13.71	67.2
20	DISTILL. WATER TK.	R6.02P	4~6	28.1	27.6	3.00	9.19	13.65	30.5
21	DRINKING WATER TK.	R6.02S	2~4	25.6	25.1	1.81	-9.32	13.45	20.7
	SUBTOTAL			258.6	253.5	0.09	1.57	13.58	242.5

Ballast Water (RED=0.02, RHO=1.025t/m3, Max.Fill Capacity=100%)




Num.	DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG	FRSM
				m3	m3	m	m	m	tm
22	NO.1 AFT S.W.B. TK. P	R2.01ASP	186~202	340.3	333.5	150.24	11.91	8.48	58.3
23	NO.1 AFT S.W.B. TK. S	R2.01ASS	186~202	340.3	333.5	150.24	-11.91	8.48	58.3
24	NO.1 FORE S.W.B. TK. P	R2.01FSP	202~221	391.9	384.0	164.39	8.30	8.60	313.8
25	NO.1 FORE S.W.B. TK. S	R2.01FSS	202~221	391.9	384.0	164.39	-8.30	8.60	313.8
26	NO.1 W.B. TK. P	R2.01P	186~218	630.6	618.0	155.93	6.34	1.84	2410.7
27	NO.1 W.B. TK. S	R2.01S	186~218	644.3	631.4	155.95	-6.21	1.83	2613.0
28	NO.2 AFT W.B. TK. P	R2.02AP	115~163	904.1	886.0	107.15	9.83	1.54	3275.8
29	NO.2 AFT W.B. TK. S	R2.02AS	115~163	1106.8	1084.6	107.15	-7.75	1.28	8969.6
30	NO.2 AFT S.W.B. TK. P	R2.02ASP	115~139	387.3	379.6	97.67	12.70	8.33	27.9
31	NO.2 AFT S.W.B. TK. S	R2.02ASS	115~139	283.0	277.4	97.67	-13.05	8.33	10.9
32	NO.2 FORE W.B. TK. P	R2.02FP	163~186	421.0	412.6	135.17	9.64	1.63	1390.8
33	NO.2 FORE W.B. TK. S	R2.02FS	163~186	531.3	520.7	135.32	-7.67	1.40	3905.0
34	NO.2 FORE S.W.B. TK. P	R2.02FSP	163~186	370.8	363.4	135.19	12.70	8.33	26.7
35	NO.2 FORE S.W.B. TK. S	R2.02FSS	163~186	281.6	275.9	135.48	-13.00	8.33	12.3
36	NO.2 MID S.W.B. TK. P	R2.02MSP	139~163	387.3	379.6	116.63	12.70	8.33	27.9
37	NO.2 MID S.W.B. TK. S	R2.02MSS	139~163	283.0	277.4	116.63	-13.05	8.33	10.9
38	NO.3 AFT W.B. TK. P	R2.03AP	44~68	378.0	370.4	42.03	9.20	1.78	1126.5
39	NO.3 AFT W.B. TK. S	R2.03AS	44~68	505.0	494.9	41.77	-7.18	1.52	3389.8
40	NO.3 AFT S.W.B. TK. P	R2.03ASP	44~68	384.3	376.6	41.64	12.69	8.35	27.9
41	NO.3 AFT S.W.B. TK. S	R2.03ASS	44~68	281.7	276.1	41.61	-13.03	8.34	12.8
42	NO.3 FORE W.B. TK. P	R2.03FP	68~115	879.9	862.3	69.72	9.81	1.54	3182.2
43	NO.3 FORE W.B. TK. S	R2.03FS	68~115	1078.3	1056.8	69.70	-7.72	1.28	8732.4
44	NO.3 FORE S.W.B. TK. P	R2.03FSP	92~115	371.2	363.8	79.11	12.70	8.33	26.7
45	NO.3 FORE S.W.B. TK. S	R2.03FSS	92~115	271.2	265.8	79.11	-13.05	8.33	10.4
46	NO.3 MID S.W.B. TK. P	R2.03MSP	68~92	387.3	379.6	60.54	12.70	8.33	27.9
47	NO.3 MID S.W.B. TK. S	R2.03MSS	68~92	283.0	277.4	60.54	-13.05	8.33	10.9
48	FORE PEAK W.B. TK.	R2.91	221~245	688.6	674.8	176.76	-0.07	5.03	652.8
49	AFT PEAK W.B. TK.	R2.92	-6~14	425.6	417.1	3.50	-0.07	9.91	4970.4
	SUBTOTAL			13629.7	13357.1	104.32	0.55	4.70	45596.4

G).Miscellaneous (RED=0.02, RHO=1t/m3, Max.Fill Capacity=100%)

Num.	DESCRIPTION	NAME	FRAME	VDLM	VNET	LCG	TCG	VCG	FRSM
				m3	m3	m	m	m	tm
50	COOLING W. TK.	R7.01	8~14	16.7	16.3	7.05	0.00	3.22	1.9
51	SEWAGE & GREY HOLD. TK.	R7.02	14~22	75.4	73.9	12.05	8.50	9.15	88.1
52	HFO PURIFIER SLUDGE TK.	R7.03	36~41	14.3	14.0	27.76	-8.60	6.44	10.0
53	LO PURIFIER SLUDGE TK.	R7.04	32~36	11.4	11.2	24.20	-8.60	6.44	8.0
54	OILY BILGE HOLD. TK.	R7.05	32~44	63.4	62.1	27.42	4.50	1.24	125.1
55	LO DRAIN TK.	R7.06	27~32	12.6	12.3	20.93	2.79	1.34	5.2
56	FO OVERFLOW TK.	R7.07	39~44	37.6	36.8	30.06	-2.21	1.01	34.2
57	FO DRAIN TK.	R7.08	39~44	18.1	17.8	30.26	-6.12	1.24	20.0
58	SLUDGE TK.	R7.09	27~39	51.7	50.7	24.55	-3.49	1.28	72.2
59	CLEAN DRAIN TK.	R7.10	16~24	40.4	39.6	13.56	0.00	1.25	32.6
60	S/T LO DRAIN TK.	R7.11	14~16	4.2	4.1	9.32	-0.08	1.42	1.5
61	BILGE PRIMARY TK.	R7.12	36~39	6.4	6.2	27.14	9.96	4.20	5.0
	SUBTOTAL			352.0	345.0	21.04	1.22	3.45	403.7

CONTAINER ARRANGEMENT

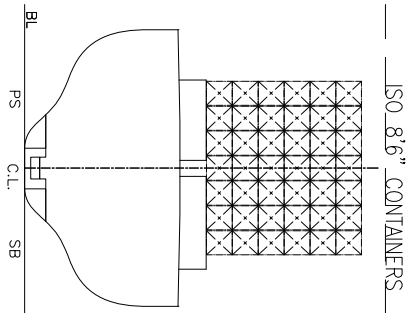
CONTAINER CAPACITY

CONTAINER SIZE	ISO HEIGHT 8'6"		
	20' MAX.	40' MAX.	L X W
LEGEND	 L X W 20' X 8'	 L X W 20' X 8' (DNL Y)	 L X W 40' X 8'
DN HC & DECK	1028	94	467
CARGO HOLD	891	39	426
TOTAL	1919	133	893

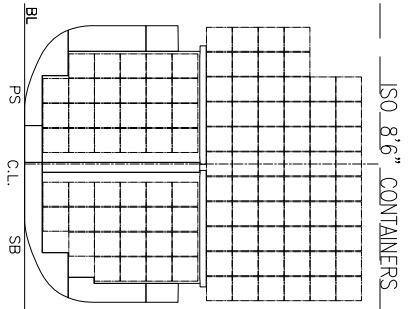
MAX. PERMISSIBLE CONTAINER STACK LOAD

20'x8'x8'6" (TEU)		40'x8'x8'6" (FEU)	
BAY 01-39	70t (on hatch cover)	BAY 02-38	90t
BAY 41	90t (on top of deck store and co2 station)	CONTAINER STACK LOAD IN BOTTOM OF CARGO HOLD	
BAY 01-39	144t	BAY 02-38	180t

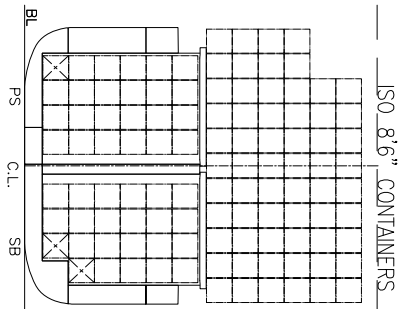
BAY 41



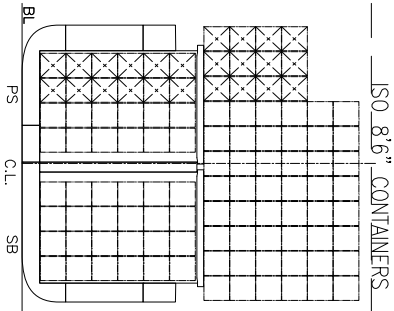
BAY 39 & 38



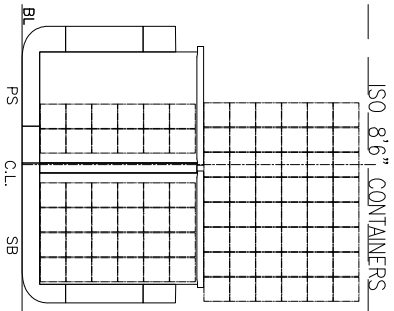
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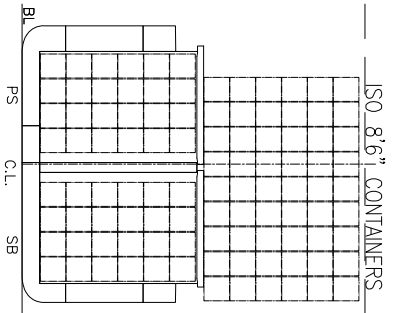
BAY 35



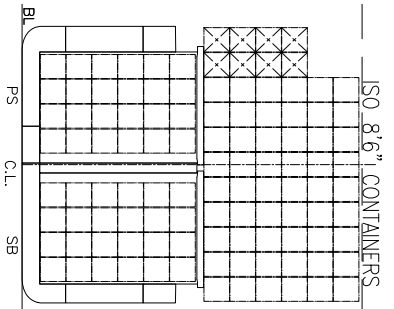
BAY 33 & 34



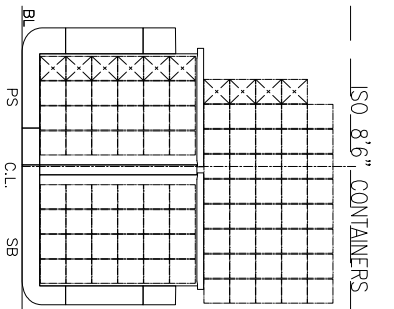
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BAY 29

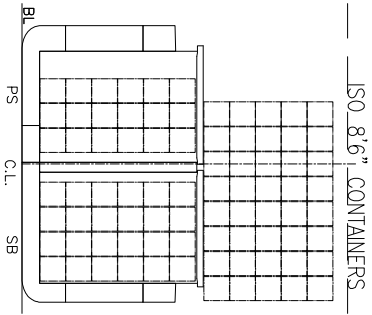


BAY 23

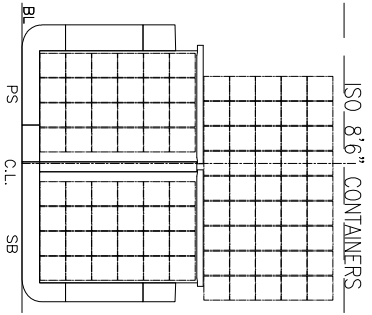


CONTAINER ARRANGEMENT

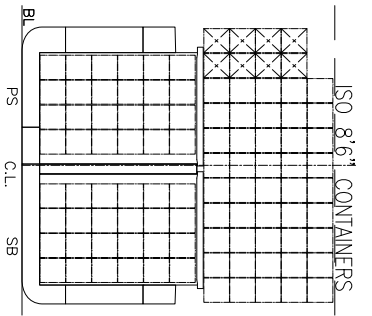
BAY21&22



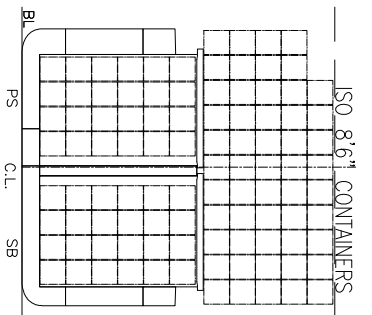
BAY19&18



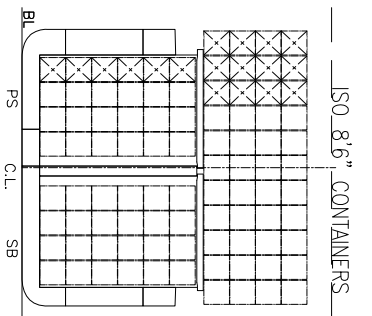
BAY17



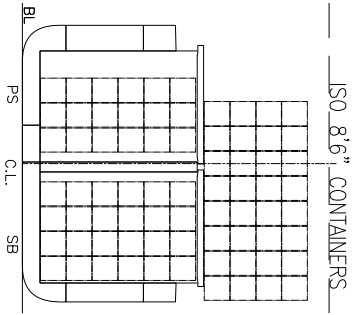
BAY15, 13, 14, 27, 25&26



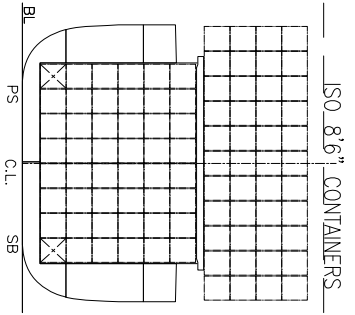
BAY11



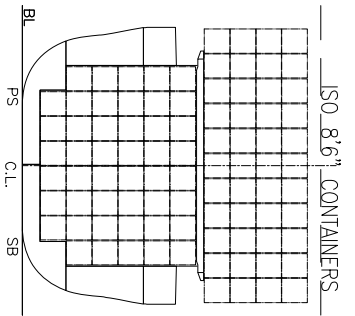
BAY09* & 10



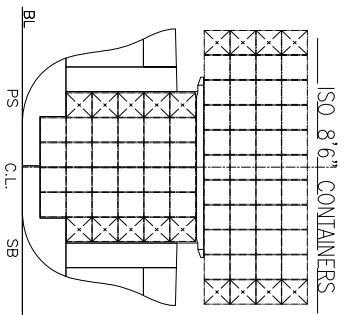
BAY07



BAY05&06



BAY03



BAY01 & 02

