

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, but not guaranteed.

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**SECTION A
GENERAL INFORMATION**

A1 PRINCIPAL SHIP PARTICULARS

1.1	Date questionnaire completed	4-Apr-19	
1.2	Name of vessel	JS INEOS MARLIN	
1.3	LR/IMO number	9799379	
1.4	Last previous name	N.A	
1.4.1	Date of name change	N.A	
1.5	Second last previous name	N.A	
1.5.1	Date of name change	N.A	
1.6	Third last previous name	N.A	
1.6.1	Date of name change	N.A	
1.7	Fourth last previous name	N.A	
1.7.1	Date of name change	N.A	
1.8	Flag	MALTA	
1.9	Port of Registry	VALLETTA	
1.10	Official number	9799379	
1.11	Call sign	9HA4949	
1.12	INMARSAT A or B number	NA	
1.13	Vessel's telephone number Sea / Port	+47 233 979 950	+47 233 979 951
1.13.1	Vessel's mobile number FBB / Mobile	+ 870 773 162 621	+49 151 407 959 14
1.14	Vessel's fax number	+ 870 783 282 343	
1.15	Vessel's telex number	NA	
1.16	Vessel's E-mail address	Jsineosmarlin@Les-Raisting.de	
1.17	INMARSAT C number SSAS / LRIT	421507713	421507714
1.18	Vessel's MMSI number	215 077 000	
1.19	Type of vessel	LEG Carrier 2G	

OWNERSHIP AND OPERATION

1.20	Registered Owner	Right Sino International Holding Limited	
	Full address	Room 19C, Lockhardt Centre 301-307	
		Lockhart Road	
		Wan Chai, Hong Kong	
	Office telephone number		
	Office telex number		
	Office fax number		
	Office Email address		
	Contact person		
	Contact person after hours telephone number		
1.21	Name of technical operator (If different from above)	Hartmann Gas Carriers Germany	
	Full Address	GmbH & Co. KG	
		Koenigstrasse 23	
		26789 Leer, Germany	
	Office telephone number	+49-491-9288 0	
	Office telex number	Not applicable	
	Office fax number	+49-491-9288 201	
	Office Email address	inspection-tanker@hartmann-reederei.de	
	Contact person (Designated Person Ashore)	Gerold Poelmann	
	Contact person after hours telephone number	+49-171-4821588	
	Emergency callout number	+49-421-536870	
	Emergency callout pager number	Not applicable	
	Contact details for person responsible for oil spill response	SOPEP: MRCC Bremen Tel. +49 421 536 870 (HCGC Emergency) Tel. +49 40 361 491 99 (DNV GL ERS) USA OPA90 NTVRP QI : ECM Tel. +1 203 857 0444 Fax. +1 203 857 0428	
	Number of years controlled by technical operator		

1.22	Total number of ships operated by this Operator	34
1.23	Number of years ship owned	0
1.23.1	Name of commercial operator (If different from above)	EVERGAS MANAGEMENT A/S
	Full Address	Kalvebod brygge 39-41 1560 Copenhagen Denmark
	Office telephone number	+45 3997 0350
	Office telex number	Not applicable
	Office fax number	Not applicable
	Office Email address	operations@evergas.net
	Contact person	Nete Egbjerg
	Contact person after hours telephone number	+45 3038 1156
	Emergency callout number	+45 3997 0101
	Emergency callout pager number	N/A
	Number of years controlled by commercial operator	0

BUILDER

1.24	Builder	DALIAN SHIPBUILDING INDUSTRY OFFSHORE Co.
1.25	Name of yard vessel built at	Dalian, China
1.26	Hull number (Class ID No.)	G85K-1
1.27	Date keel laid	December 25, 2017
1.28	Date launched	July 16, 2018
1.29	Date delivered	28-Mar-19
1.30	Date of completion of major hull changes, - if any.	N.A
1.31	If changes were made, what changes were made and at which yard were they carried out	N.A

CLASSIFICATION

1.32	Classification society	DNV-GL
1.33	Class Notation	+ 100 A5 Liquefied Gas Carrier (-104°C; 4.5 bar g; 0.601 t/m³), Type 2-G; NAV; IW; BWM (D2); INERT; ERS + MC-AUT; GF; CM-PS; EP-D
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	YES
US COAST GUARD	YES	YES
IACS Class	YES	YES
Other: _____		

1.37	IMO certification	
	Certificate of fitness - IGC	YES
	Certificate - A328	
	Certificate - A329	
	Letter of Compliance	YES
	Issued by	DNV-GL MALTA
1.38	Unattended Machinery Space Certificate	YES

1.39	Net Registered Tonnage	17768
1.40	Gross Registered Tonnage	59226
1.41	Suez Net Tonnage - Canal Tonnage	17768
	Suez Gross Tonnage	59226
1.42	Panama Net Tonnage - Canal Tonnage	57208
	Panama Gross Tonnage	193930

A2 HULL DIMENSIONS

2.1	Length overall (LOA)	231.57	Metres
2.2	Length between perpendiculars (LBP)	225.50	Metres
2.3	Distance bow to bridge	192.60	Metres
2.4	Distance bridge front - mid point manifold	75.05	Metres
2.5	Distance bow to mid-point manifold	117.50	Metres
2.6	Extreme breadth	36.60	Metres
2.7	Extreme depth	22.00	Metres
2.8	Summer draught (design / Scantling)	12.00/12.30	Metres
2.9	Corresponding Summer deadweight	51312.50	Tonnes
2.10	Light displacement	24607.50	Tonnes
2.11	Loaded displacement (Summer deadweight)	75920.00	Tonnes
2.12	Cargo tanks cubic capacity - 100% (with V of the Dome)	83757.08	Cubic metres
2.12.1	Gas Fuel Tank (s) cubic capacity - 100%	2046.70	Cubic metres
2.12.2	Cargo tanks cubic capacity - 98%	82081.94	Cubic metres
2.12.3	Gas Fuel Tank (s) cubic capacity - 98%	2005.77	Cubic metres
2.13	Distance from keel to highest point	49.45	Metres
2.14	Air draught (normal ballast condition)	41.85	Metres

A3 IMMERSION

3.1	TPC - in normal ballast condition	ABT 65.3
	TPC - in loaded condition (summer deadweight)	ABT 73.6

A4 LOADED PARTICULARS

	Ethane	N.A	
4.1	Cargo grade	N.A	
4.2	Density	0.543	Tonnes/m3
4.3	Cargo loadable Cargo TK + Fuel gas	45660	Tonnes
4.4	Bunkers - FO	2160	Tonnes
4.5	Bunkers - DO	781	Tonnes
4.6	Fresh water 50%	134	Tonnes
4.7	Stores & spares	100	Tonnes
4.8	Lub oil	311	Tonnes
4.9	Ballast	2210	Tonnes
4.10	Deadweight	51478	Tonnes
4.11	Draught - forward	11.92	Metres
	Draught - aft	12.68	Metres
	Draught - mean	12.30	Metres

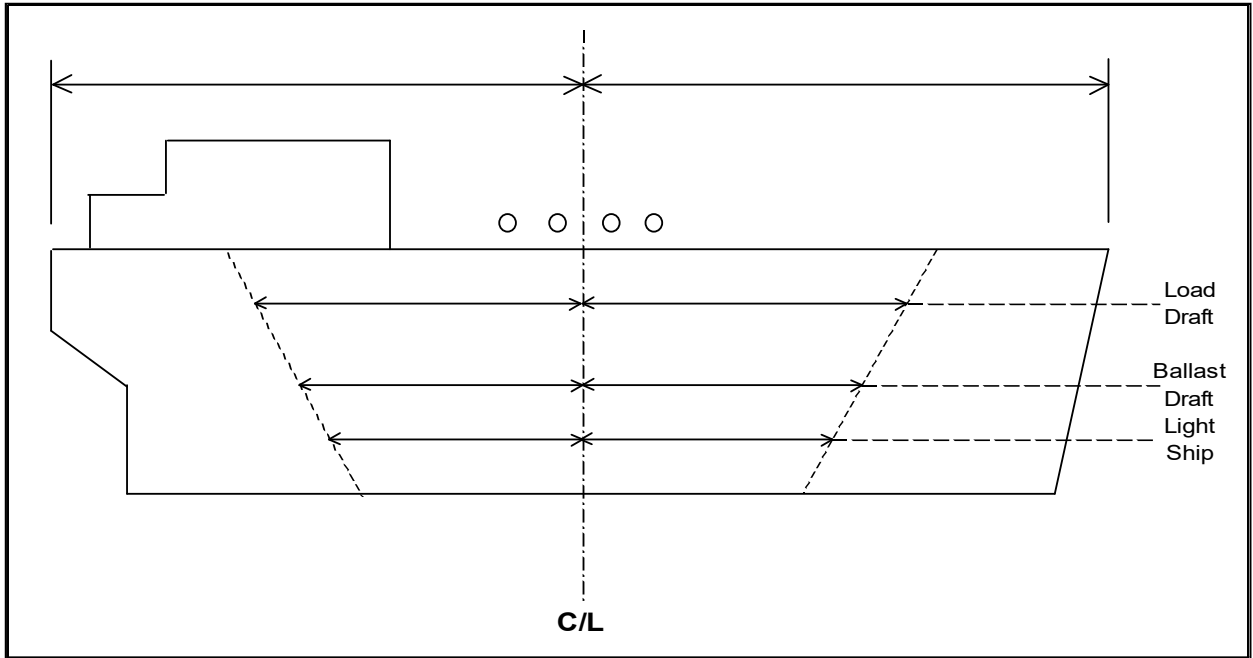
	Propylene	Propane (pure)	
	0.609	0.582	Tonnes/m3
	49988	47772	Tonnes
	2160	1500	Tonnes
	781	781	Tonnes
	268	50	Tonnes
	100	100	Tonnes
	320.6	320.6	Tonnes
	19272	445	Tonnes
		51377	Tonnes
		12.23	Metres
		12.38	Metres
		12.30	Metres

		Ammonia	VCM	
Cargo grade		0.682	0.972	Tonnes/m3
Density		55980	79784	Tonnes
Cargo loadable		2160	2160	Tonnes
Bunkers - FO	100 / 100 %	781	781	Tonnes
Bunkers - DO		268	268	Tonnes
Fresh water	50%	100	100	Tonnes
Stores & spares		320.6	320.6	Tonnes
Lub oil		19272	19272	Tonnes
Ballast				Tonnes
Deadweight				Metres
Draught - forward				Metres
Draught - aft				Metres
Draught - mean				Metres

		Butadiene	Ethylene	
Cargo grade		0.651	0.568	Tonnes/m3
Density		53435	46623	Tonnes
Cargo loadable		2160	2160	Tonnes
Bunkers - FO	100 / 100 %	781	781	Tonnes
Bunkers - DO		268	268	Tonnes
Fresh water	50%	100	100	Tonnes
Stores & spares		320.6	320.6	Tonnes
Lub oil		19272	19272	Tonnes
Ballast				Tonnes
Deadweight				Metres
Draught - forward				Metres
Draught - aft				Metres
Draught - mean				Metres

		N.A	N.A	
Cargo grade		N.A	N.A	Tonnes/m3
Density		N.A	N.A	Tonnes
Cargo loadable		N.A	N.A	Tonnes
Bunkers - FO		N.A	N.A	Tonnes
Bunkers - DO		N.A	N.A	Tonnes
Fresh water		N.A	N.A	Tonnes
Stores & spares		N.A	N.A	Tonnes
Lub oil		N.A	N.A	Tonnes
Ballast		N.A	N.A	Tonnes
Deadweight		N.A	N.A	Metres
Draught - forward		N.A	N.A	Metres
Draught - aft		N.A	N.A	Metres
Draught - mean		N.A	N.A	Metres

A5 PARALLEL MID-BODY DIMENSIONS



5.1	Light ship	63.61	Metres
5.2	Forward to mid-point manifold - light ship	26.36	Metres
5.3	Aft to mid-point manifold - light ship	37.24	Metres
5.4	Normal ballast	75.53	Metres
5.5	Forward to mid-point manifold - normal ballast	34.03	Metres
5.6	Aft to mid-point manifold - normal ballast	41.50	Metres
5.7	Loaded SDWT	105.92	Metres
5.8	Forward to mid-point manifold - loaded SDWT	48.77	Metres
5.9	Aft to mid-point manifold - loaded SDWT	57.15	Metres

A6 BUNKER CAPACITIES

Main engine
 Auxiliary engine(s)
 Other Main Engine / Dual Fuel

Grade		
HFO	2251.10	Cubic metres @ 98%
MGO	925.8	Cubic metres @ 98%
ETHANE	2005.80	Cubic metres @ 98%

A7 FUEL CONSUMPTION DETAILS

- 7.1 At sea - normal service speed 16 KN
- 7.2 At sea - normal service speed - while conditioning cargo full cooling 16 KN
- 7.3 In port - loading
- 7.4 In port - discharging
- 7.5 In port - idle

Grade		
HFO	-	Tonnes/day
Ethane	-	Tonnes/day
Gas oil	0	Tonnes/day
HFO	-	Tonnes/day
Ethane	-	Tonnes/day
Gas oil	0	Tonnes/day
HFO	0	Tonnes/day
Ethane	0	Tonnes/day
Gas oil	-	Tonnes/day
HFO	0	Tonnes/day
Ethane	0	Tonnes/day
Gas oil	-	Tonnes/day

While ME running in Gas / Ethane Pilot Fuel to be added HFO / MGO abt. 2% of 100%

A7 SPEED/CONSUMPTION

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

NO

A8 MAIN ENGINE PARTICULARS

8.1	Main engine make and type	MAN B&W 6G60ME-C9.5-GIE-TII & TIII	
8.2	Number of units	1	
8.3	Maximum continuous rating (MRC) per engine	16080 kW	97.00 RPM
8.4	Total available power - Kwe	16,080 kW	
8.5	Normal service power - Kwe at 90% SMCR	14,472	93.70 kW

A9 AUXILIARY PLANTS

9.1	Make and type of auxiliary generators / engines	CMP-MAN 8L23/30H	
9.2	Number of units	4	
9.3	Maximum generator output per unit	RPM	Kilowatts
	Unit no. 1	900	1300 kW
	Unit no. 2	900	1300 kW
	Unit no. 3	900	1300 kW
	Unit no. 4	900	1300 kW
9.4	Shaft generator	3000 kW	
9.5	Total available power	8200	
9.6	Emergency generator	180 kW	
9.7	Emergency fire pump - type	Centrifugal pump	
	Delivery pressure	9.00 bar	
	Motive power	E-Motor	
	If electrical, - indicate power required	64.00 kW	
9.8	Steering gear - type	Rotary Type	
	Indicate power required to steer the vessel with one pump unit	87.30 kW	

A10 POWER/SPEED INFORMATION

10.1	Trial data	BHP	16,080	kW
		MRC	10,934	kW
		Speed	18.18	KN
		Draught	7	M
10.2	Normal service speed (LOADED / BALLAST)	BHP		kW
		MRC		kW
		Speed		KN
		Draught		M

A11 THRUSTERS

11.1	Make and type	Brunvoll FU74LTC2000 13/49	
11.2	Bow thruster	(output)	1400 kW
11.3	Stern thruster	(output)	N.A

A12 FRESH WATER

12.1	Capacity of distilled tanks	28.6	Cubic metres
12.2	Capacity of domestic tanks	239.7	Cubic metres
12.3	Daily consumption	5	Tonnes
	Distilled	5	Tonnes
12.4	Daily evaporator capacity	16	Tonnes
	Domestic		

A13 BALLAST CAPACITIES AND PUMPS

	Tank	Capacity (m3)	Number
13.1	Fore peak	583.9	2
13.2	Wing and or side tanks	6714.0	18
13.3	Double bottom tanks	10252.0	25
13.4	Aft peak	1722.2	2
13.5	Deep tank		
13.6	Total	19272	47

- 13.7 Ballast pump make and type
- 13.8 Number of pumps
- 13.9 Total capacity
- 13.10 Location
- 13.11 Control location
- 13.13 Ballast Water Treatment Plant

ALLWEILER centrifugal pump	
	2.00
	1200 m3/h
ER floor	
Local/CCR/ECR	
HEADWAY OceanGuard	HMT-600x2

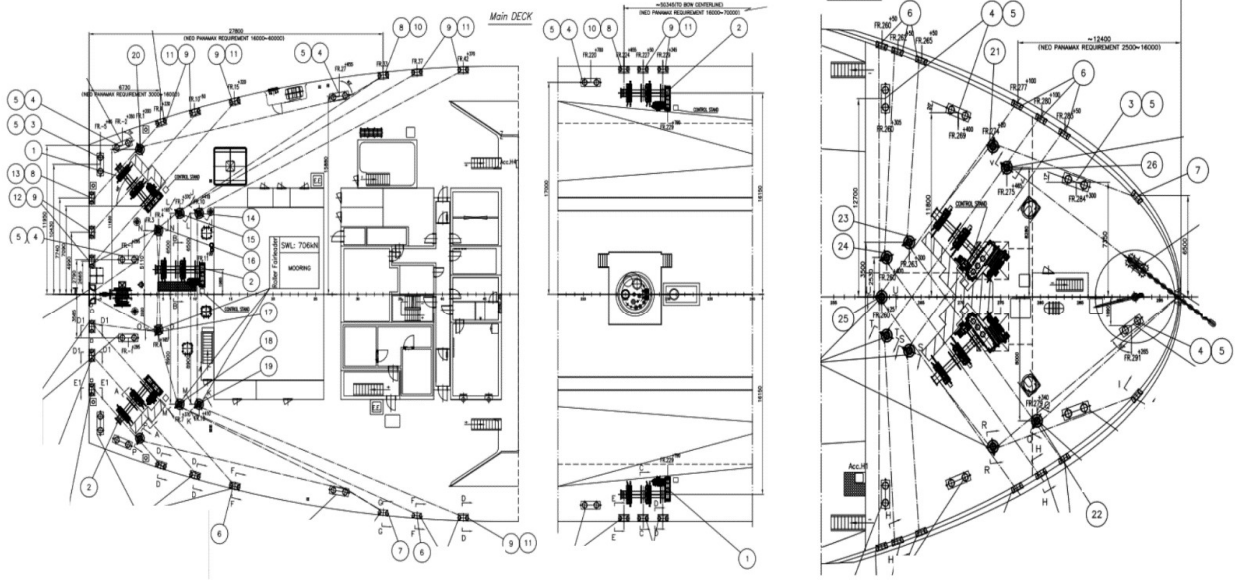
A14 MOORING EQUIPMENT

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 A3 format.

YES



MOORING ROPES (ON DRUMS)

Mooring Ropes (On Drums) Forecastle - Number

Diameter

Material

Length

Breaking Strength

Mooring Ropes (On Drums) Forward Main Deck - Number

Diameter

Material

Length

Breaking Strength

	4.00	
	30.00	MM
High modules Mooring Ropes / Dyneema		
	220.00	M
	63.00	MT
	4.00	
	30.00	MM
High modules Mooring Ropes / Dyneema		
	220.00	M
	63.00	MT

Mooring Ropes (On Drums) Aft Main Deck - Number

Diameter	6.00	
	30.00	MM
Material	High modules Mooring Ropes / Dyneema	
Length	220.00	M
MBL	63.00	MT
Mooring Ropes (On Drums) Poop - Number	NA	
Diameter	NA	
Material	NA	
Length	NA	
Breaking Strength	NA	

OTHER MOORING LINES

Mooring Ropes not on Drums - Number

Diameter	4	
	30	MM
Material	High modules Mooring Ropes / Dyneema	
Length	220	M
Breaking Strength	63	MT

Emergency Towing Wires / Fire Wires - Number

Diameter	1.00	
	92.00	MM
Material	Steel Wire	
Length	90.00	M
Breaking Strength	201.00	MT

14.2

MOORING WINCHES

Forecastle - Number

Single Drum or Double Drums	2.00	
Split Drums Y/N	double drums	
Motive Power	Y	
Heaving Power	34/68/74	
Brake Capacity		
Hauling Speed	441~588	
	7.5/15/45	

Forward Main Deck - Number

Single Drum or Double Drums	2.00	
Split Drums Y/N	double drums	
Motive Power	Y	
Heaving Power	29/58/64	
Brake Capacity		
Hauling Speed	441~588	
	7.5/15/45	

Aft Main Deck - Number

Single Drum or Double Drums	2.00	
Split Drums Y/N	double drums	
Motive Power	Y	
Heaving Power	29/58/64	
Brake Capacity		
Hauling Speed	441~588	
	7.5/15/45	

Poop - Number

Single Drum or Double Drums	N.A	
Split Drums Y/N	N.A	
Motive Power	N.A	
Heaving Power	N.A	
Brake Capacity	N.A	mt
Hauling Speed	N.A	

14.3

ANCHORS AND WINDLASS

Windlass motive power(e.g. steam, hydraulic)	Electric	34/68/74	
Hauling power		360.00	kN
Brake holding power		2475.00	kN
Anchor type	HHP		
Weight		16000.00	kg

Is spare anchor carried	NO
Cable diameter	87.00
Number of shackles port cable	357.5
Number of shackles starboard cable	357.5

mm

14.4 **TOWING ARRANGEMENTS**

Is the vessel fitted with a Towing Bracket Aft?	YES
If Yes, state SWL	2000 KN
Is Towing chain provided	YES
Dimensions of Towing wire	80.00
Diameter	90.00
Length	

14.5 **WINDAGE**

Windage on ballast draught	Front	1105.82	M2
	End-on		M2
	Lateral	5654.91	M2

A15 NAVIGATIONAL EQUIPMENT

15.1	Magnetic compass		YES
15.2	Off Course Alarm - Magnetic compass		NO
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	6
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		NO
15.14	Speed/distance indicator		YES
15.15	Doppler log		YES
15.16	Docking approach Doppler		NO
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		YES
15.22	Thruster(s) indicator		YES
15.23	Rate of turn indicator		YES
15.24	Radio direction finder		NO
15.25	Navtex receiver		YES
15.26	GPS		NO
15.26.1	DGPS		YES
15.27	Transit SATNAV		NO
15.28	Decca navigator		NO
15.29	Omega		NO
15.30	Loran C		NO
15.31	Weather fax		YES
15.32	Sextant(s)		NO
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?		YES

15.38	Is bridge equipped with a 'Dead-Man' alarm?		YES
15.39	What chart outfit coverage is provided	World-wide	YES
		Limited	NA
		If limited, - please indicate area(s) covered	NA
15.40	Formal chart correction system in use		Chartco / NTM
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 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?		6
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		YES
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

Cargo	Temp at atm. Press (Celsius)	Density at atm. Press (kg/m3)
Ethylene	-103.80	0.568
Ethane	-88.00	0.540
Propylene	-43.75	0.609
Propane (pure)	-42.30	0.582
Anhydrous Ammonia	-33.40	0.682
VCM	-13.80	0.972
Butadiene (all isomers)	-4.70	0.650
Butane (all isomers)	-12	0.594
Butylene (all isomers)	-7	0.625
C-Propane	-45	0.583
Diethyl Ether	35	0.700
Methyl chloride		
Mixed C4 cargoes	-5	0.650
Propane - Butane mixtures		
Methane (Fuel Tanks)	-163	0.545

Transport and Carriage Conditions

1.2	Minimum allowable tank temperature	-104	Deg. Celsius
1.3	Maximum Permissible tank pressure	4.45	Bar gauge
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	X12 Ni 5 (5% Ni-steel)	
2.2	Maximum allowable relief valve setting	4.45	Bar gauge
2.2.1	IMO Setting	4.45	Bar gauge
2.2.2	USCG Setting	4.45	Bar gauge
2.3	Safety valve set pressure, - if variable stipulate range of pilot valves	N.A	Bar gauge
2.4	Maximum allowable vacuum	0.7	Bar gauge
2.5	Maximum cargo density at 15 deg Celsius	0.972	Kg/m3
2.6	Maximum rate of cool-down	5	Deg Cel / Hour
2.7	State any limitations regarding partially filled tanks	N.A	

Max. cargo density 602 kg/cbm (this density corresponds to max. allowable tank filling limit, cargoes with higher density may be carried at reduced tank filling ratio)

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2.8

State allowable combinations of filled and empty tanks

N.A

B3 CARGO TANK CAPACITIES

Tank number / location

Capacity m3 (100%)
 Capacity 98%
 Ethane capacity 98%
 Ethane temperature
 C-Propane capacity 98%
 C-Propane temperature
 Butadiene capacity
 Butadiene temperature
 Propylene capacity
 Propylene temperature
 Vinyl Chloride Monomer capacity
 Vinyl Chloride Monomer temperature
 Ethylene capacity
 Ethylene temperature
 Ammonia capacity
 Ammonia temperature

1	In cargo void space 1	
	13927.6	m3
	13649.1	m3
	7371	Tonnes
	-88	Deg. C
	7946	Tonnes
	-42	Deg. C
	8872	Tonnes
	-5	Deg. C
	8312	Tonnes
	-44	Deg. C
	13267	Tonnes
	-14	Deg. C
	7753	Tonnes
	-104	Deg. C
	9309	Tonnes
	-33	Deg. C

Tank number / location

Capacity m3 (100%)
 Capacity 98%
 Ethane capacity 98%
 Ethane temperature
 C-Propane capacity 98%
 C-Propane temperature
 Butadiene capacity
 Butadiene temperature
 Propylene capacity
 Propylene temperature
 Vinyl Chloride Monomer capacity
 Vinyl Chloride Monomer temperature
 Ethylene capacity
 Ethylene temperature
 Ammonia capacity
 Ammonia temperature

2	In cargo void space 2	
	23262.4	m3
	22797.2	m3
	12310	Tonnes
	-88	Deg. C
	13273	Tonnes
	-42	Deg. C
	14818	Tonnes
	-5	Deg. C
	13883	Tonnes
	-44	Deg. C
	22159	Tonnes
	-14	Deg. C
	12949	Tonnes
	-104	Deg. C
	15548	Tonnes
	-33	Deg. C

Tank number / location

Capacity m3 (100%)
 Capacity 98%
 Ethane capacity 98%
 Ethane temperature
 C-Propane capacity 98%
 C-Propane temperature
 Butadiene capacity
 Butadiene temperature
 Propylene capacity
 Propylene temperature
 Vinyl Chloride Monomer capacity
 Vinyl Chloride Monomer temperature
 Ethylene capacity

3	In cargo void space 3	
	23299.9	m3
	22833.9	m3
	12330	Tonnes
	-88	Deg. C
	13294	Tonnes
	-42	Deg. C
	14842	Tonnes
	-5	Deg. C
	13906	Tonnes
	-44	Deg. C
	22195	Tonnes
	-14	Deg. C
	12949	Tonnes

Ethylene temperature	-104	Deg. C
Ammonia capacity	15573	Tonnes
Ammonia temperature	-33	Deg. C

Tank number / location

Capacity m3 (100%)
 Capacity 98%
 Ethane capacity 98%
 Ethane temperature
 Propane capacity
 Propane temperature
 Butadiene capacity
 Butadiene temperature
 Propylene capacity
 Propylene temperature
 Vinyl Chloride Monomer capacity
 Vinyl Chloride Monomer temperature
 Ethylene capacity
 Ethylene temperature
 Ammonia capacity
 Ammonia temperature

4	In cargo void space 4	
	23267.1	m3
	22801.8	m3
	12313	Tonnes
	-88	Deg. C
	13275	Tonnes
	-42	Deg. C
	14821	Tonnes
	-5	Deg. C
	13886	Tonnes
	-44	Deg. C
	22163	Tonnes
	-14	Deg. C
	12949	Tonnes
	-104	Deg. C
	15551	Tonnes
	-33	Deg. C

Tank number / location

Capacity m3 (100%)
 Capacity 98%
 Butane capacity
 Butane temperature
 Propane capacity
 Propane temperature
 Butadiene capacity
 Butadiene temperature
 Propylene capacity
 Propylene temperature
 Vinyl Chloride Monomer capacity
 Vinyl Chloride Monomer temperature
 Ethylene capacity
 Ethylene temperature
 Propylene Oxide capacity
 Propylene Oxide temperature
 Ammonia capacity
 Ammonia temperature

	N.A	
	N.A	m3
	N.A	m3
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C

Tank number / location

Capacity m3 (100%)
 Capacity 98%
 Butane capacity
 Butane temperature
 Propane capacity
 Propane temperature
 Butadiene capacity
 Butadiene temperature
 Propylene capacity
 Propylene temperature
 Vinyl Chloride Monomer capacity
 Vinyl Chloride Monomer temperature
 Ethylene capacity
 Ethylene temperature
 Propylene Oxide capacity

	N.A	
	N.A	m3
	N.A	m3
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes
	N.A	Deg. C
	N.A	Tonnes

Propylene Oxide temperature	N.A	Deg. C
Ammonia capacity	N.A	Tonnes
Ammonia temperature	N.A	Deg. C

Tank number / location

Capacity m3 (100%)	N.A	m3
Capacity 98%	N.A	m3
Butane capacity	N.A	Tonnes
Butane temperature	N.A	Deg. C
Propane capacity	N.A	Tonnes
Propane temperature	N.A	Deg. C
Butadiene capacity	N.A	Tonnes
Butadiene temperature	N.A	Deg. C
Propylene capacity	N.A	Tonnes
Propylene temperature	N.A	Deg. C
Vinyl Chloride Monomer capacity	N.A	Tonnes
Vinyl Chloride Monomer temperature	N.A	Deg. C
Ethylene capacity	N.A	Tonnes
Ethylene temperature	N.A	Deg. C
Propylene Oxide capacity	N.A	Tonnes
Propylene Oxide temperature	N.A	Deg. C
Ammonia capacity	N.A	Tonnes
Ammonia temperature	N.A	Deg. C

Tank number / location

Capacity m3 (100%)	N.A	m3
Capacity 98%	N.A	m3
Butane capacity	N.A	Tonnes
Butane temperature	N.A	Deg. C
Propane capacity	N.A	Tonnes
Propane temperature	N.A	Deg. C
Butadiene capacity	N.A	Tonnes
Butadiene temperature	N.A	Deg. C
Propylene capacity	N.A	Tonnes
Propylene temperature	N.A	Deg. C
Vinyl Chloride Monomer capacity	N.A	Tonnes
Vinyl Chloride Monomer temperature	N.A	Deg. C
Ethylene capacity	N.A	Tonnes
Ethylene temperature	N.A	Deg. C
Propylene Oxide capacity	N.A	Tonnes
Propylene Oxide temperature	N.A	Deg. C
Ammonia capacity	N.A	Tonnes
Ammonia temperature	N.A	Deg. C

Total Capacity of all cargo tanks (100%)	83,757.1	m3
Total Capacity of all cargo tanks (98%)	82,081.9	m3
Total Capacity of Ethane	54,813	Tonnes
Total Capacity of C-Propane	47,788	Tonnes
Total Capacity of Butadiene	53,353	Tonnes
Total Capacity of Propylene	49,988	Tonnes
Total Capacity of Vinyl Chloride Monomer	79,784	Tonnes
Total Capacity of Ethylene	46,599	Tonnes
Total Capacity of Ammonia	55,980	Tonnes

B16 GAS FUEL TANK CAPACITIES

Are Gas Fuel tank(s) fitted?	Yes	
Material of tank(s)	X7Ni9	
Maximum allowable relief valve setting	9	Bar gauge

Gas Fuel TK 1 - capacity (100%)

Capacity 98%

Ethane Capacity

Methane Capacity

Propylene capacity

Ethylene capacity

Ammonia Capacity

1022.8	m3
1002.4	m3
541	Tonnes
244	Tonnes
NA	Tonnes
NA	Tonnes
NA	Tonnes

Gas Fuel TK 2- capacity (100%)

Capacity 98%

Ethane Capacity

Methane Capacity

Propylene capacity

Ethylene capacity

Ammonia Capacity

1024.0	m3
1003.5	m3
542	Tonnes
461	Tonnes
NA	Tonnes
NA	Tonnes
NA	Tonnes

B4 LOADING RATES**4.1 From Refrigerated Storage (Fully Refrigerated at Vessel's Manifold)**

Ethane - with vapour return

Ethane - without vapour return

Propane - with vapour return

Propane - without vapour return

Butadiene - with vapour return

Butadiene - without vapour return

Propylene - with vapour return

Propylene - without vapour return

Ethylene - with vapour return

Ethylene - without vapour return (**)

Ammonia - with vapour return

Ammonia - without vapour return

Vinyl Chloride Monomer - with vapour return

Vinyl Chloride Monomer - without vapour return

3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr

4.8 From Pressure Storage**Ethane minus 88.3 deg C - with vapour return**

Minus 70 deg C - without vapour return (**)

Minus 84 deg C - with vapour return

Minus 86 deg C - without vapour return (**)

Minus 88 deg C - with vapour return

3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
3500	cbm/hr

Propane minus 30 deg C - with vapour return

Minus 30 deg C - without vapour return

Minus 20 deg C - with vapour return

Minus 20 deg C - without vapour return

Minus 10 deg C - with vapour return

Minus 10 deg C - without vapour return

0 deg C - with vapour return

0 deg C - without vapour return

10 deg C - with vapour return by compressors

10 deg C - without vapour return

3500	cbm/hr
3500	cbm/hr
3500	cbm/hr
2000	cbm/hr
3500	cbm/hr
1000	cbm/hr
NA	cbm/hr
NA	cbm/hr
NA	cbm/hr
NA	cbm/hr

Butadiene 0 deg C - with vapour return	3500	cbm/hr
0 deg C - without vapour return	3500	cbm/hr
10 deg C - with vapour return	3500	cbm/hr
10 deg C - without vapour return	3500	cbm/hr
20 deg C - with vapour return	3500	cbm/hr
20 deg C - without vapour return	3500	cbm/hr

Propylene minus 30 deg C - with vapour return	3500	cbm/hr
Minus 30 deg C - without vapour return	3500	cbm/hr
Minus 20 deg C - with vapour return	3500	cbm/hr
Minus 20 deg C - without vapour return	1800	cbm/hr
Minus 10 deg C - with vapour return	3500	cbm/hr
Minus 10 deg C - without vapour return	750	cbm/hr
0 deg C - with vapour return	NA	cbm/hr
0 deg C - without vapour return	NA	cbm/hr
10 deg C - with vapour return by compressors	NA	cbm/hr
10 deg C - without vapour return	NA	cbm/hr
20 deg C - with vapour return by compressors	NA	cbm/hr
20 deg C - without vapour return	NA	cbm/hr

Ethylene minus 100 deg C - with vapour return		cbm/hr
Minus 100 deg C - without vapour return **)	3500	cbm/hr
Minus 95 deg C - with vapour return	3500	cbm/hr
Minus 95 deg C - without vapour return **)	3500	cbm/hr
Minus 90 deg C - with vapour return	3500	cbm/hr
Minus 90 deg C - without vapour return **)	3500	cbm/hr
Minus 85 deg C - with vapour return	3500	cbm/hr
Minus 85 deg C - without vapour return **)	3500	cbm/hr

Butadiene 0 deg C - with vapour return	3500	Tonnes/Hr.
0 deg C - without vapour return	3500	Tonnes/Hr.
10 deg C - with vapour return	3500	Tonnes/Hr.
10 deg C - without vapour return	3500	Tonnes/Hr.
20 deg C - with vapour return	3500	Tonnes/Hr.
20 deg C - without vapour return	3500	Tonnes/Hr.

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

4.14

Special remarks:

B5 DISCHARGING - GENERAL

Cargo Pumps

5.1	Type of Pumps	DW 250/200-3-K+I	
5.2	Number of pumps per tank	Tank 1 - 1 Pump Tank 2,3,4 - 2 Pumps	
5.3	Rate per Pump	500	m3/hr
5.4	At Delivery Head mlc	120	mlc
5.5	Maximum density	972	Kg/m3

- 5.6 **Booster Pump**
Type of Booster Pumps
- 5.7 Number of pumps
- 5.8 Rate per Pump
- 5.9 At Delivery Head m/c
- 5.10 Maximum density

NMB 150e	
	1
	500
	240
	750

m3/hr
m/c
kg/m3

Copies of pumping curves for cargo and booster pumps are enclosed?

NO

B6 DISCHARGE PERFORMANCE

Full Cargo Discharge Times

Fully Refrigerated

- Manifold Back Press 1 kP/cm2, with vapour return
- Manifold Back Press 1 kP/cm2, without vapour return
- Manifold Back Press 5 bar g - Ammonia - DW pump
- Manifold Back Press 5 bar g - C-Propane - DW pump
- Manifold Back Press 10 kP/cm2, with vapour return
- Manifold Back Press 10 kP/cm2, without vapour return

	24	Hours
	23	Hours
	24	Hours
	24	Hours
	24	Hours
	164	Hours
	164	Hours

Pressurised

- Manifold Back Press 1 kP/cm2, with vapour return
- Manifold Back Press 1 kP/cm2, without vapour return
- Manifold Back Press 5 bar g - Ammonia 0.9 bar g - DW pump
- Manifold Back Press 5 kg/cm2, without vapour return
- Manifold Back Press 10 bar g - C-Propane 4.8 bar g - DW pump
- Manifold Back Press 10 bar g - Ammonia 0.9 bar g - DW pump

	24	Hours
	24	Hours
	24	Hours
	24	Hours
	167	Hours
	167	Hours

B7 UNPUMPABLES

- 7.1 Tank number / location
- Tank number / location
- Tank number / location
- Tank number / location
- Tank number / location
- Tank number / location
- Tank number / location
- Tank number / location
- Total

TK 1	2	m3
TK 2	2	m3
TK 3	2	m3
TK 4	2	m3
Fuel Gas 1	0	m3
Fuel Gas 2	0	m3
N.A	N.A	m3
N.A	N.A	m3
		m3

B8 VAPORISING UNPUMPABLES

- 8.1 Process used
- Time to vaporise liquid unpumpables remaining after full cargo discharge of (1 CT, 1 Compressor running):
- 8.2 Ethane
- 8.3 Propane
- 8.4 Butadiene
- 8.5 Propylene
- 8.6 Ethylene
- 8.7 Ammonia
- 8.8 Vinyl Chloride Monomer
- 8.9 Propylene Oxide

3 x Cargo Compressors

	10	Hours
	12	Hours
	14	Hours
	12	Hours
	10	Hours
	18	Hours
	14	Hours
	N.A	Hours

B9 RELIQUEFACTION PLANT

- 9.1 Plant Design Conditions - air temperature

45

Deg. C

9.3	Plant Design Conditions - sea temperature	32	Deg. C
Plant Type			
9.4	Is the plant single stage/direct? (for warm cargoes):	No	
9.5	Is the plant two stage/direct? (for propane, propylene and ammonia):	Yes	
9.6	Is the plant simple cascade?	Yes	
9.7	Coolant type	SeaWater / R1270	
Compressors			
9.8	Compressor type	2K160-2F_1	
9.8.1	Compressor makers name	Burckhardt	
9.9	Number of compressors	3	
9.10	Capacity per unit, 1st / 2nd stage (swept volume)	1292 / 582.5	m3/hr
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	C-Propane from -5 deg C to -42 deg C	250	Hours
11.2	C-Propane from -20 deg C to -42 deg C	145	Hours
11.3	C-Propane from -38 deg C to -42deg C	60	Hours
11.4	C-Propane from +20 deg C to -0.50 deg C	NA	Hours
11.5	C-Propane from 0 deg C to -20 deg C	90	Hours
11.6	N-Butane from +20 deg C to-0.5 deg C	200	Hours
11.7	N-Butane from +10 deg C to-0.5 deg C	120	Hours
11.8	N-Butane from +10 deg C to -5 deg C	200	Hours
11.9	Butadiene From +20 deg C to -5 deg C	250	Hours
11.10	Propylene From -20 deg C to -47 deg C	220	Hours
11.11	Ethylene From -99 deg C to -103 deg C	158	Hours
11.12	Ammonia From -16 deg C to -33 deg C	210	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	N.A	
12.2	Capacity	N.A	
12.3	Type of fuel used	N.A	
12.4	Composition of IG - oxygen	N.A	
	Composition of IG - CO2	N.A	
	Composition of IG - Nox	N.A	
	Composition of IG - N2	N.A	
12.5	Lowest dewpoint achievable	N.A	
12.6	Used for	N.A	
Nitrogen plant			
12.7	Type of System	PSA	
12.8	Purity N2	99.8%	
12.9	Capacity	1200Nm3/h	
	Purity N2	99.5%	
	Capacity	1600Nm3/h	

12.10	Purity N2	98%
	Capacity	2000Nm3/h
12.11	Used for	Drying/ Inerting/Purging / ME GI FGSS

Nitrogen

12.12	Liquid storage capacity	N.A	LTR
12.13	Daily boil-off loss	N.A	
12.14	Maximum supply pressure	N.A	Bar
12.15	Supply capacity	N.A	
12.16	Used for	N.A	

B13 CARGO TANK INERTING/DE-INERTING

13.1	Time taken to inert from fresh air to under 5% O2 at minus 25 degree C?	48	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?	96	Hours
	Time taken to inert from cargo vapour to fully inert at minus 25 degrees dewpoint when IG density is greater than product?	96	Hours

B14 GAS FREEING TO FRESH AIR

14.1	Plant used	PSA	
14.2	Time taken from fully inert condition to fully breathable fresh air?	48	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	Air	Nitrogen
From C-Propane to Ethane	404	255,000	340,000
From C-Propane to Butadiene	404	255,000	340,000
From C-Propane to Ethylene	404	255,000	340,000
From C-Propane to Ammonia	NA	NA	NA
From C-Propane to Vinyl Chloride Monomer	404	255,000	340,000
From C-Propane to Propylene Oxide	NA	NA	NA
From Ethane to C-Propane	404	255,000	340,000
From Ethane to Butadiene	404	255,000	340,000
From Ethane to Ethylene	404	255,000	340,000
From Ethane to Ammonia	NA	NA	NA
From Ethane to Vinyl Chloride Monomer	404	255,000	340,000
From Ethane to Propylene Oxide	NA	NA	NA
From Butadiene to C-Propane	404	255,000	340,000
From Butadiene to N-Butane	404	255,000	340,000
From Butadiene to Ethylene	404	255,000	340,000
From Butadiene to Ammonia	NA	NA	NA
From Butadiene to Vinyl Chloride Monomer	404	255,000	340,000
From Butadiene to Propylene Oxide	NA	NA	NA
From Ethylene to C-Propane	404	255,000	340,000
From Ethylene to N-Butane	404	255,000	340,000
From Ethylene to Butadiene	404	255,000	340,000
From Ethylene to Ammonia	NA	NA	NA
From Ethylene to Vinyl Chloride Monomer	404	255,000	340,000
From Ethylene to Propylene Oxide	NA	NA	NA
From Ammonia to C-Propane	NA	NA	NA
From Ammonia to N-Butane	NA	NA	NA
From Ammonia to Butadiene	NA	NA	NA
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 C-Propane
 From Vinyl Chloride Monomer to Ethane
 From Vinyl Chloride Monomer to Butadiene
 From Vinyl Chloride Monomer to Ammonia
 From Vinyl Chloride Monomer to Ethylene
 From Vinyl Chloride Monomer to Propylene Oxide
 From Propylene Oxide to C-Propane
 From Propylene Oxide to N-Butane
 From Propylene Oxide to Butadiene
 From Propylene Oxide to Ethylene
 From Propylene Oxide to Vinyl Chloride Monomer
 From Propylene Oxide to Ammonia

404	255,000	340,000
404	255,000	340,000
404	255,000	340,000
NA	NA	NA
404	255,000	340,000
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA
NA	NA	NA

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

All operation can be carried out at sea but have to load small parcel for gassing up/cooling down purpose

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	200
	Propane - Time required to cooldown cargo tanks from ambient temperature with vapour return line	12
	Propane - Time required to cooldown cargo tanks from ambient temperature without vapour return line	12
17.2	Butane - Quantity of Coolant Required	NA
	Butane - Time required to cooldown cargo tanks from ambient temperature with vapour return line	NA
	Butane - Time required to cooldown cargo tanks from ambient temperature without vapour return line	NA
17.3	Butadiene - Quantity of Coolant Required	NA
	Butadiene - Time required to cooldown cargo tanks from ambient temperature with vapour return line	NA
	Butadiene - Time required to cooldown cargo tanks from ambient temperature without vapour return line	NA
17.4	Propylene - Quantity of Coolant Required	200
	Propylene - Time required to cooldown cargo tanks from ambient temperature without vapour return line	16
	Propylene - Time required to cooldown cargo tanks from ambient temperature with vapour return line	16
17.5	Ethylene - Quantity of Coolant Required	200
	Ethylene - Time required to cooldown cargo tanks from ambient temperature with vapour return line	24
	Ethylene - Time required to cooldown cargo tanks from ambient temperature without vapour return line	24
17.6	Ammonia - Quantity of Coolant Required	200
	Ammonia - Time required to cooldown cargo tanks from ambient temperature with vapour return line	18
	Ammonia - Time required to cooldown cargo tanks from ambient temperature without vapour return line	18

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

NA
NA
NA

B18 LPG VAPORISER

- 18.1 Type of Vaporiser
18.2 Number of Vaporisers fitted
18.3 Capacity per unit - C-Propane
18.4 Liquid Supply Rate
18.5 Delivery Temperature
18.6 Capacity per unit - Ammonia
18.7 Liquid Supply Rate
18.8 Delivery Temperature
18.9 Capacity per unit - Nitrogen
18.10 Liquid Supply Rate
18.11 Delivery Temperature

Tube / Shell	
3 (combined use with heater as stated on B20)	
1680	Nm3/h
4	m3/h
-104	degC
NA	Nm3/h
NA	m3/h
NA	degC
NA	Nm3/h
NA	m3/h
NA	degC

B19 BLOWER

- 19.1 Type of Blower
19.2 Rated Capacity
19.3 Delivery Pressure

N:A
N.A
N.A

B20 CARGO RE-HEATER

- 20.1 Type of Re-Heater
20.2 Number Fitted
20.3 Heating Medium
20.4 Discharge rates with seawater at 15 degC to raise product temperature of Propane from -42 degC to 0 degC
20.5 Discharge rates with seawater at 15 deC to raise product temperature of Ammonia from -33 degC to 0 degC

Tube / Shell	
3	
SW	
500	m3/h
700	m3/h

B21 HYDRATE CONTROL

- 21.1 Type of Depressant?
21.1.1 Freezing point temperature?
21.2 Quantity of Depressant Carried?
21.3 Means of injection?
Name any other system used

Ethanol	
-114	
100	Ltr.
Hand pump	
Hot Gas	

B22 CARGO MEASUREMENT

Level Gauges

- 22.1 Are level gauges local or remote?
22.2 Name of manufacture
22.3 Type
22.4 Rated Accuracy
22.5 Certifying Authority

YES
HENRI SYSTEMS HOLLAND B.V.
FTLG 807 SUS/T39
± 7,5 mm
DNVGL

Temperature Gauges

- 22.6 Name of manufacture
22.7 Type
22.8 Rated Accuracy
22.9 Certifying Authority

Labom measurement technology
GA8140
0.6
DNVGL

Pressure Gauges

22.10	Name of manufacture	Yokogawa Electric Corporation	
22.11	Type	EJA530E	
22.12	Rated Accuracy		0.25
22.13	Certifying Authority	DNVGL	

Oxygen Analyser

22.14	Name of manufacture	Drager	
22.15	Type	O2 LS	
22.15.1	What is the lowest level measurable?		0%

Fixed Gas Analyser

22.16	Name of manufacture	Drager	
22.17	Type	Polytron SE Ex	

Cargo Tank Calibrations

22.18	Are Cargo tank calibration tables available?		YES
22.19	Name of Measuring Company	NKKK	
22.20	Name of Certifying Authority	NKKK	
22.21	Calibration calculated to cm?		YES
22.21.1	Calibration calculated to 1/2 cm?		NO
22.22	Tables established to cm?		YES
22.22.1	Tables established to mm?		NO
22.22.2	Tables established to "other" (state what other)		N.A
22.23	Are trim and list corrections available?		YES
22.24	Are temperature corrections available?		YES
22.25	Are float gauge tape corrections available?		YES

B23 CARGO SAMPLING

23.1	May cargo samples be obtained from the levels; top, middle and bottom in all cargo tanks?	NO
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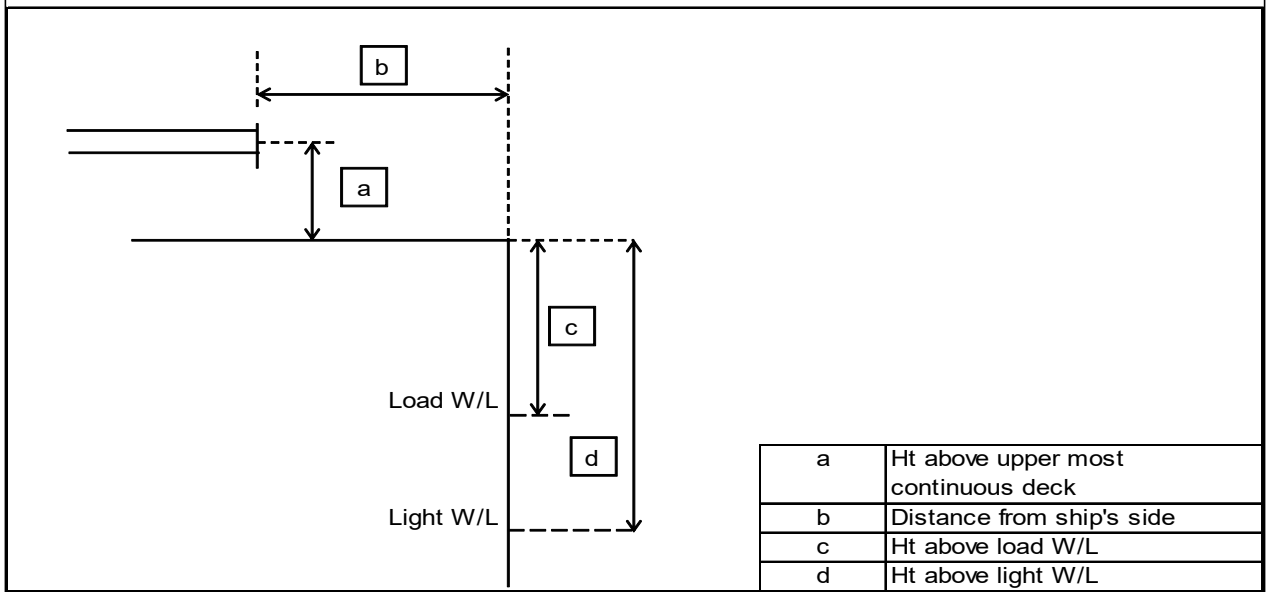
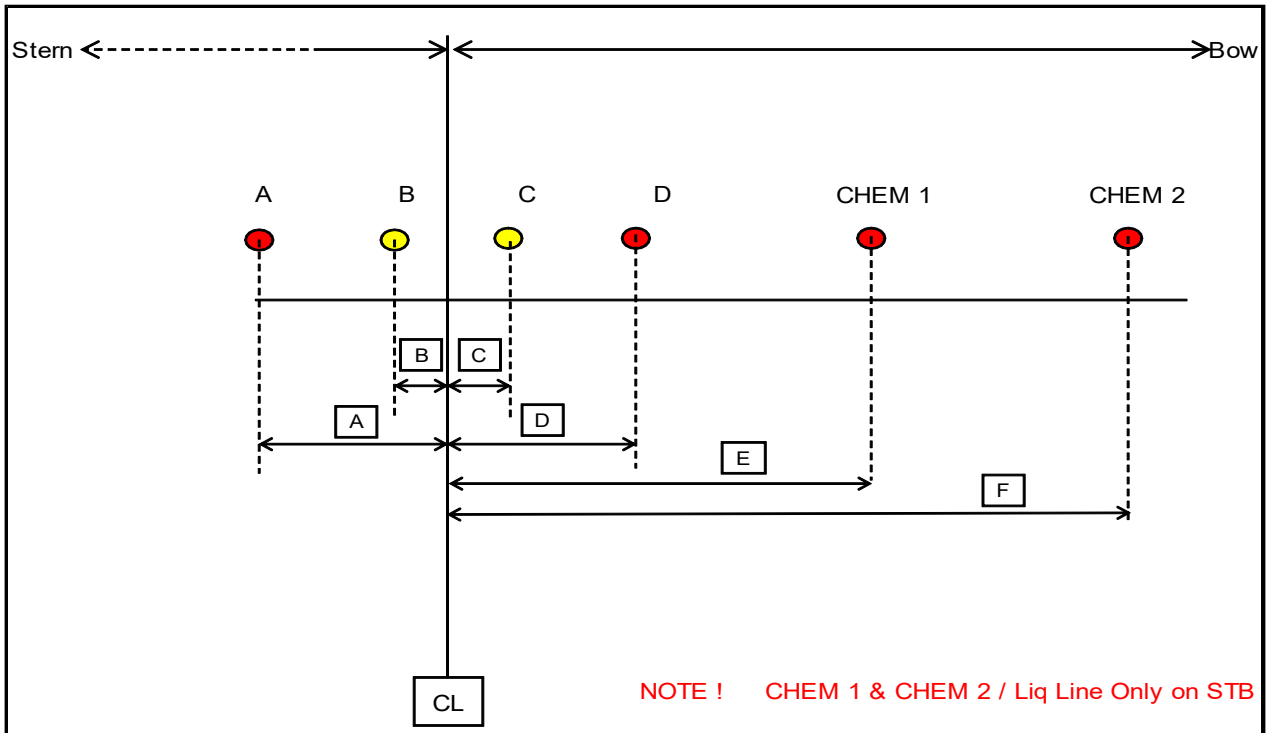
If no, - the arrangement for sampling is limited to:

Closed loop sampling from bottom via pump

23.2	Can samples be drawn from tank vapour outlet?	YES
	Can samples be drawn from manifold liquid line?	YES
	Can samples be drawn from manifold vapour line?	NO
	Can samples be drawn from pump discharge line?	YES
23.3	State sample connection type	(ISO228-1) Female
	Size of sample connection	R1/2"

B24 CARGO MANIFOLD

Manifold arrangement diagram



Center of manifold to bow
Center of manifold to stern

114.65	M
116.95	M

Liquid line L1 (D)

Distance from bow
Distance from stern
Distance from manifold centerline (D)
Size and rating
Type
Height above uppermost continuous deck
Distance from ship's side

110.90	M
120.70	M
3.75	M
16" ASA 150 lbs	
RF	
2.98	M
4.00	M

Height above load waterline	12.70	M
Height above light waterline	18.00	M
Vapour line V1 (C)		
Distance from bow	113.40	M
Distance from stern	118.20	M
Distance from manifold centerline (C)	1.25	M
Size and rating	12" ASA 150 lbs	
Type	RF	
Height above uppermost continuous deck	2.98	M
Distance from ship's side	4.00	M
Height above load waterline	12.70	M
Height above light waterline	18.00	M
Vapour line V2 (B)		
Distance from bow	115.90	M
Distance from stern	115.70	M
Distance from manifold centerline (B)	1.25	M
Size and rating	12" ASA 150 lbs	
Type	RF	
Height above uppermost continuous deck	2.98	M
Distance from ship's side	4.00	M
Height above load waterline	12.70	M
Height above light waterline	18.00	M
Liquid line L2 (A)		
Distance from bow	118.40	M
Distance from stern	113.20	M
Distance from manifold centerline (A)	3.75	M
Size and rating	16" ASA 150 lbs	
Type	RF	
Height above uppermost continuous deck	2.98	M
Distance from ship's side	4.00	M
Height above load waterline	12.70	M
Height above light waterline	18.00	M
Liquid line L3 / CHEM 1		
Distance from bow	103.60	M
Distance from stern	128.00	M
Distance from manifold centerline (E)	11.05	M
Size and rating	12" ASA 150 lbs	
Type	RF	
Height above uppermost continuous deck	2.98	M
Distance from ship's side	4.00	M
Height above load waterline	12.70	M
Height above light waterline	18.00	M
Vapour line V3		
Distance from bow	N.A	
Distance from stern	N.A	
Distance from manifold centerline	N.A	
Size and rating	N.A	
Type	N.A	
Height above uppermost continuous deck	N.A	
Distance from ship's side	N.A	
Height above load waterline	N.A	
Height above light waterline	N.A	
Vapour line V4		
Distance from bow	N.A	
Distance from stern	N.A	
Distance from manifold centerline	N.A	
Size and rating	N.A	
Type	N.A	
Height above uppermost continuous deck	N.A	
Distance from ship's side	N.A	
Height above load waterline	N.A	
Height above light waterline	N.A	
Liquid line L4 / CHEM 2		
Distance from bow	96.10	M
Distance from stern	135.50	M

Distance from manifold centerline (F)	18.55	M
Size and rating	12" ASA 150 lbs	
Type	RF	
Height above uppermost continuous deck	2.98	M
Distance from ship's side	4.00	M
Height above load waterline	12.70	M
Height above light waterline	18.00	M

Nitrogen manifold

Distance from bow	114.75
Distance from stern	116.85
Distance from manifold centerline	0.00
Size	DN 150
Height above uppermost continuous deck	2.98
Distance from ship's side	4.00

Manifold Arrangement Located on Top of Compressor

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

B25 CARGO MANIFOLD REDUCERS

25.1	Number of ANSI Class 300 reducers carried onboard	0	
	Flange rating of ANSI Class 300 reducer	N.A	
	Size of ANSI Class 300 reducer	N.A	
	Length of ANSI Class 300 reducer	N.A	MM
25.2	Number of ANSI Class 300 to Class 150 reducers carried onboard	22	
	Flange rating of ANSI Class 300 to Class 150 reducer	class300 lb, class150 lb	
	Size of ANSI Class 300 to Class 150 reducer	16"×16", 16"×12", 14"×16, 14"×12, 12"×16, 12"×12", 10"×16", 10"×12", 8"×16", 8"×12", 6"×12"	
	Length of ANSI Class 300 to Class 150 reducer	500	MM
25.3	Number of ANSI Class 150 reducers carried onboard	22	
	Flange rating of Class 150 reducer	class150 lb	
	Size of ANSI Class 150 reducer	16"×16", 16"×14", 16"×12, 16"×10 , 16"×8", 12"×16", 12"×14", 12"×12", 12"×10", 12"×8", 12"×6"	
	Length of ANSI Class 150 reducer	500	

B26 CONNECTIONS TO SHORE FOR ESD AND COMMUNICATIONS SYSTEMS

26.1	Is ESD connection to shore available?	YES	
	If yes, is the system pneumatic?	NO	
	If yes, is the system electrical?	YES	
	If yes, is the system fiber optic?	NO	
26.2	What is the type of connection used?	MTL 901 & 901C	
26.3	Are ESD hoses or cables available on board?	YES	
	If yes, length of pneumatic	N.A	
	If yes, length of electrical	45.00	M
	If yes, length of fiber optic	N.A	
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	BAC Butterfly valve	
	Closing time in seconds	20 - 30 sec	
	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 %	98.00	

B27 MANIFOLD DERRICK/CRANE

27.1	Is manifold derrick provided	N.A	
27.2	Is manifold crane provided	YES	
27.3	Is lifting equipment same for port and starboard?	YES	
	If no, then stipulate details		
27.4	State SWL at maximum outreach	7.50	MT
27.4.1	Maximum outreach of lifting equipment	Port: 7.5 / Stbd: 5	M

B28 STORES DERRICK/CRANE

28.1	State location	E-Deck	
	SWL	8.00	MT

B29 SISTER VESSEL(S)

29.1	Name of vessel	N.A
		N.A
		N.A
		N.A
		N.A
		N.A
		N.A
		N.A