BW LPG Ltd.

GAS FORM-C

based on the

OCIMF / SIGTTO

SHIP INFORMATION QUESTIONNAIRE

for

GAS CARRIERS

2nd Edition 1998

Specifications of the vessel and the gas installations are believed to be correct as per design specifications and capacities, but not guaranteed, and consequently Owners are not to be held accountable for such.

We further reserve our rights for normal wear and tear on cargo equipment in respect of loading-, discharging-, cooling-rates and time for changing cargo grades etc., including but not limited to capacity of cargo re-heaters, compressors, pumps and other equipment, as described in this form-C as these descriptions, as described above, refers to design capacities.

INDEX

SECTION A

GENERAL INFORMATION

A1 PRINCIPAL SHIP PARTICULARS

1.1	Date questionnaire completed		**24-Oct-17**
1.2	Name of vessel		BW Odin
1.3	LR/IMO number		9387762
1.4	Last previous name		Aurora Capricorn
1.4.1	Date of name change		23/06/2017
1.5	Second last previous name		-
1.5.1	Date of name change		-
1.6	Third last previous name		-
1.6.1	Date of name change		-
1.7	Fourth last previous name		-
1.7.1	Date of name change		-
1.8	Flag		Marshall Islands
1.9	Port of Registry		Majuro
1.10	Official number		5789
1.11	Call sign		V7GZ5
1.12	INMARSAT F77 numbers	765122589	765122590
1.13	Vessel's telephone number (V-Sat)		4723675748
1.13.1	Vessel's mobile number		To be advised
1.14	Vessel's fax number		765122591
1.15	Vessel's telex number (Inmarsat-C)	453840430	453840431
1.16	Vessel's E-mail address		master.bwodin@ship-bw.wilhelmsen.com
1.17	INMARSAT C number	453840430	453840431
1.18	Vessel's MMSI number		538005789
1.19	Type of vessel		Gas carrier (VLGC)

OWNERSHIP AND OPERATION

1.20	Registered Owner	BW VLGC Limited
	Full address	Clarendon House 2 Church Street
		Hamilton HM11, Bermuda.
	Office telephone number	+(65) 6705 5588
	Office telex number	
	Office fax number	+(65) 6570 6056
	Office Email address	projects@bwlpg.com
	Contact person	Joel Wee
	Contact person after hours telephone number	+(65) 6705 5588

1.21	Name of technical operator (If different from above)	Wilhelmsen Ship Management Sdn Bhd
	Full Address	8th floor, 1 Sentral, Jln Travers,
		Kuala Lumpur Sentral, 50400
		Kuala Lumpur, Malaysia.
	Office telephone number	+60 3 20845601
	Office telex number	NIL
	Office fax number	+60 3 20845604/ 5605
	Office Email address	
	Contact person	Sumit Ray
	Contact person after hours telephone number	+60173464748
	Emergency callout number	
	Emergency callout pager number	
	Contact details for person responsible for oil spill response	Capt. Lars Andersson, H/P: +60 17 3659307
	Number of years controlled by technical operator	3.25 Years

1.22	Total number of ships operated by this Operator	62	
1.23	Number of years ship owned	3.25	Years

1.23.1	Name of commercial operator (If different from above)	BW LPG LTD	
	Full Address	Mapletree Business City 10 Pasir Panjang Rd, #17-02 Singapore 117438	
	Office telephone number	+ 65 6705 55 88	
	Office telex number		
	Office fax number	+ 65 6570 60 56	
	Office Email address	fleetops2@bwlpg.com	
	Contact person	Kevin Knott	
	Contact person after hours telephone number	+ 65 209616/201685	
	Emergency callout number	+ 65 6705 55 20	
	Emergency callout pager number		
	Number of years controlled by commercial operator	0.8	Years

BUILDER

1.24	Builder	Hyundai Heavy Industry	
1.25	Name of yard vessel built at	HHI	
1.26	Hull number	1920	
1.27	Date keel laid	12/11/2008	
1.28	Date launched	16/01/2009	
1.29	Date delivered	31/03/2009	
1.30	Date of completion of major hull changes, - if any.	-	
1.31	If changes were made, what changes were made and at which yard were they carried out		

NA

CLASSIFICATION

1.32	Classification society	DNV GL	
1.33	Class Notation	+1A1 Tanker for liquefied Gas OPP-F E0 NAUT – OC PLUS-1 BIS TIMON NAUTICUS	
1.34	If Classification society changed, name of previous society	N/A	
1.35	If Classification society changed, date of change	N/A	
1.36	Was ship built in accordance with the following regulations:		
	IMO		Yes
	US COAST GUARD		Yes
	RINA		
	Other:_____		
1.37	IMO certification		
	Certificate of fitness - IGC		DNV GL
	Certificate - A328		To be advised
	Certificate - A329		To be advised
	Letter of Compliance		To be advised
	Issued by	To be advised	
1.38	Unattended Machinery Space Certificate		DNV GL

1.39	Net Registered Tonnage	17539,00
1.40	Gross Registered Tonnage	47266,00
1.41	Suez Net Tonnage - Canal Tonnage	45725.51
	Suez Gross Tonnage	50561.66
1.42	Panama Net Tonnage - Canal Tonnage	-
	Panama Gross Tonnage	-

A2 HULL DIMENSIONS

2.1	Length overall (LOA)	225.28	Metres
2.2	Length between perpendiculars (LBP)	215.00	Metres
2.3	Distance bow to bridge	187.33	Metres
2.4	Distance bridge front - mid point manifold	78.05	Metres
2.5	Distance bow to mid-point manifold	109.28	Metres
2.6	Extreme breadth	36.63	Metres
2.7	Extreme depth	22.00	Metres
2.8	Summer draught	12.57	Metres
2.9	Corresponding Summer deadweight	58551	Tonnes
2.10	Light displacement	19013	Tonnes
2.11	Loaded displacement (Summer deadweight)	77564	Tonnes
2.12	Cargo tanks cubic capacity - 100%	82446.1	Cubic metres
2.12.1	Deck tank(s) cubic capacity - 100%	402.2	Cubic metres
2.12.2	Cargo tanks cubic capacity - 98%	80797.2	Cubic metres
2.12.3	Deck tank(s) cubic capacity - 98%	398.2	Cubic metres
2.13	Distance from keel to highest point	50.414	Metres
2.14	Air draught (normal ballast condition)	Abt 42.64	Metres

A3 IMMERSION

		Tonnes / cm @	metres draught
3.1	TPC - in normal ballast condition	66.19	7.97
	TPC - in loaded condition (summer deadweight)	71.24	12.57

A4 LOADED PARTICULARS

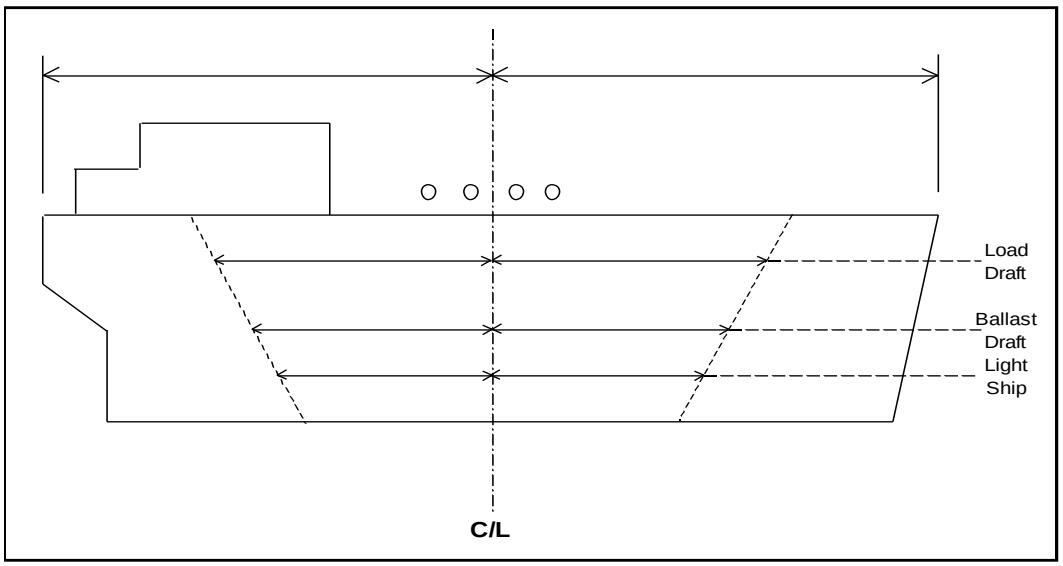
4.1	Cargo grade	Butane	Propane	
4.2	Density	0.596	0.508	
4.3	Cargo loadable	47895	46700	Tonnes
4.4	Bunkers - FO	3020.2	3020.2	Tonnes
4.5	Bunkers - DO	132.4	132.4	Tonnes
4.6	Fresh water	420.6	420.6	Tonnes
4.7	Stores & spares			Tonnes
4.8	Lub oil	100	100	Tonnes
4.9	Ballast	0	0	Tonnes
4.10	x	51000	51000	Tonnes
4.11	Draught - forward	10.11	10.11	Metres
	Draught - aft	12.77	12.77	Metres
	Draught - mean	11.44	11.44	Metres

Cargo grade	Butadiene	Propylene	
Density	0.651	0.61	
Cargo loadable	52314	49200	Tonnes
Bunkers - FO	3020.2	3020.2	Tonnes
Bunkers - DO	132.4	132.4	Tonnes
Fresh water	420.6	400	Tonnes
Stores & spares			Tonnes
Lub oil	100	100	Tonnes
Ballast	0	0	Tonnes
Deadweight	51000	53400	Tonnes
Draught - forward	10.11	10.64	Metres
Draught - aft	12.77	12.95	Metres
Draught - mean	11.44	11.79	Metres

Cargo grade	Ethylene	Ammonia	
Density	NA	0.680	
Cargo loadable		54200	Tonnes
Bunkers - FO		3020.2	Tonnes
Bunkers - DO		132.4	Tonnes
Fresh water		400	Tonnes
Stores & spares		300	Tonnes
Lub oil		100	Tonnes
Ballast		0	Tonnes
Deadweight		58400	Tonnes
Draught - forward		11.53	Metres
Draught - aft		13.49	Metres
Draught - mean		12.51	Metres

Cargo grade	VCM	Propylene Oxide	
Density	NA	NA	
Cargo loadable			Tonnes
Bunkers - FO			Tonnes
Bunkers - DO			Tonnes
Fresh water			Tonnes
Stores & spares			Tonnes
Lub oil			Tonnes
Ballast			Tonnes
Deadweight			Tonnes
Draught - forward			Metres
Draught - aft			Metres
Draught - mean			Metres

A5 PARALLEL MID-BODY DIMENSIONS



5.1	Light ship	66.60	Metres
5.2	Forward to mid-point manifold - light ship	25.50	Metres
5.3	Aft to mid-point manifold - light ship	41.10	Metres
5.4	Normal ballast	102.20	Metres
5.5	Forward to mid-point manifold - normal ballast	42.90	Metres
5.6	Aft to mid-point manifold - normal ballast	59.30	Metres
5.7	Loaded SDWT	124.00	Metres
5.8	Forward to mid-point manifold - loaded SDWT	52.90	Metres
5.9	Aft to mid-point manifold - loaded SDWT	71.10	Metres

A6 BUNKER CAPACITIES

	Grade	Capacity @ 98%	
Main engine	380cST	3421.2	Cu. Metres
Auxiliary engine(s)	MGO	202.9	
Other:_____			

A7 FUEL CONSUMPTION DETAILS

		Grade		
7.1	At sea - normal service speed	Fuel oil		Tonnes/day
		Diesel oil		Tonnes/day
		Gas oil		Tonnes/day
7.2	At sea - normal service speed - while conditioning cargo	Fuel oil		Tonnes/day
	(Cooling down condition)	Diesel oil		Tonnes/day
		Gas oil		Tonnes/day
7.3	In port - loading	Fuel oil		Tonnes/day
		Diesel oil		Tonnes/day
		Gas oil		Tonnes/day
7.4	In port - discharging	Fuel oil		Tonnes/day
		Diesel oil		Tonnes/day
		Gas oil		Tonnes/day
7.5	In port - idle	Fuel oil		Tonnes/day
		Diesel oil		Tonnes/day
		Gas oil		Tonnes/day

Based on FO LCV=10200kcal/kg, MDO LCV=10200kcal/kg under ISO reference condition

A7 SPEED/CONSUMPTION

Copies of the vessel's Speed and Consumption Graph for both Laden and Ballast conditions are enclosed?

A8 MAIN ENGINE PARTICULARS

8.1	Main engine make and type		HYUNDAI- MAN B&W / 6S60MC-C	
8.2	Number of units		6	
8.3	Maximum continuous rating (MRC) per engine	KW @	RPM	
		13560	105	
8.4	Total available power	at 103 rpm	13560	Kilowatts
8.5	Normal service power	at 101 rpm	12050	Kilowatts

A9 AUXILIARY PLANTS

9.1	Make and type of auxiliary generators / engines		HHI-HIMSEN / 8H21/32	
9.2	Number of units		3	
9.3	Maximum generator output per unit	RPM	Kilowatts	
	Unit no. 1	720	1280	
	Unit no. 2	720	1280	
	Unit no. 3	720	1280	
9.4	Shaft generator		-	
9.5	Total available power		3840	
9.6	Emergency generator	1800	130	
9.7	Emergency fire pump - type		Centrifugal single stage pump	
	Delivery pressure		10	Bar
	Motive power			
	If electrical, - indicate power required		55	Kilowatts
9.8	Steering gear - type		Rot.Vane type(Rolls-royceRV1400-2)	
	Indicate power required to steer the vessel with one pump unit		65	Kilowatts

A10 POWER/SPEED INFORMATION

10.1	Trial data	BHP		
		MRC		SHP
		Speed		Knots
		Draught		Metres
10.2	Normal service speed	BHP		
		MRC		SHP
		Speed		Knots
		Draught		Metres

A11 THRUSTERS

11.1	Make and type		N/A	
11.2	Bow thruster	(output)	N/A	Kilowatts
11.3	Stern thruster	(output)	N/A	Kilowatts

A12 FRESH WATER

12.1	Capacity of distilled tanks		420.6	Tonnes
12.2	Capacity of domestic tanks			Tonnes
12.3	Daily consumption	Distilled	10	Tonnes
		Domestic		Tonnes
12.4	Daily evaporator capacity		30	Tonnes

A13 BALLAST CAPACITIES AND PUMPS

	Tank	Capacity (m3)	Number
13.1	Fore peak	1689.2	1
13.2	Wing and or side tanks	20717.6	8
13.3	Double bottom tanks		
13.4	Aft peak	1315.7	1
13.5	Other:		
13.6	Total	23722.5	10

13.7	Ballast pump make and type	SHIN SHIN MACH./ DB300 VIG	
13.8	Number of pumps	2	
13.9	Total capacity	1600 (2 x 800)	M3/hour
13.10	Location	E/R FLOOR FWD	
13.11	Control location	CARGO CONTROL ROOM	

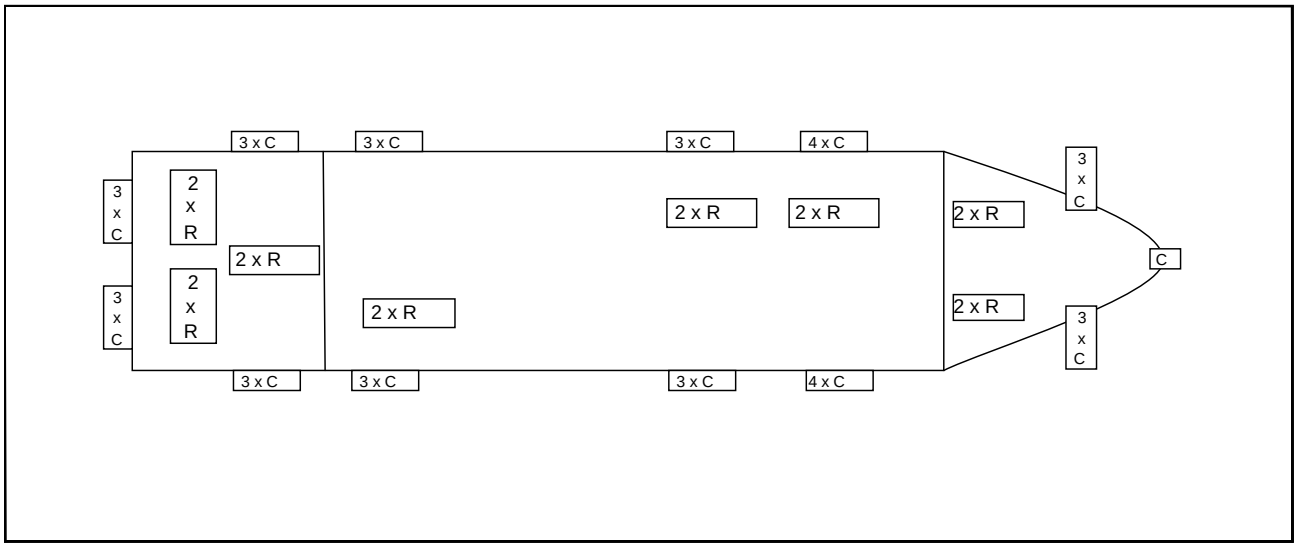
A14 MOORING EQUIPMENT

14.1 **ROPES**

Indicate on the diagram below the position of:

Winch Mounted Ropes (R)
Open Fairleads (O)
Closed Fairleads (C)

Alternatively enclosed copy of vessel's Mooring arrangements in A4 format.	**NO**



MOORING ROPES (ON DRUMS)

Mooring Ropes (On Drums) Forecastle - Number	4	
Diameter	35/34	mm.
Material	GALV STEEL WIRE ROPE(IWRC)	
Length	220	Metres
Breaking Strength	81/82.4	Ton
Mooring Ropes (On Drums) Forward Main Deck - Number	4	
Diameter	35/32	mm.
Material	GALV STEEL WIRE ROPE(IWRC)	
Length	220	Metres
Breaking Strength	81/80.2	Ton

Mooring Ropes (On Drums) Aft Main Deck - Number	2	
Diameter	35/32	mm.
Material	GALV STEEL WIRE ROPE(IWRC)	
Length	220	Metres
Breaking Strength	81/80.2	Ton
Mooring Ropes (On Drums) Poop - Number	6	
Diameter	34/35	mm.
Material	GALV STEEL WIRE ROPE(IWRC)	
Length	220	Metres
Breaking Strength	81/82.4	Ton

OTHER MOORING LINES

Mooring Ropes not on Drums - Number	16	
Diameter	64	mm.
Material	ESTALON	
Length	220	Metres
Breaking Strength	769	KN
Fire Wires - Number	2	
Diameter	28	mm.
Material	GALV STEEL WIRE ROPE(IWRC)	
Length	70	Metres
Breaking Strength	539	KN

14.2 **MOORING WINCHES**

Forecastle - Number	2	
Single Drum or Double Drums	DOUBLE DRUM	
Split Drums Y/N	Y	
Motive Power	HYD.	
Heaving Power	20	Tonnes
Brake Capacity	48.6	Tonnes
Hauling Speed	15	Metres/Min.
Forward Main Deck - Number	2	
Single Drum or Double Drums	DOUBLE DRUM	
Split Drums Y/N	Y	
Motive Power	HYD.	
Heaving Power	20	Tonnes
Brake Capacity	48.6	Tonnes
Hauling Speed	15	Metres/Min.
Aft Main Deck - Number	1	
Single Drum or Double Drums	DOUBLE DRUM	
Split Drums Y/N	Y	
Motive Power	HYD.	
Heaving Power	20	Tonnes
Brake Capacity	48.6	Tonnes
Hauling Speed	15	Metres/Min.
Poop - Number	3	
Single Drum or Double Drums	DOUBLE DRUM	
Split Drums Y/N	Y	
Motive Power	HYD.	
Heaving Power	20	Tonnes
Brake Capacity	48.6	Tonnes
Hauling Speed	15	Metres/Min.

14.3 **ANCHORS AND WINDLASS**

Windlass motive power(e.g. steam, hydraulic)	HYD.	
Hauling power	31.2	Tonnes
Brake holding power	222	Tonnes
Anchor type	HHP TYPE	
Weight	8.35	Tonnes

	Is spare anchor carried		1	
	Cable diameter		81	mm.
	Number of shackles port cable		12	
	Number of shackles starboard cable		13	

14.4 **TOWING ARRANGEMENTS**

	Is the vessel fitted with a Towing Bracket Aft?		YES	
	If Yes, state SWL		200	Tonnes
	Is Towing chain provided		YES	
	Dimensions of Towing wire	Diameter	80	mm.
		Length	100	Metres

14.5 **WINDAGE**

	Windage on ballast draught	End-on	1027.3	Squaremetres
		Lateral	3887.7	Squaremetres

A15 NAVIGATIONAL EQUIPMENT

15.1	Magnetic compass		YES
15.2	Off Course Alarm - Magnetic compass		YES
15.3	Gyro compass		YES
		Number of Units	2
15.4	Off Course Alarm - Gyro compass		YES
15.5	Gyro (Bridge) Repeaters		YES
		Number of Units	2
15.6	Radar 3cm		YES
15.7	Radar 10cm		YES
15.8	Are radars gyro stabilised?		YES
15.9	Radar plotting equipment		YES
15.10	ARPA		YES
15.11	ECDIS		YES
15.12	Depth sounder with recorder		YES
15.13	Depth sounder without recorder		N/A
15.14	Speed/distance indicator		YES
15.15	Doppler log		YES
15.16	Docking approach Doppler		N/A
15.17	Rudder angle indicator		YES
15.18	Rudder angle indicator on Each Bridge Wing		YES
15.19	RPM indicator		YES
15.20	RPM indicator on Each Bridge Wing		YES
15.21	Controllable pitch propeller indicator		N/A
15.22	Thruster(s) indicator		N/A
15.23	Rate of turn indicator		YES
15.24	Radio direction finder		N/A
15.25	Navtex receiver		YES
15.26	GPS		NO
15.26.1	DGPS		YES
15.27	Transit SATNAV		N/A
15.28	Decca navigator		N/A
15.29	Omega		N/A
15.30	Loran C		N/A
15.31	Weather fax		YES
15.32	Sextant(s)		YES
15.33	Signal lamp ALDIS		YES
15.34	Anemometer		YES
15.35	Engine order recorder		YES
15.35.1	VDR (Voyage Data Recorder)		YES
15.36	Course recorder		YES
15.37	Are steering motor controls and engine controls fitted on bridge wings?		NO

15.38	Is bridge equipped with a 'Dead-Man' alarm?		YES
15.39	What chart outfit coverage is provided	World-wide	YES
		Limited	YES
	If limited, - please indicate area(s) covered		Red Sea and Middle East Gulf to Japan, South Korea, Taiwan, China including Yangtze river and not north of Lianyungang, Indonesia, Philippines, Singapore, Thailand and Malaysia, Richards Bay and West Africa.
15.40	Formal chart correction system in use		E Navigator
15.41	Electronic Chart system in use		YES

A16 COMMUNICATIONS AND ELECTRONICS

16.2	What GMDSS areas is the vessel classed for? A1 A2 A3 A4	A1,A2 and A3
16.3	Transponder (SART)	YES
16.4	EPIRB	YES
16.5	How many VHF radios are fitted on the bridge?	2
16.6	Is vessel fitted with VHF in the cargo control room (CCR)?	YES
16.7	Is the CCR connected to the vessel's internal communication system?	YES
16.8	How many intrinsically safe walkie talkies are provided for cargo handling?	12
16.9	Is vessel fitted with an INMARSAT satellite communications system?	YES
16.10	Does vessel carry at least three survival craft two-way radio telephones?	YES
16.11	Inmarsat satellite system	YES
	Specify system type A, B or C	C
16.12	2182kHz bridge auto alarm	NO
16.13	Radio telephone distress frequency watch receiver	YES
16.14	Emergency lifeboat transceiver	NO
16.15	Can vessel transmit the helicopter homing signal on 410 kHz?	NO
16.16	Full set of Radio List publications	YES

SECTION B

CARGO SYSTEMS

B1 CARGO - GENERAL INFORMATION

1.1 List products which the ship is Certified to carry

Anhydrous Ammonia
Butadiene
Butane
Butane-propane mixtures
Butylenes
Propane
Propylene

Transport and Carriage Conditions

1.2	Minimum allowable tank temperature	-50	Deg. Celsius
1.3	Maximum Permissible tank pressure	250	mBar
1.4	List Number of grades that can be loaded/discharged simultaneously and completely segregated without risk of contamination?	2	
1.5	List the Number of grades that can be carried simultaneously and completely segregated without risk of contamination?	2	
1.6	What is the Number of Products that can be conditioned by reliquefaction simultaneously?	2	
1.7	State the number of natural segregation's (NB: Separation must be by the removal of spools or the insertion of blanks)	2	

B2 CARGO TANKS

2.1	Type and materials of cargo tanks		Low temperature Manganese steel	
2.2	Maximum allowable relief valve setting		Ref. 2.3	Bar gauge
2.2.1	IMO Setting		0.25	Bar gauge
2.2.2	USCG Setting		-	Bar gauge
2.3	Safety valve set pressure, - if variable stipulate range of pilot valves	0.4 in harbor	0.25 at seagoing	Bar gauge
2.4	Maximum allowable vacuum		-0.05	Bar gauge
2.5	Maximum cargo density at 15 deg Celsius		0.69	Kg/cm2
2.6	Maximum rate of cool-down		10	Deg Cel / Hour
2.7	State any limitations regarding partially filled tanks			

2.8 State allowable combinations of filled and empty tanks

B3 CARGO TANK CAPACITIES

Tank number / location	1 P+S	
Capacity m3 (100%)	17940.7	m3
Capacity 98%	17581.9	m3
Butane capacity		Tonnes
Butane temperature	-1	Deg. C
Propane capacity		Tonnes
Propane temperature	-42	Deg. C
Butadiene capacity		Tonnes
Butadiene temperature	-4	Deg. C
Propylene capacity		Tonnes
Propylene temperature	-48	Deg. C
Vinyl Chloride Monomer capacity	NA	Tonnes
Vinyl Chloride Monomer temperature	-	Deg. C
Ethylene capacity	NA	Tonnes
Ethylene temperature	-	Deg. C
Propylene Oxide capacity	NA	Tonnes
Propylene Oxide temperature	-	Deg. C
Ammonia capacity		Tonnes
Ammonia temperature	-33	Deg. C

Tank number / location	2 P+S	
Capacity m3 (100%)	21879.9	m3
Capacity 98%	21442.3	m3
Butane capacity		Tonnes
Butane temperature	-1	Deg. C
Propane capacity		Tonnes
Propane temperature	-42	Deg. C
Butadiene capacity		Tonnes
Butadiene temperature	-4	Deg. C
Propylene capacity		Tonnes
Propylene temperature	-48	Deg. C
Vinyl Chloride Monomer capacity	NA	Tonnes
Vinyl Chloride Monomer temperature	-	Deg. C
Ethylene capacity	NA	Tonnes
Ethylene temperature	-	Deg. C
Propylene Oxide capacity	NA	Tonnes
Propylene Oxide temperature	-	Deg. C
Ammonia capacity		Tonnes
Ammonia temperature	-33	Deg. C

Tank number / location	3 P+S	
Capacity m3 (100%)	21885.5	m3
Capacity 98%	21447.9	m3
Butane capacity		Tonnes
Butane temperature	-1	Deg. C
Propane capacity		Tonnes
Propane temperature	-42	Deg. C
Butadiene capacity		Tonnes
Butadiene temperature	-4	Deg. C
Propylene capacity		Tonnes
Propylene temperature	-48	Deg. C
Vinyl Chloride Monomer capacity	NA	Tonnes
Vinyl Chloride Monomer temperature	-	Deg. C
Ethylene capacity	NA	Tonnes
Ethylene temperature	-	Deg. C
Propylene Oxide capacity	NA	Tonnes
Propylene Oxide temperature	-	Deg. C
Ammonia capacity		Tonnes
Ammonia temperature	-33	Deg. C

Tank number / location	4 P+S	
Capacity m3 (100%)	20739.9	m3
Capacity 98%	20325.1	m3
Butane capacity		Tonnes
Butane temperature	-1	Deg. C
Propane capacity		Tonnes
Propane temperature	-42	Deg. C
Butadiene capacity		Tonnes
Butadiene temperature	-4	Deg. C
Propylene capacity		Tonnes
Propylene temperature	-48	Deg. C
Vinyl Chloride Monomer capacity	NA	Tonnes
Vinyl Chloride Monomer temperature	-	Deg. C
Ethylene capacity	NA	Tonnes
Ethylene temperature	-	Deg. C
Propylene Oxide capacity	NA	Tonnes
Propylene Oxide temperature	-	Deg. C
Ammonia capacity		Tonnes
Ammonia temperature	-33	Deg. C
Total Capacity of all cargo tanks (100%)	82446.1	m3
Total Capacity of all cargo tanks (98%)	80797.1	m3
Total Capacity of Butane		Tonnes
Total Capacity of Propane		Tonnes
Total Capacity of Butadiene		Tonnes
Total Capacity of Propylene		Tonnes
Total Capacity of Vinyl Chloride Monomer	NA	Tonnes
Total Capacity of Ethylene	NA	Tonnes
Total Capacity of Propylene Oxide	NA	Tonnes
Total Capacity of Ammonia		Tonnes

B16 DECK TANK CAPACITIES

Are Deck pressure tank(s) fitted?	Yes	
Material of tank(s)	carbon steel	
Maximum allowable relief valve setting	18	Bar gauge

Deck tank number 1 - capacity (100%)	402.2	m3
Capacity 98%	394.1	m3
Propane Capacity		Tonnes
Butane Capacity		Tonnes
Propylene capacity		Tonnes
Ethylene capacity	NA	Tonnes
Ammonia Capacity		Tonnes

Deck tank number 2 - capacity (100%)	N/A	m3
Capacity 98%	N/A	m3
Propane Capacity	N/A	Tonnes
Butane Capacity	N/A	Tonnes
Propylene capacity	N/A	Tonnes
Ethylene capacity	N/A	Tonnes
Ammonia Capacity	N/A	Tonnes

B4 LOADING RATES

4.1 **From Refrigerated Storage** (Fully Refrigerated at Vessel's Manifold)

Butane - with vapour return	2890	Tonnes/Hr.
Butane - without vapour return	2890	Tonnes/Hr.
Propane - with vapour return	2800	Tonnes/Hr.
Propane - without vapour return	2800	Tonnes/Hr.
Butadiene - with vapour return	3125	Tonnes/Hr.
Butadiene - without vapour return	3125	Tonnes/Hr.
Propylene - with vapour return	2925	Tonnes/Hr.
Propylene - without vapour return	2925	Tonnes/Hr.
Ethylene - with vapour return	NA	Tonnes/Hr.
Ethylene - without vapour return	NA	Tonnes/Hr.
Ammonia - with vapour return	3230	Tonnes/Hr.
Ammonia - without vapour return	3230	Tonnes/Hr.
Vinyl Chloride Monomer - with vapour return	NA	Tonnes/Hr.
Vinyl Chloride Monomer - without vapour return	NA	Tonnes/Hr.
Propylene Oxide - with vapour return	NA	Tonnes/Hr.
Propylene Oxide - without vapour return	NA	Tonnes/Hr.

4.8 **From Pressure Storage**

Butane 0 deg C - with vapour return	2890	Tonnes/Hr.
0 deg C - without vapour return	2890	Tonnes/Hr.
10 deg C - with vapour return	-	Tonnes/Hr.
10 deg C - without vapour return	-	Tonnes/Hr.
20 deg C - with vapour return	-	Tonnes/Hr.
20 deg C - without vapour return	-	Tonnes/Hr.

Propane minus 30 deg C - with vapour return	-	Tonnes/Hr.
Minus 30 deg C - without vapour return	-	Tonnes/Hr.
Minus 20 deg C - with vapour return	-	Tonnes/Hr.
Minus 20 deg C - without vapour return	-	Tonnes/Hr.
Minus 10 deg C - with vapour return	-	Tonnes/Hr.
Minus 10 deg C - without vapour return	-	Tonnes/Hr.
0 deg C - with vapour return	-	Tonnes/Hr.
0 deg C - without vapour return	-	Tonnes/Hr.
10 deg C - with vapour return	-	Tonnes/Hr.
10 deg C - without vapour return	-	Tonnes/Hr.
20 deg C - with vapour return	-	Tonnes/Hr.
20 deg C - without vapour return	-	Tonnes/Hr.

Butadiene 0 deg C - with vapour return	-	Tonnes/Hr.
0 deg C - without vapour return	-	Tonnes/Hr.
10 deg C - with vapour return	-	Tonnes/Hr.
10 deg C - without vapour return	-	Tonnes/Hr.
20 deg C - with vapour return	-	Tonnes/Hr.
20 deg C - without vapour return	-	Tonnes/Hr.

Propylene minus 30 deg C - with vapour return	-	Tonnes/Hr.
Minus 30 deg C - without vapour return	-	Tonnes/Hr.
Minus 20 deg C - with vapour return	-	Tonnes/Hr.
Minus 20 deg C - without vapour return	-	Tonnes/Hr.
Minus 10 deg C - with vapour return	-	Tonnes/Hr.
Minus 10 deg C - without vapour return	-	Tonnes/Hr.
0 deg C - with vapour return	-	Tonnes/Hr.
0 deg C - without vapour return	-	Tonnes/Hr.
10 deg C - with vapour return	-	Tonnes/Hr.
10 deg C - without vapour return	-	Tonnes/Hr.
20 deg C - with vapour return	-	Tonnes/Hr.
20 deg C - without vapour return	-	Tonnes/Hr.

Ethylene minus 100 deg C - with vapour return	NA	Tonnes/Hr.
Minus 100 deg C - without vapour return		Tonnes/Hr.
Minus 95 deg C - with vapour return		Tonnes/Hr.
Minus 95 deg C - without vapour return		Tonnes/Hr.
Minus 90 deg C - with vapour return		Tonnes/Hr.
Minus 90 deg C - without vapour return		Tonnes/Hr.
Minus 85 deg C - with vapour return		Tonnes/Hr.
Minus 85 deg C - without vapour return		Tonnes/Hr.

Ammonia minus 20 deg C - with vapour return	-	Tonnes/Hr.
Minus 20 deg C - without vapour return	-	Tonnes/Hr.
Minus 10 deg C - with vapour return	-	Tonnes/Hr.
Minus 10 deg C - without vapour return	-	Tonnes/Hr.
0 deg C - with vapour return	-	Tonnes/Hr.
0 deg C - without vapour return	-	Tonnes/Hr.

VCM minus 10 deg C - with vapour return	NA	Tonnes/Hr.
Minus 10 deg C - without vapour return		Tonnes/Hr.
0 deg C - with vapour return		Tonnes/Hr.
0 deg C - without vapour return		Tonnes/Hr.
10 deg C - with vapour return		Tonnes/Hr.
10 deg C - without vapour return		Tonnes/Hr.
20 deg C - with vapour return		Tonnes/Hr.
20 deg C - without vapour return		Tonnes/Hr.

4.14 **Special remarks:**

Note 1: The figures given apply for four cargo tanks and four reliquefaction units in
operation, where applicable, and for +20 degC ambient temperature.
Note 2: Loading a fully refrigerated vessel from pressurized storage will give unacceptable
loading times and therefore not deemed applicable for this type of vessel.

B5 DISCHARGING - GENERAL

Cargo Pumps

5.1	Type of Pumps	Hamworthy Svanehoj DW 250/200-3-k+1	
5.2	Number of pumps per tank	2	
5.3	Rate per Pump	600	m3/hr
5.4	At Delivery Head mlc	120	mlc
5.5	Maximum density	690	Kg/m3

Booster Pump

5.6	Type of Booster Pumps	Hamworthy Svanehoj NMB 150e	
5.7	Number of pumps	2	
5.8	Rate per Pump	600	m3/hr
5.9	At Delivery Head mlc	115	mlc
5.10	Maximum density	690	Kg/m3

Copies of pumping curves for cargo and booster pumps are enclosed? — **See Operation Manual**

B6 DISCHARGE PERFORMANCE

Full Cargo Discharge Times (using all cargo pumps)

Fully Refrigerated

Manifold Back Press 1 kP/cm2, with vapour return	17	Hours
Manifold Back Press 1 kP/cm2, without vapour return	18	Hours
Manifold Back Press 5 kP/cm2, with vapour return	20	Hours
Manifold Back Press 5 kP/cm2, without vapour return	20	Hours
Manifold Back Press 10 kP/cm2, with vapour return	25	Hours
Manifold Back Press 10 kP/cm2, without vapour return	25	Hours

Pressurised

Manifold Back Press 1 kP/cm2, with vapour return	NA	Hours
Manifold Back Press 1 kP/cm2, without vapour return	NA	Hours
Manifold Back Press 5 kP/cm2, with vapour return	NA	Hours
Manifold Back Press 5 kP/cm2, without vapour return	NA	Hours
Manifold Back Press 10 kP/cm2, with vapour return	NA	Hours
Manifold Back Press 10 kP/cm2, without vapour return	NA	Hours

B7 UNPUMPABLES

7.1	Tank number / location	Tank 1, P&S: 15 m3	mt
	Tank number / location	Tank 2, P&S: 20 m3	mt
	Tank number / location	Tank 3, P&S: 20 m3	mt
	Tank number / location	Tank 4, P&S: 18 m3	mt
	Total	73 m3	mt

B8 VAPORISING UNPUMPABLES

8.1	Process used	Hot gas by cargo compressors	
	Time to vaporise liquid unpumpables remaining after full cargo discharge of:		
8.2	Butane	24	Hours
8.3	Propane	20	Hours
8.4	Butadiene	22	Hours
8.5	Propylene	18	Hours
8.6	Ethylene	NA	Hours
8.7	Ammonia	15	Hours
8.8	Vinyl Chloride Monomer	NA	Hours
8.9	Propylene Oxide	NA	Hours

B9 RELIQUEFACTION PLANT

9.1	Plant Design Conditions - air temperature	50	Deg. C
9.3	Plant Design Conditions - sea temperature	36	Deg. C

	Plant Type	
9.4	Is the plant single stage/direct?	-
9.5	Is the plant two stage/direct?	Two/three stage
9.6	Is the plant simple cascade?	-
9.7	Coolant type	NA
	Compressors	
9.8	Compressor type	Piston
9.8.1	Compressor makers name	Burckhardt Compression
9.9	Number of compressors	4
9.10	Capacity per unit	Depending on type of cargo
9.11	Are they Oil Free?	Yes

B11 CARGO TEMPERATURE LOWERING CAPABILITY (AT SEA WITH SEA TEMPERATURE +15C)

	Time taken to lower the temperature of:		
11.1	**Propane** from -5 deg C to - 42 deg C	NA	Hours
11.2	**Propane** from -20 deg C to - 42 deg C	NA	Hours
11.3	**Propane** from -38 deg C to - 42deg C	108	Hours
11.4	**Propane** from +20 deg C to 0 deg C	NA	Hours
11.5	**Propane** from 0 deg C to -20 deg C	NA	Hours
11.6	**Butane** from +20 deg C to 0 deg C	NA	Hours
11.7	**Butane** from +10 deg C to 0 deg C	NA	Hours
11.8	**Butane** from +10 deg C to -5 deg C	NA	Hours
11.9	**Butadiene** From +20 deg C to -5 deg C	NA	Hours
11.10	**Propylene** From -20 deg C to -47 deg C	NA	Hours
11.11	**Ethylene** From -100 deg C to -104 deg C	NA	Hours
11.12	**Ammonia** From -15 deg C to -33 deg C	NA	Hours
11.13	**Vinyl Chloride Monomer** From -5 deg C to -14 deg C	NA	Hours

B12 INERT GAS AND NITROGEN

	Main IG Plant		
12.1	Type of system	Inert Gas Generator	
12.2	Capacity	5300	Nm3/hr
12.3	Type of fuel used	Marine diesel oil DMA	
12.4	Composition of IG - oxygen	1-2	%
	Composition of IG - CO2	Approx. 14	%
	Composition of IG - Nox	Max 100 ppm	
	Composition of IG - N2	Balance	%
12.5	Lowest dewpoint achievable	-40	Deg. C
12.6	Used for	Inerting of cargo tanks and holds	
	Auxiliary IG or Nitrogen plant		
12.7	Type of System	NA	
12.8	Capacity	-	m3/hr
12.9	Composition of IG - oxygen	-	%
	Composition of IG - CO2	-	%
	Composition of IG - Nox	-	
	Composition of IG - N2	-	%

12.10	Lowest dewpoint achievable	-	Deg. C
12.11	Used for	-	

Nitrogen

12.12	Liquid storage capacity	Bottles - 6 off	m3
12.13	Daily boil-off loss	NA	m3
12.14	Maximum supply pressure	-	Kp/Cu. Cm
12.15	Supply capacity	-	m3/hr
12.16	Used for	Gas freeing of cargo pipes and equipment	

B13 CARGO TANK INERTING/DE-INERTING

13.1	Time taken to inert from fresh air to under 5% O2 at minus 25 degree C?	25	Hours
13.2	Time taken to inert from cargo vapour to fully inert at minus 25 degrees dewpoint when IG density is **less** than product?	36	Hours
	Time taken to inert from cargo vapour to fully inert at minus 25 degrees dewpoint when IG density is **greater** than product?	NA	Hours

B14 GAS FREEING TO FRESH AIR

14.1	Plant used	Vent fans	
14.2	Time taken from fully inert condition to fully breathable fresh air?	24	Hours

B15 CHANGING CARGO GRADES

Indicate number of hours needed to change grades from the removal of pumpables to tanks fit to load and the estimated quantity of Inert Gas and or Nitrogen consumed during the operation:

	Hours	Inert Gas	Nitrogen
From Propane to Butane	60	-	-
From Propane to Butadiene	-	-	-
From Propane to Ethylene	NA	NA	NA
From Propane to Ammonia	105	238380 m3	-
From Propane to Vinyl Chloride Monomer	NA	NA	NA
From Propane to Propylene Oxide	NA	NA	NA
From Butane to Propane	62	-	-
From Butane to Butadiene	-	-	-
From Butane to Ethylene	NA	NA	NA
From Butane to Ammonia	102	238380 m3	-
From Butane to Vinyl Chloride Monomer	NA	NA	NA
From Butane to Propylene Oxide	NA	NA	NA
From Butadiene to Propane	-	-	-
From Butadiene to Butane	-	-	-
From Butadiene to Ethylene	NA	NA	NA
From Butadiene to Ammonia	-	-	-
From Butadiene to Vinyl Chloride Monomer	NA	NA	NA
From Butadiene to Propylene Oxide	NA	NA	NA
From Ethylene to Propane	NA	NA	NA
From Ethylene to Butane	NA	NA	NA
From Ethylene to Butadiene	NA	NA	NA
From Ethylene to Ammonia	NA	NA	NA
From Ethylene to Vinyl Chloride Monomer	NA	NA	NA
From Ethylene to Propylene Oxide	NA	NA	NA
From Ammonia to Propane	105	120000 m3	-
From Ammonia to Butane	105	120000 m3	-
From Ammonia to Butadiene	-	-	-
From Ammonia to Ethylene	NA	NA	NA
From Ammonia to Vinyl Chloride Monomer	NA	NA	NA
From Ammonia to Propylene Oxide	NA	NA	NA

From Vinyl Chloride Monomer to Propane	NA	NA	NA
From Vinyl Chloride Monomer to Butane	NA	NA	NA
From Vinyl Chloride Monomer to Butadiene	NA	NA	NA
From Vinyl Chloride Monomer to Ammonia	NA	NA	NA
From Vinyl Chloride Monomer to Ethylene	NA	NA	NA
From Vinyl Chloride Monomer to Propylene Oxide	NA	NA	NA
From Propylene Oxide to Propane	NA	NA	NA
From Propylene Oxide to Butane	NA	NA	NA
From Propylene Oxide to Butadiene	NA	NA	NA
From Propylene Oxide to Ethylene	NA	NA	NA
From Propylene Oxide to Vinyl Chloride Monomer	NA	NA	NA
From Propylene Oxide to Ammonia	NA	NA	NA

Cargo Grade Change Operations that cannot be carried out at sea:

Cargo grade change operations applicable for Butadiene and Propylene cannot be carried
out at sea since they require Nitrogen supply from shore terminal.

B17 PRE-LOADING COOLDOWN

The following questions ask the Time and Quantity of coolant required to cooldown cargo tanks from ambient temperature to fully gassed up state sufficient to allow loading to commence.

17.1	**Propane** - Quantity of Coolant Required	480	m3
	Propane - Time required to cooldown cargo tanks from ambient temperature with vapour return line	36	Hours
	Propane - Time required to cooldown cargo tanks from ambient temperature without vapour return line	48	Hours
17.2	**Butane** - Quantity of Coolant Required	430	m3
	Butane - Time required to cooldown cargo tanks from ambient temperature with vapour return line	33	Hours
	Butane - Time required to cooldown cargo tanks from ambient temperature without vapour return line	45	Hrs.
17.3	**Butadiene** - Quantity of Coolant Required	400	m3
	Butadiene - Time required to cooldown cargo tanks from ambient temperature with vapour return line		Hours
	Butadiene - Time required to cooldown cargo tanks from ambient temperature without vapour return line	30	Hours
17.4	**Propylene** - Quantity of Coolant Required	420	m3
	Propylene - Time required to cooldown cargo tanks from ambient temperature without vapour return line		Hours
	Propylene - Time required to cooldown cargo tanks from ambient temperature with vapour return line	55	Hours
17.5	**Ethylene** - Quantity of Coolant Required	NA	m3
	Ethylene - Time required to cooldown cargo tanks from ambient temperature with vapour return line	-	Hours
	Ethylene - Time required to cooldown cargo tanks from ambient temperature without vapour return line	-	Hrs.
17.6	**Ammonia** - Quantity of Coolant Required		m3
	Ammonia - Time required to cooldown cargo tanks from ambient temperature with vapour return line		Hours
	Ammonia - Time required to cooldown cargo tanks from ambient temperature without vapour return line		Hours

17.7	**VCM** - Quantity of Coolant Required	NA	m3
	VCM - Time required to cooldown cargo tanks from ambient temperature without vapour return line	-	Hours
	VCM - Time required to cooldown cargo tanks from ambient temperature with vapour return line	-	Hours

B18 VAPORISER

18.1	Type of Vaporiser	Shell and Tube type/Glycol heated by steam	
18.2	Number of Vaporisers fitted	1	
18.3	Capacity per unit - **Propane**	4480	m3/hr Vap
18.4	Liquid Supply Rate	16.5	m3/hr Liq
18.5	Delivery Temperature	0	Deg. C
18.6	Capacity per unit - **Ammonia**	4440	m3/hr Vap
18.7	Liquid Supply Rate	4.1	m3/hr Liq
18.8	Delivery Temperature	5	Deg. C
18.9	Capacity per unit - **Nitrogen**	NA	m3/hr Vap
18.10	Liquid Supply Rate	-	m3/hr Liq
18.11	Delivery Temperature	-	Deg. C

B19 BLOWER

19.1	Type of Blower	2 off Centrifugal fans	
19.2	Rated Capacity	10,000	m3/hr
19.3	Delivery Pressure	0.12	Kp/cm2

B20 CARGO RE-HEATER

20.1	Type of Re-Heater	Shell and Tube type	
20.2	Number Fitted	1	
20.3	Heating Medium	Seawater	
20.4	Discharge rates with sea water at 15 degrees C to raise product temperature of **Propane** from -42 degrees C to 0 degrees C	600	m3/hr
20.5	Discharge rates with sea water at 15 degrees C to raise product temperature of **Ammonia** from -33 degrees C to 0 degrees C	350	m3/hr

B21 HYDRATE CONTROL

21.1	Type of Depressant?	Ethanol	
21.1.1	Freezing point temperature?	-98	Deg. C
21.2	Quantity of Depressant Carried?	2000	Ltr.
21.3	Means of injection?	Portable container with hand pump	
	Name any other system used	-	

B22 CARGO MEASUREMENT

Level Gauges

22.1	Are level gauges local or remote?	Remote	
22.2	Name of manufacture	Kongsberg Maritime	
22.3	Type	Radar beam type GL-100/5	
22.4	Rated Accuracy	+/- 2	mm.
22.5	Certifying Authority	SGS	

Temperature Gauges

22.6	Name of manufacture	Kongsberg Maritime	
22.7	Type	MN3927	
22.8	Rated Accuracy	+/- 0.03	Deg. C
22.9	Certifying Authority	SGS	

Pressure Gauges

22.10	Name of manufacture	Skotselv	
22.11	Type	Pressure indicator	
22.12	Rated Accuracy	1	%
22.13	Certifying Authority		

Oxygen Analyser

22.14	Name of manufacture	Riken Keiki	
22.15	Type	RX-415	
22.15.1	What is the lowest level measurable?	0%	

Fixed Gas Analyser

22.16	Name of manufacture	Omicron	
22.17	Type	IR sensor, OGS 3.1/19	
22.18	Are Cargo tank calibration tables available?	Yes	
22.19	Name of Measuring Company	SGS	
22.20	Name of Certifying Authority	DNV	
22.21	Calibration calculated to cm?		
22.21.1	Calibration calculated to 1/2 cm?		
22.22	Tables established to cm?		
22.22.1	Tables established to mm?		
22.22.2	Tables established to "other" (state what other)		
22.23	Are trim and list corrections available?		
22.24	Are temperature corrections available?		
22.25	Are float gauge tape corrections available?	NA	

B23 CARGO SAMPLING

23.1	May cargo samples be obtained from the levels; top, middle and bottom in all cargo tanks?	Yes

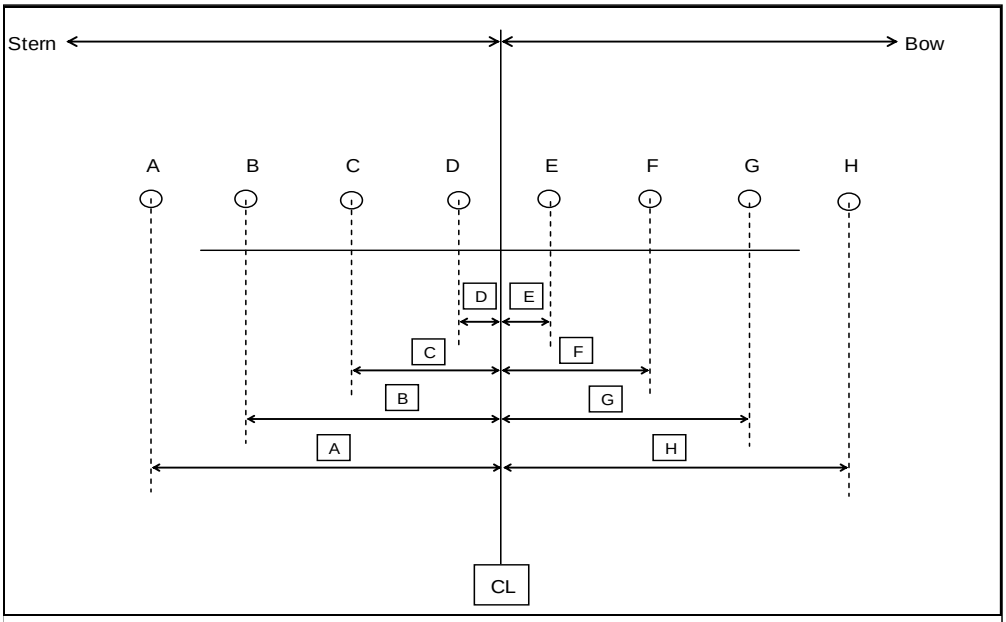
If no, - the arrangement for sampling is limited to:

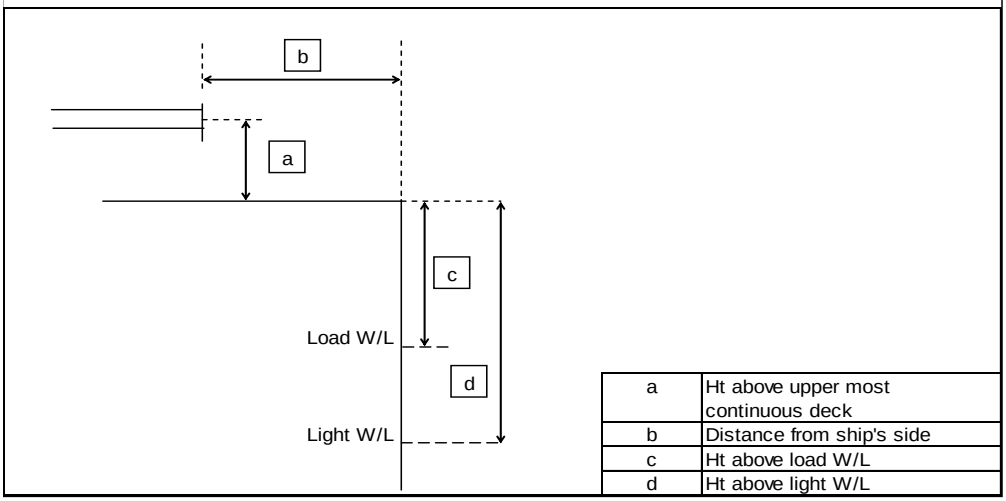
Vapour sample can be taken from top, middle and bottom levels. Liquid sample can only be taken via Cargo pump on the discharge line

23.2	Can samples be drawn from tank vapour outlet?	No
	Can samples be drawn from manifold liquid line?	No
	Can samples be drawn from manifold vapour line?	No
	Can samples be drawn from pump discharge line?	Yes
23.3	State sample connection type	Ball valve full bore
	Size of sample connection	1/2" NPT (F)

B24 CARGO MANIFOLD

Manifold arrangement diagram





a	Ht above upper most continuous deck
b	Distance from ship's side
c	Ht above load W/L
d	Ht above light W/L

Center of manifold to bow	109.28	M.
Center of manifold to stern	116	M.
Dimension A	7625	mm.
Dimension B	5625	mm.
Dimension C	3375	mm.
Dimension D	1125	mm.
Dimension E	1125	mm.
Dimension F	3375	mm.
Dimension G	5625	mm.
Dimension H	7625	mm.

Pipe Flange A - duty	BUNKER LINE	
Pipe Flange A - rating	150#	bar
Pipe Flange A - size	8 INCH	mm.
Pipe Flange A raised or flat face	F/F	
Pipe Flange B - duty	LIQUID 2	
Pipe Flange B - rating	300#	bar
Pipe Flange B - size	14 INCH	mm.
Pipe Flange B raised or flat face	F/F	
Pipe Flange C - duty	VAPOUR 2	
Pipe Flange C - rating	150#	bar
Pipe Flange C - size	10 INCH	mm.
Pipe Flange C raised or flat face	F/F	
Pipe Flange D - duty	VAPOUR 1	
Pipe Flange D - rating	150#	bar
Pipe Flange D - size	10 INCH	mm.
Pipe Flange D raised or flat face	F/F	
Pipe Flange E - duty	LIQUID 1	
Pipe Flange E - rating	300#	bar
Pipe Flange E - size	14 INCH	mm.
Pipe Flange E raised or flat face	F/F	
Pipe Flange F - duty	LIQUID 2A	
Pipe Flange F - rating	300#	bar
Pipe Flange F - size	14 INCH	mm.
Pipe Flange F raised or flat face	F/F	
Pipe Flange G - duty	VAPOUR 2A	
Pipe Flange G - rating	150#	bar
Pipe Flange G - size	10 INCH	mm.
Pipe Flange G raised or flat face	F/F	
Pipe Flange H - duty	BUNKER LINE	
Pipe Flange H - rating	150#	bar
Pipe Flange H - size	8 INCH	mm.
Pipe Flange H raised or flat face	F/F	
Height above uppermost continuous deck	2110	mm.
Distance from ship side	3108	mm.
Height above load waterline	11526	mm.
Height above light waterline (Ballast cond.(dep))	16330	mm.

Manifold Arrangement Located on Top of Compressor

Distance from rail of compressor room/platform to presentation flanges	NA	mm.
Distance from deck of compressor room/platform/try to centre of manifold	NA	mm.

B25 CARGO MANIFOLD REDUCERS

25.1	Number of ANSI Class 300 reducers carried onboard	8	
	Flange rating of ANSI Class 300 reducer	300#	bar
	Size of ANSI Class 300 reducer	14x16, 14x12, 14x10, 14x8	inch
	Length of ANSI Class 300 reducer	584~645	mm.
25.2	Number of ANSI Class 300 to Class 150 reducers carried onboard	10	
	Flange rating of ANSI Class 300 to Class 150 reducer	300#,150#	bar
	Size of ANSI Class 300 to Class 150 reducer	14x16,14x14,14x12 ,14x10,14x8	inch
	Length of ANSI Class 300 to Class 150 reducer	575~645	mm.
25.3	Number of ANSI Class 150 reducers carried onboard	6	
	Flange rating of Class 150 reducer	150#	bar
	Size of ANSI Class 150 reducer	10x12,10x8,10x6	mm.
	Length of ANSI Class 150 reducer	500	mm.

B26 CONNECTIONS TO SHORE FOR ESD AND COMMUNICATIONS SYSTEMS

26.1	Is ESD connection to shore available?	Yes	
	If yes, is the system pneumatic?	Yes	
	If yes, is the system electrical?	Yes	
	If yes, is the system fiber optic?	-	
26.2	What is the type of connection used?	SIGGTO	
26.3	Are ESD hoses or cables available on board?	Yes	
	If yes, length of pneumatic		mm.
	If yes, length of electrical	35 meters	mm.
	If yes, length of fiber optic	-	mm.
26.4	Is there a connection available for a telephone line?	No	
26.5	Are ESD connections available on both sides of vessel?	Yes	
	Are ESD Fusible plugs fitted at tank domes?	Yes	
	Are ESD Fusible plugs fitted at manifolds?	Yes	
	Is the link compatible with the SIGTTO guidelines?	Yes	
	Type of manifold valve	Butterfly	
	Closing time in seconds	30	secs
	Is closing time adjustable?	Yes	
	Is Independent high level shut down system fitted(overflow control)?	Yes	
	If yes, does the independent high level shutdown system also switch off running cargo pumps?	Yes	
	Shut down level %	99	%

B27 MANIFOLD DERRICK/CRANE

27.1	Is manifold derrick provided	NA	
27.2	Is manifold crane provided	YES	
27.3	Is lifting equipment same for port and starboard?	YES	
	If no, then stipulate details	THE LOCATION IS SHIP'S CENTER	
27.4	State SWL at maximum outreach	10	Tonnes
27.4.1	Maximum outreach of lifting equipment	24	Metres

B28 STORES DERRICK/CRANE

28.1	State location	BOSUN STORE, EL. MOTOR HANDLING	
	SWL	1.5 / 1.5	Tonnes

B29 SISTER VESSEL(S)

29.1	Name of vessel	"PROGRESS"