GAS FORM-C

CLIPPER NEPTUN

SOLVANG ASA

«Industry leading provider of LPG and petrochemical tonnage»

BASED ON:
OCIMF/SIGTTO
Ship Information Questionnaire for Gas Carriers
2nd Edition 1998

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SOLVANG ASA

Solvang ASA dates back to 1936. From very modest beginnings, the shipping company has now developed into one of the world's leading transporters of LPG and petrochemical gases. Solvang ASA has its headquarters in Stavanger, with offices in Oslo and the Philippines.

Solvang has a fleet of modern and efficient vessels - all built in the accordance with the most up to date specifications and fitted with new and efficient technology. Perhaps of greater importance than the modern technology is the way in which the vessels are operated – the people onboard. Good seamanship represents the very core of our business, and we place a firm focus on this area in the form of education, working on attitudes and training.

On every single sailing, we are required to demonstrate the full range of our experience and expertise.

«Industry leading provider of LPG and petrochemical tonnage»

Our strength lies in reliable, high-quality deliveries. It is our goal to maintain a steady course towards the future, at the same time as making good use of the experience we have gained.

1. SECTION A – GENERAL INFORMATION

SOLVANG ASA

1.1 PRINCIPAL SHIP PARTICULARS

A1	PRINCIPAL SHIP PARTICULARS			CLIPPER NEPTUN
1.0	Date Questionnaire Completed			13.03.2017
1.1	Name of vessel			CLIPPER NEPTUN
1.2	LR/IMO Number			IMO 9372432
1.3	**Last Previous Name**			N/A
1.3.1		Date of Name change		N/A
1.4	**Second Last Name Change**			N/A
1.4.1		Date of Name change		N/A
1.5	**Third Last Name Change**			N/A
1.5.1		Date of Name change		N/A
1.6	**Fourth Last Name Change**			N/A
1.6.1		Date of Name change		N/A
1.7	Flag			NIS
1.8	Port Of Registry			Stavanger
1.9	Official Number			
1.10	Call Sign			LAHY6
1.11	VSAT			+44 203 145 4242
1.12	Fleet 77			+870 764 842 062
1.13	Fax			+870 764 842 064
1.14	Mini – M			+870 600 922 973
1.15	E-mail			clipper.neptun@solvangship.no
1.16	GSM Mobile			+ 47 488 81 815
1.17	SAT C			
1.18	Vessel's MMSI Number			258 640 000
1.19	**Max tank pressure**		**UNIT**	
1.19.1		(1) Pressurized	[bar g]	
1.19.2		(2) Semi- Refrigerated	[bar g]	
1.19.3		(3) Refrigerated	[bar g]	0,275
1.20	**Minimum tank temperature**		**UNIT**	
1.20.1		(1) Pressurized	[°C]	
1.20.2		(2) Semi- Refrigerated	[°C]	
1.20.3		(3) Refrigerated	[°C]	-50
A1	**OWNERSHIP AND OPERATION**			
1.21	**REGISTERED OWNER**			P/R LGC DA
1.22	**Visitor's address**			Haakon VII Gate 8
1.22.1		City		N-4005 Stavanger
1.22.2		Country		Norway
1.23	**Postal address**			P.O. Box 90
1.23.1		City		N-4001 Stavanger
1.23.2		Country		Norway
1.24	Office Telephone Number			+47 51 84 84 00
1.25	Office Fax Number			+47 51 84 84 11
1.26	Office Telex Number			
1.27	Office e-mail Address			solvang-lgc@solvangship.no
1.28	Number of Years Vessel Owned			8,6
1.29	**NAME OF TECHNICAL OPERATOR**			**Solvang ASA**
1.30	**Visitor's address**			Haakon VII Gate 8
1.30.1		City		N-4005 Stavanger
1.30.2		Country		Norway
1.31	**Postal address**			P.O. Box 90
1.31.1		City		N-4001 Stavanger
1.31.2		Country		Norway
1.32	Office Telephone Number			(+47) 51 84 84 00

1.33	Office Fax Number		(+47) 51 84 84 11
1.34	Office Telex Number		
1.35	Office e-mail Address		solvang-lgc@solvangship.no
1.36	Number of Years as vessel Operator		8,6
1.37	Total number of vessels, Operator		23
1.38	**COMMERCIAL OPERATOR**		**Solvang ASA**
1.39	**Visitor's address**		Haakon VII's gt 6
1.39.1	City		N-0121 Oslo
1.39.2	Country		Norway
1.40	**Postal address**		P.O.Box 1734 Vika
1.40.1	City		N-0121 Oslo
1.40.2	Country		Norway
1.41	Office Telephone Number		(+47) 22 47 19 50
1.42	**Office e-mail Address**		chartering@solvangship.no
1.42.1	Office e-mail Address 2		operation@solvangship.no
1.43	Number of Years as vessel Operator		8,6
1.44	Builder		Hyundai HI
1.45	Name of Yard Vessel Built At		Ulsan, Korea
1.46	Hull Number		1900
1.47	Date Keel Laid		18.03.2008
1.48	Date Launched		23.05.2008
1.49	Date Delivered		31.07.2008
1.50	Date of Completion of Major Hull Changes (If Any)		N/A
1.51	If Changes were made, specify changes and yard		N/A
A1	**CLASSIFICATION**	**UNIT**	**CLIPPER NEPTUN**
1.52	Classification Society	[Text]	DNV GL
1.53	**Class Notation**	[Text]	1A1, Tanker for Liquefied Gas
1.53.1	Cont.	[Text]	EO, Nauticus, Plus 1
1.53.2	Cont.	[Text]	Plus-1, TMON, BWMP
1.54	If Class Society Changed, Name of Previous society	[Text]	N/A
1.55	If Class Society Changed, Date of Change	[Date]	N/A
1.56	**Built in accordance with Regulations:**		Approval recieved
1.56.1	IMO	[Yes/No]	YES
1.56.2	USCG	[Yes/No]	YES
1.56.3	RINA	[Yes/No]	NO
1.56.4	Other	[Yes/No]	NO
1.57	**IMO Certification Certificate of Fitness**		Approval recieved
1.57.1	IGC	[Yes/No]	YES
1.57.2	A328	[Yes/No]	NO
1.57.3	A329	[Yes/No]	NO
1.57.4	Letter of compliance	[Yes/No]	YES
1.57.5	Issued By	[Text]	DNV GL
1.58	Unattended Machinery Space certificate	[Yes/No]	Yes (24h)
A1	**TONNAGES**	**UNIT**	**CLIPPER NEPTUN**
1.59	Nett Registered Tonnage	[NT]	10938
1.60	Gross Tonnage	[GT]	36459
1.61	**Suez Canal Tonnage**		
1.61.1	Net Tonnage	[NT]	34288,97
1.61.2	Gross Tonnage	[GT]	38815,25
1.62	**Panama Canal Tonnage**		
1.62.1	Net Tonnage	[NT]	30196
1.62.2	Gross Tonnage	[GT]	

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1.2 HULL DIMENSIONS

A2	HULL DIMENSIONS	UNIT	CLIPPER NEPTUN
2.1	Length Overall	[m]	205,0
2.2	Length Between Perpendiculars	[m]	195,0
2.3	Distance Bow to Bridge	[m]	168,6
2.4	Distance Bridge Front to Mid-Point Manifold	[m]	66,9
2.5	Distance Bow to Mid-Point Manifold	[m]	101,6
2.6	Extreme Breadth	[m]	32,2
2.7	Extreme Depth	[m]	20,8
2.8	Summer Draught	[m]	12,1
2.9	Corresponding Deadweight	[ton]	43508,0
2.10	Light Displacement/weight	[ton]	15659,0
2.11	Loaded Displacement (Summer)	[ton]	59167,0
2.12	Cargo Tank Cubic Capacity (100% full)	[m3]	60 255,7
2.13	Distance from Keel to Highest Point (With mast down)	[m]	50,8 (49,55)
2.14	Air Draught normal ballast (With mast down)	[m]	44,4 (43,15)

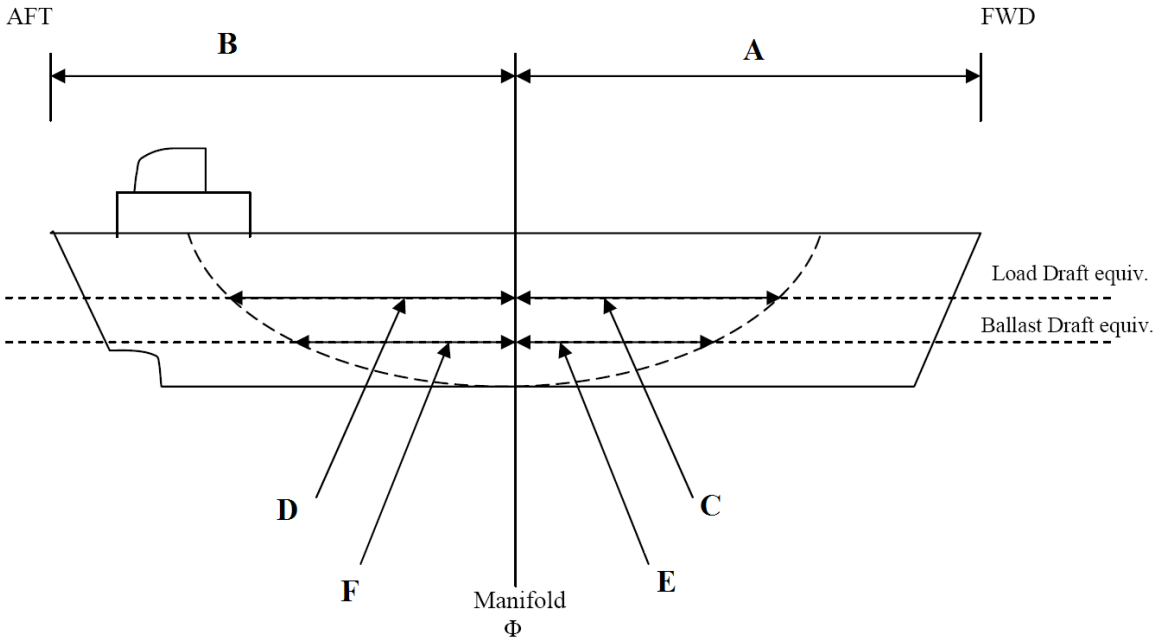
1.3 IMMERSION

A3	IMMERSION	UNIT	CLIPPER NEPTUN
3.1	**Normal Ballast Draught**	[TPC]	51,97
3.1.1	Draught	[m]	7,24
3.2	**Loaded Draught**	[TPC]	56,91
3.2.1	Draught	[m]	12,1

1.4 LOADED PARTICULARS

A4	LOADED PARTICULARS	UNIT	CLIPPER NEPTUN		
4.1	**Cargo:**		Propane	VCM	Ammonia
4.2	Density:	[ton/m3]	0,58	0,97	0,68
4.3	Cargo	[ton]	34249,00	40019	40019
4.4	Bunkers	[ton]	2868,00	2868	2868
4.5	DO	[ton]			
4.6	Fresh Water	[ton]	274,00	274	274
4.7	Stores/Spares	[ton]			
4.8	Lube Oil	[ton]	120	120	120
4.9	Ballast	[ton]			
4.10	Deadweight Const.	[ton]	99	99,00	99,00
4.11	**Draught – Forward**	[m]	10,26	11,92	11,87
4.11.1	Aft	[m]	11,81	12,29	12,33
4.11.2	Eqiv.	[m]	11,03	12,1	12,1

1.5 PARALLEL MID-BODY DIMENSIONS



A5	PARALLEL MID-BODY DIMENSIONS	UNIT	CLIPPER NEPTUN
5.1	A Manifold to FWD	[m]	101,68
5.2	B Manifold to AFT	[m]	103,31
5.3	**Loaded draft equiv-**		
5.3.1	C Manifold to FWD side tangent line	[m]	46,2
5.3.2	D Manifold to AFT side tangent line	[m]	54,8
5.4	**Ballast draft equiv.**		
5.4.1	E Manifold to FWD	[m]	37,9
5.4.2	F Manifold to AFT	[m]	42,8

1.6 BUNKER CAPACITIES

A6	BUNKER CAPACITIES	UNIT	CLIPPER NEPTUN
6.1	**HFO**	[Grade]	IFO 380 (Standard)
6.1.1	Capacity @ 100 %	[m3]	2183,33
6.2	**LSHFO**	[Grade]	N/A
6.2.1	Capacity @ 100 %	[m3]	N/A
6.3	**Diesel Oil**	[Grade]	DO
6.3.1	Capacity @ 100 %	[m3]	785,19

1.7 FUEL CONSUMPTION DETAILS

Average speed and consumption, based on max force 4 Beaufort and 15% Sea Margin.
Vessel use mainly HFO for all consumers. DO/GO for INCN and when Rules & Regulations demands it for other consumers

A7	FUEL CONSUMPTION DETAILS	UNIT	CLIPPER NEPTUN
7.1	**LOADED CONDITION**		*About
7.2	Average speed over 12 months	[kn]	16,00
7.3	Average consumption, Main engine	[ton/day]	38
7.4	**Consumption, AUX**		
7.4.1	Butane	[ton/day]	3,5
7.4.2	Propane/Ammonia	[ton/day]	4 – 8
7.5	**Average consumption, AUX**		
7.5.1	Propane/Ammonia	[ton/day]	5
7.5.2		[ton/day]	
7.6	**BALLAST CONDITION**		
7.7	Average speed over 12 months	[kn]	16
7.8	Average consumption, Main engine	[ton/day]	36
7.9	Average consumption, AUX	[ton/day]	3,5
7.10	**PORT/IDLE**		
7.11	Average consumption, AUX, Loading	[ton/day]	7
7.12	Average consumption, AUX, Discharging	[ton/day]	5
7.13	Average consumption, AUX, Idle	[ton/day]	3
7.14	Average consumption, Boiler (depending on weather)	[ton/day]	2,0-3,0
7.15	**OTHER**		
7.16	INCN (When operating) - MDO/MGO	[ton/day]	0,2
7.17	IGG-plant (When operating)	[ton/day]	0,2

7.18	ME CONSUMPTION GRAPH/KNOTS		LOADED	BALLAST
7.18.1	17	[ton/day]	46,0	43,0
7.18.2	16	[ton/day]	38,0	36,0
7.18.3	15	[ton/day]	32,0	30,0
7.18.4	14	[ton/day]	28,0	26,0
7.18.5	12	[ton/day]	24,0	23,0

1.8 MAIN ENGINE PARTICULARS

A8	MAIN ENGINE PARTICULARS	UNIT	CLIPPER NEPTUN
8.1	Main Engine Make and Type	[Text]	Hyundai B&W 5S60MC-C
8.2	No of Units	Pcs	1
8.3	**Maximum Continuous Rating (MCR)**	[kW]	10150
8.3.1	RPM	[RPM]	98
8.4	Total Available Power	kW	10 150
8.5	Normal service Power	kW	9 135

1.9 AUXILIARY PLANT

A9	AUXILIARY PLANT	UNIT	CLIPPER NEPTUN
9.1	Make and Type of Auxiliary Generators	[Text]	HHI-EES, 8H21/32
9.2	**Main Generators**	[Pcs]	
9.2.1	No of Units	[Pcs]	3
9.2.2	Maximum Generator Output per Unit	[kW]	1 200
9.3	**Generators, other**	[Yes/No]	NO

9.3.1	No of Units	[Pcs]	N/A
9.3.2	Maximum Generator Output per Unit	[kW]	N/A
9.4	Shaft Generator	[kW]	N/A
9.5	Total Available Power	[kW]	3600
9.6	Emergency Generator	[kW]	130
9.7	**Emergency Fire Pump**	[Text]	
9.7.1	Type	[Text]	Vertical Centrifugal
9.7.2	Delivery Pressure	[Bar]	10
9.7.3	Motive Power	[Text]	Electric
9.7.4	If Electrical, Indicate Power Required in kW	[kW]	55
9.8	**Steering Gear Type**		Cylinder
9.8.1	kW to Steer the Vessel with One Pump Unit	[kW]	37

1.10 POWER/SPEED INFORMATION

A10	POWER/SPEED INFORMATION	UNIT	CLIPPER NEPTUN
10.1	**Trial Data**		
10.1.1	NCR	[kW]	9 135
10.1.2	MCR	[kW]	10 150
10.1.3	Speed	[kn]	17,511
10.1.4	Draught	[m]	6,42
10.2	**Normal Service Speed**		
10.2.1	NCR	[kW]	
10.2.2	MCR	[kW]	
10.2.3	Speed	[kn]	
10.2.4	Draught	[m]	

1.11 THRUSTERS

A11	THRUSTERS	UNIT	CLIPPER NEPTUN
11.1	Make and Type	[Text]	Kawasaki KT-157B5
11.2	No. Installed	[Pcs]	1,00
11.3	Location and Rated Bollard Pull or kW output	[kW]	1200

1.12 FRESH WATER

A12	FRESH WATER	UNIT	CLIPPER NEPTUN
12.1	Capacity of Distilled Tanks	[ton]	N/A
12.2	Capacity of F/D.W. Ts	[ton]	274,20
12.3	Daily Consumption	[ton/day]	8,00
12.4	Daily Evaporator Output	[ton/day]	30,00

1.13 BALLAST CAPACITIES AND PUMPS

A13	BALLAST CAPACITIES AND PUMPS	UNIT	CLIPPER NEPTUN	
13.1	**Tank Capacities**		**Capacity [m3]**	**Tanks [Pcs]**
13.1.1	Forepeak	[Col]	656,60	1
13.1.2	Wing or Side tanks	[Col]	14307,1	8
13.1.3	Aft Peak	[Col]	1264,5	1
13.1.4	Other	[Col]		
13.1.5	Other	[Col]		
13.1.6	**Total**	[Col]	**16 228,20**	**10**
13.2	**Ballast Pumps**			
13.2.1	Capacity per pump	[m3/h]	800	
13.2.2	Model	[Text]	Shinko	
13.2.3	Type	[Text]	Electric	
13.2.4	Setting	[Text]	Vertical Centrifugal	
13.3	No of Pumps	[Pcs]	2	
13.4	Total Capacity	[m3/h]	1600	
13.5	Location	[Text]	Engine Room	
13.6	Control Location	[Text]	CCR, Engine Room, Bridge	

1.14 MOORING

A14	MOORING EQUIPMENT	UNIT	CLIPPER NEPTUN			
14.1	**Mooring wires (On drums)**		**FWD**	**FWD DECK**	**AFT DECK**	**POOP**
14.1.1	Number	[Pcs]				
14.1.2	Diameter	[mm]				
14.1.3	Length	[m]				
14.1.4	Maximum Breaking Load	[ton]				
14.2	**Mooring wire tails**		**FWD**	**FWD DECK**	**AFT DECK**	**POOP**
14.2.1	Number	[Pcs]				
14.2.2	Type	[Text]				
14.2.3	Diameter	[mm]				
14.2.4	Length	[m]				
14.2.5	Maximum Breaking Load	[ton]				
14.3	**Mooring ropes (On drums)**		**FWD**	**FWD DECK**	**AFT DECK**	**POOP**
14.3.1	Number	[Pcs]	6			
14.3.2	Type	[Text]	KARATMAXI	KARATMAXI	KARATMAXI	KARATMAXI
14.3.3	Diameter	[mm]	64	64	64	64
14.3.4	Length	[m]	220	220	220	220
14.3.5	Maximum Breaking Load	[ton]	74,6	84,3	84,3	74,6
14.4	**Mooring winches**		**FWD**	**FWD DECK**	**AFT DECK**	**POOP**
14.4.1	Number	[Pcs]	3	1	1	3
14.4.2	[S]ingle/[D]ouble drums	[S/D]	Double	Double	Double	Double
14.4.3	Split drums	[Yes/No]	YES	YES	YES	YES
14.4.4	Motive power	[Text]	Hydraulic	Hydraulic	Hydraulic	Hydraulic
14.4.5	Heaving power	[ton]	20	20	20	20
14.4.6	Brake capacity	[ton]	62,7	67,4	67,4	62,7
14.4.7	Hauling speed	[m/s]	0,25	0,25	0,25	0,25
14.5	**Wires/ropes not on drums**		**WIRES**	**ROPES**	**EM'GENCY**	
14.5.1	Number	[Pcs]				
14.5.2	Type	[Text]				
14.5.3	Diameter	[mm]				
14.5.4	Length	[m]				

14.5.5	Maximum Breaking Load	[ton]			

A14	ANCHORS AND WINDLASSES	UNIT	CLIPPER NEPTUN
14.5.1	**Windlass Motive Power (e.g. Steam, Hydraulic)**	[Text]	Hydraulic
14.5.2	Hauling Power	[ton]	28,9
14.5.3	Brake Holding Power	[ton]	206,7
14.5.4	**Anchor Type**	[Text]	High Holding Power
14.5.5	Weight	[kg]	7 425
14.5.6	Is Spare Carried	[Yes/No]	NO
14.5.7	Cable Diameter	[mm]	78
14.5.8	No of Shackles Port	[Pcs]	12
14.5.9	No of Shackles Starboard	[Pcs]	12
14.6	**TOWING EQUIPMENT**		
14.6.1	Is Ship fitted with a Towing Bracket AFT(drum)	[Yes/No]	YES
14.6.2	If Yes, state SWL	[ton]	200
14.6.3	Is Towing Chain provided	[Yes/No]	YES
14.6.4	**Dimensions of Towing Wire – Diameter**	[mm]	57
14.6.5	Length	[m]	86
14.7	**Windage on Ballast Draught**		
14.7.1	End-on	[m2]	976
14.7.2	Lateral	[m2]	3360

Mooring diagram is provided in the appendix.

1.15 NAVIGATIONAL EQUIPMENT

A15	NAVIGATIONAL EQUIPMENT	UNIT	CLIPPER NEPTUN
15.1	Magnetic Compass	[Yes/No]	YES
15.2	Off Course Alarm – Magnetic	[Yes/No]	YES
15.3	**Gyro Compass**	[Yes/No]	YES
15.3.1	Specify number	[Pcs]	2
15.4	Off Course Alarm – Gyro	[Yes/No]	YES
15.5	**Bridge Repeaters**	[Yes/No]	YES
15.5.1	Specify Number	[Pcs]	2
15.6	Radar 3 GHz	[Yes/No]	YES
15.7	Radar 9 GHz	[Yes/No]	YES
15.8	Are Radars Gyro Stabilized	[Yes/No]	YES
15.9	Radar Plotting Equipment	[Yes/No]	YES
15.10	ARPA	[Yes/No]	YES
15.11	ECDIS (Electric Display and Information System)	[Yes/No]	YES
15.11.1	Make/Type	[Text]	Kongsberg
15.12	Depth Echo Sounder with Recorder	[Yes/No]	YES
15.13	Depth Echo Sounder without Recorder	[Yes/No]	NO
15.14	Speed/Distance Indicator	[Yes/No]	YES
15.15	Doppler Log	[Yes/No]	YES
15.16	Speed of Approach Doppler	[Yes/No]	YES
15.17	Rudder Angle Indicator	[Yes/No]	YES
15.18	Rudder Angle Indicator on Each Bridge Wing	[Yes/No]	YES
15.19	R.P.M Indicator	[Yes/No]	YES
15.20	R.P.M Indicator on Each Bridge Wing	[Yes/No]	YES
15.21	Controllable Propeller Pitch Indicator	[Yes/No]	NO
15.22	Thruster (s) indicator	[Yes/No]	YES
15.23	Rate of turn Indicator	[Yes/No]	YES
15.24	Radio Direction Finder	[Yes/No]	NO
15.25	NAVTEX Receiver	[Yes/No]	YES
15.26	GPS	[Yes/No]	YES
15.27	Transit SATNAV	[Yes/No]	NO
15.28	DECCA navigator	[Yes/No]	NO
15.29	Omega	[Yes/No]	NO
15.30	Loran C	[Yes/No]	NO
15.31	Weather Route System	[Yes/No]	YES
15.32	Sextant(s)	[Yes/No]	YES
15.33	Signal Lamp ALDIS	[Yes/No]	YES
15.34	Anemometer	[Yes/No]	YES
15.35	Engine Order Recorder	[Yes/No]	YES
15.36	Course Recorder	[Yes/No]	YES
15.37	Steering motor controls controls fitted on bridge wings	[Yes/No]	YES
15.38	Is bridge Equipped with a “Dead Man” Alarm Equipment	[Yes/No]	YES
15.39	**What chart outfit coverage is provided**	[Yes/No]	
15.39.1	Worldwide	[Yes/No]	NO
15.39.2	Limited	[Yes/No]	NO
15.39.3	**If Limited Please Indicate**	[Text]	
15.40	Formal Chart Correction System in use	[Yes/No]	YES
15.41	Electronic Chart System in use	[Yes/No]	YES

1.16 COMMUNICATIONS EQUIPMENT

A16	COMMUNICATIONS EQUIPMENT	UNIT	CLIPPER NEPTUN
16.1	Main Transmitted Including Radio Telephone Distress Frequency	[Yes/No]	YES
16.2	Main Receiver Including Radio Telephone Distress Frequency	[Yes/No]	YES
16.3	Radio Telephone Distress Frequency Watch Receiver	[Yes/No]	YES
16.4	Main Radio Antenna	[Yes/No]	YES
16.5	Reserve Radio Antenna	[Yes/No]	NO
16.6	Main and Reserve Installations Electrically Separate and Independent	[Yes/No]	YES
16.7	2182 kHz Bridge auto Alarm	[Yes/No]	YES
16.8	Alarm Signal Generating Device	[Yes/No]	YES
16.9	**VHF Radio (s)**	[Yes/No]	YES
16.9.1	Specify Number	[Pcs]	3
16.10	**Portable VHF/UHF Radios**	[Yes/No]	YES
16.10.1	Specify Type and Number	[Pcs]	3 Entel HT 649
16.11	Are Sets Intrinsically Safe	[Yes/No]	YES
16.12	Inmarsat Satellite System	[Yes/No]	YES
16.13	Specify System Type A, B, C, F or VSAT	[Text]	C, F, VSAT
16.14	Is the ship equipped as per GMDSS Requirements	[Yes/No]	YES
16.15	**If Yes, which area of operation is vessel certified to operate in**	[Text]	A1, A2, A3
16.15.1	EPIRB	[Yes/No]	YES
16.15.2	SARTS	[Yes/No]	YES
16.16	Emergency Lifeboat Transceiver	[Yes/No]	(incl. EPIRB)
16.17	At least Three Survival craft Two-way Radio Telephone Apparatus	[Yes/No]	YES
16.18	Full Set of Publications	[Yes/No]	YES

2. SECTION B – CARGO SYSTEMS

SOLVANG ASA

2.1 GENERAL INFORMATION

B1	CARGO - GENERAL INFORMATION		CLIPPER NEPTUN
1.1	**List Products Which the Ship is Certified to Carry**		
1.1.1	1. Ammonia anhydrous		
1.1.2	2. Butadiene		
1.1.3	3. Butane		
1.1.4	4. Butane-propane		
1.1.5	5. Butylenes		
1.1.6	6. Propane		
1.1.7	7. Propylene		
1.1.8	8. VCM (Fill = 68.7 %)		
1.1.9	9.		
1.1.10	10.		
1.1.11	11.		
1.1.12	12.		
1.1.13	13.		
1.1.14	14.		
1.1.15	15.		
1.1.16	16.		
1.1.17	17.		
1.1.18	18.		
1.1.19	19.		
1.1.20	20.		
1.1.21	21.		
1.1.22	22.		
1.1.23	23.		
1.1.24	24.		
1.2	**Transport and Carriage Condition**	UNIT	
1.3	Minimum Allowable Tank Temperature	[Celsius]	-50
1.3.1	Maximum Allowable Tank Pressure (Seagoing setting)	[bar g]	0,275
1.3.2	Maximum Allowable Tank Pressure (Harbour setting)	[bar g]	0,4
1.4	Grades which can be Loaded or Discharged Simultaneously	[Pcs]	2
1.5	Grades which can be Transported Simultaneously	[Pcs]	2
1.6	Number of Products Re-liquefied Simultaneously	[Pcs]	2
1.7	**State Natural Tank Segregations (Possible combinations)**	UNIT	
1.7.1	1.	[Tank]	1+3 & 2+4
1.7.2	2.	[Tank]	2 & 1+3+4
1.7.3	3.	[Tank]	1+2+3+4

2.2 CARGO TANKS

B2	CARGO TANKS	UNIT	CLIPPER NEPTUN
2.1	**Cargo Tanks**		
2.1.1	Type	[Text]	NV 4-4-MOD23
2.1.2	Material	[Text]	Carbon Manganese LT
2.2	Maximum Allowable Relief Valve setting	[bar g]	0,4
2.3	Safety Valve Set Pressure – If Variable Give Range of Pilot Valves		
2.3.1	Seagoing setting	[bar g]	0,275
2.3.2	Harbour setting	[bar g]	0,4
2.4	Maximum Vacuum	[bar g]	-0,05
2.5	Maximum Cargo Density (98% full)	[kg/m3]	690
2.6	Maximum Rate of Cool-Down	[C/h]	10

2.7	State any Limitations regarding Partially Filled Tanks	[Text]	VCM=68,7%
2.7.1	Cont.	[Text]	
2.8	State Allowable Combinations of Filled and Empty Tanks	[Text]	
2.8.1	Cont.	[Text]	

2.3 CARGO TANK CAPACITIES

B3	CARGO TANK CAPACITIES	UNIT	CLIPPER NEPTUN				
3.1	Capacity	Tank	1	2	3	4	Total
3.1.1	100 %	[m3]	13802	15694	15694	15074	60264
3.1.2	98 %	[m3]	13526	15380	15380	14773	59058
3.2	**Cargo**						
3.2.1	iso-butane	[ton]	8034	9136	9136	8775	35081
3.2.2	Propane	[ton]	7845	8920	8920	8568	34254
3.2.3	Butadiene	[ton]	8805	10012	10012	9617	38447
3.2.4	Propylene	[ton]	8251	9382	9382	9011	36026
3.2.5	Ammonia	[ton]	9198	10458	10458	10045	40160
3.2.6	Butylene/Butenes	[ton]	8034	9136	9136	8775	35081
3.2.7	n-butane	[ton]	8129	9243	9243	8878	35494
3.2.8	Ethylene	[ton]					

- **Cargoes may not be applicable for vessel. Check which cargoes the vessel is certified to carry.**

2.4 LOADING RATES

VR = Vapour Return, W/O VPR = Without Vapour Return

			CLIPPER NEPTUN			
B4	**LOADING RATES**	**UNIT**	**REFRIGERATED**		**PRESSURE**	
4.1	**Cargo**	**[m3/h]**	**VR**	**W/O VR**	**VR**	**W/O VR**
4.1.1	1 Propylene	[m3/h]	2400	2400		
4.1.2	2 Propane	[m3/h]	2300	2300		
4.1.3	3 Ammonia	[m3/h]	2700	2700		
4.1.4	4 Iso butane (0°C)	[m3/h]				400
4.1.5	5 Propane (0°C)	[m3/h]				50
4.1.6	6 Propane (10°C)	[m3/h]				40
4.1.7	7 Propane (20°C)	[m3/h]				30
4.1.8	8 Propane (30°C)	[m3/h]				20
4.1.9	9	[m3/h]				
4.1.10	10	[m3/h]				
4.1.11	11	[m3/h]				
4.1.12	12	[m3/h]				
4.1.13	13	[m3/h]				
4.1.14	14	[m3/h]				
4.1.15	15	[m3/h]				
4.1.16	16	[m3/h]				
4.1.17	17	[m3/h]				
4.1.18	18	[m3/h]				
4.1.19	19	[m3/h]				
4.1.20	20	[m3/h]				

2.5 DISCHARGING – GENERAL

Pumping curves for cargo main pumps and booster pumps are given in the appendix.

B5	DISCHARGING – GENERAL	UNIT	CLIPPER NEPTUN
5.1	**Cargo Pumps**	[Text]	Deepwell
5.1.1	Type of Pumps	[Text]	Centrifugal
5.1.2	Number per Tank	[Pcs]	2
5.1.3	Rate (per pump)	[m3/h]	500
5.1.4	Delivery Head	[mlc]	130
5.1.5	Maximum Density	[kg/m3]	970
5.2	**Booster Pumps**		
5.2.1	Type of Pumps	[Text]	Centrifugal, Horizontal
5.2.2	Number	[Pcs]	2
5.2.3	Rate (per pump)	[m3/h]	500
5.2.4	Delivery Head	[mlc]	125
5.2.5	Maximum Density	[kg/m3]	690

2.6 DISCHARGE PRESSURE

B6	DISCHARGE PERFORMANCE	UNIT	CLIPPER NEPTUN	
6.1	**Fully Refrigerated, Full Cargo Discharge Times (all pumps):**		**VR**	**W/O VR**
6.1.1	Manifold Back Pressure (1 kg/cm2) x	[h]	15	15
6.1.2	Manifold Back Pressure (5 kg/cm2) x	[h]	16	16
6.1.3	Manifold Back Pressure (10 kg/cm2) x	[h]	60	60
6.2	**Pressurized, Full Cargo Discharge Times (all pumps):**		**VR**	**W/O VR**
6.2.1	Manifold Back Pressure (1 kg/cm2) x	[h]		
6.2.2	Manifold Back Pressure (5 kg/cm2) x	[h]		
6.2.3	Manifold Back Pressure (10 kg/cm2) x	[h]		

x = Based on largest single tank volume
^ = Based on discharging tanks one at a time

2.7 UNPUMPABLES

B7	UNPUMPABLES	UNIT	CLIPPER NEPTUN
7.1	**Unpumpables, liquid**		
7.1.1	Tank 1	[m3]	17
7.1.2	Tank 2	[m3]	18
7.1.3	Tank 3	[m3]	18
7.1.4	Tank 4	[m3]	17
7.1.5	Total	[m3]	70

2.8 VAPORISING UNMPUMPABLES

B8	VAPORISING UNPUMPABLES	UNIT	CLIPPER NEPTUN
8.1	Process Used	[Text]	Hot Gas / Puddle heating
8.2	**Time to Vaporize Liquid Unpumpables After Discharge:**		
8.2.1	Propane	[h]	24
8.2.2	iso-Butane	[h]	24
8.2.3	n-Butane	[h]	26
8.2.4	Ammonia	[h]	52
8.2.5		[h]	

2.9 RELIQUEFACTION PLANT

B9	RELIQUEFCATION PLANT	UNIT	CLIPPER NEPTUN
9.1	**Plant Design Conditions**		
9.1.1	Air Temperature	[°C]	45
9.1.2	Sea Temperature	[°C]	32
9.2	**Plant Type**		
9.2.1	Single Stage/Direct	[Yes/No]	YES
9.2.2	Two Stage / Direct	[Yes/No]	YES
9.2.3	Three Stage / Direct	[Yes/No]	No
9.2.4	Coolant Type	[Text]	Seawater
9.3	**Compressors**		
9.3.1	Type	[Text]	Sulzer + Burckhardt
9.3.2	Model	[Text]	2K 160-2F
9.3.3	Number	[Psc]	4
9.3.4	Capacity (per unit)	[m3/h]	Varies
9.3.5	Are they oil free?	[Yes/No]	YES

2.10 COOLING CAPACITY

B10	COOLING CAPACITY	UNIT	CLIPPER NEPTUN	
10.1	**State Cooling Capacity** (per compressor, 2-stage @ - 0.4 bar g)		**SW 36 [°C]**	**SW 15 [°C]**
10.1.1	1 Propane @ -42 [°C]	[kcal/h]	250000	
10.1.2	2 Com. Propane (5 mol.% ethane) @ -42 [°C]	[kcal/h]	245000	
10.1.3	3 Propane @ -20 [°C]	[kcal/h]		
10.1.4	4 Propane @ -5 [°C]	[kcal/h]		
10.1.5	5 Iso-Butane @ -5 [°C]	[kcal/h]	325000	
10.1.6	6 Ammonia @ -33 [°C]	[kcal/h]	390000	
10.1.7	7 VCM @ -11[°C]	[kcal/h]	350000	

2.11 CARGO TEMP. LOWERING CAPABILITY

B11	CARGO TEMPERATURE LOWERING CAPIBILITY	UNIT	CLIPPER NEPTUN
11.0	**Time taken to lower the temp of:**		
11.1	Propane from ...0 [°C] to -42 [°C]	[h]	
11.2	-5[°C]to -42[°C]	[h]	
11.3	-38[°C] to -42[°C]	[h]	113
11.4	+20[°C] to -42[°C]	[h]	
11.5	+10[°C] to -42[°C]	[h]	
11.6	Iso-Butane from +20[°C] to -0.5[°C]	[h]	
11.7	+10[°C] to -0.5[°C]	[h]	
11.8	+10[°C] to -5[°C]	[h]	
11.9	-5[°C] to -12[°C]	[h]	66
11.10	Ammonia from -30[°C] to -33[°C]	[h]	122
11.11	Propylene from -42[°C] to -47[°C]	[h]	54

2.12 INERT GAS

B12	INERT GAS	UNIT	CLIPPER NEPTUN
12.1	**Main IG Plant**		
12.1.1	Type of System	[Text]	
12.1.2	Capacity	[m3/h]	5500
12.1.3	Type of Fuel Used	[Text]	MDO
12.1.4	**Composition of I.G.**		
12.1.5	Max O2	[%]	0,5
12.1.6	Max CO2	[%]	14
12.1.7	Max Nox	[%]	Traces
12.1.8	Max N2	[%]	Balance
12.2	Lowest Dewpoint Achievable	[°C]	-40
12.3	Used for	[Text]	Inerting/purging
12.4	**Auxiliary IG or Nitrogen Plant**		Unitor Marine Systems
12.4.1	Type of System	[Text]	Nitrogen Generator
12.4.2	Capacity	[m3/h]	6
12.5	Lowest Dewpoint Achievable	[°C]	-70
12.6	Used for	[Text]	Inerting/purging
12.7	**Nitrogen generator installed?**	[Yes/No]	NO
12.7.1	Liquid storage Capacity	[m3]	N/A
12.7.2	Daily Boil-Off Loss	[m3]	N/A
12.7.3	Maximum Supply Pressure	[Bar]	N/A
12.7.4	Supply Capacity	[m3/h]	N/A
12.7.5	Used For	[Text]	N/A
12.7.6	HP Nitrogen	[Nm3]	N/A

2.13 CARGO TANK INTERTING/DE-INERTING

B13	CARGO TANK INERTING/DE-INERTING	UNIT	CLIPPER NEPTUN
13.1	Time Taken From Fresh Air to Under 5% O2 at –25oC Dewpoint	[h]	33
13.2	Time taken from cargo Vapor to Fully Inert at – 25oC Dewpoint when:		
13.2.1	IG density less than product	[h]	N/A
13.2.2	IG density greater than product	[h]	33

2.14 GAS FREEING TO FRESH AIR

B14	GAS FREEING TO FRESH AIR	UNIT	CLIPPER NEPTUN
14.1	Plant Used	[Text]	IGG Plant – Dry Air
14.1.1	Number of fans	[Pcs]	4
14.1.2	Total capacity	[m3/h]	40000
14.2	Time taken from Fully Inert Condition to Fully Breathable Air	[h]	5(33)

2.15 CHANGING CARGO GRADES

The table below show the number of hours needed to change grades from the removal of unpumpables to tanks fit to load. The quantity of inert gas consumed during the operation is also indicated.

B15	CHANGING CARGO GRADES	UNIT	CLIPPER NEPTUN	
15.1	From propane to:		[h]	[m3]
15.1.1	Iso-butane	[COL]	24/0	
15.1.2	Ammonia	[COL]	90	180000
15.2	From Iso-butane to:		[h]	[m3]
15.2.1	Propane	[COL]	24/0	
15.2.2	Ammonia	[COL]	90	180000
15.3	From ammonia to:		[h]	[m3]
15.3.1	Propane	[COL]	120	180000
15.3.2	Iso-butane	[COL]	120	180000

2.16 DECK TANK CAPACTITIES

B16	DECK TANK CAPACITITIES	UNIT	CLIPPER NEPTUN
16.1	Deck tank	[Yes/No]	Yes
16.2	**Deck tank capacities**		
16.2.1	1 Propane	[ton]	285
16.2.2	2 Ammonia	[ton]	334
16.2.3	3 Ethylene	[ton]	
16.3	Maximum Allowable Relief Valve Setting	[bar g]	18,2
16.4	Lowest Permissible Temperature	[°C]	-50
16.5	Materials	[Text]	Carbon Manganese

2.17 PRE-LOADING CONDITIONS

The table below indicates time and quantity of coolant required to cool down cargo tanks from ambient temperature and fully gassed up state sufficient to allow loading to commence.

B17	PRE-LOADING CONDITIONS	UNIT	CLIPPER NEPTUN		
17.1	**Product**		Quantity [ton]	VPR [h]	W/O VPR [h]
17.1.1	Propane	[COL]	200	24	24
17.1.2	Butane	[COL]	200	24	24
17.1.3	Butadiene	[COL]	200	24	24
17.1.4	Propylene	[COL]			
17.1.5	Ammonia	[COL]			
17.1.6	VCM	[COL]			

2.18 VAPORISER

B18	VAPORISER	UNIT	CLIPPER NEPTUN
18.1	Type of Vaporizer	[Text]	Shell and tube
18.2	Number Fitted	[Pcs]	1
18.3	Capacity (per unit) – Propane	[Nm3/h]	4000
18.3.1	Liquid Supply rate	[m3/h]	14,11
18.3.2	Delivery temperature	[°C]	
18.4	Capacity (per unit) – Ammonia	[Nm3/h]	4000
18.4.1	Liquid Supply rate	[m3/h]	4,57
18.4.2	Delivery temperature	[°C]	
18.5		[Nm3/h]	
18.5.1		[m3/h]	
18.5.2		[°C]	

2.19 BLOWER

B19	BLOWER	UNIT	CLIPPER NEPTUN
19.1	Type of Blower	[Text]	High pressure centrifugal fan
19.2	Number fitted	[Pcs]	4
19.3	Rated Capacity (per unit)	[Nm3/h]	10000
19.4	Delivery Pressure	[Bar]	0,12

2.20 CARGO RE-HEATER

Cargo re-heater capacities are given in the appendix.

B20	CARGO RE-HEATER	UNIT	CLIPPER NEPTUN
20.1	Type of re-heater	[Text]	Shell/tube
20.2	Number Fitted	[Pcs]	1
20.3	Heating Medium	[Medium]	Seawater
20.4	**Discharge rates, SW = 15[°C], to raise product temperature:**		
20.4.1	Propane from –42[°C] to 0[°C]	[ton/h]	260
20.4.2	Ammonia from –33[°C] to 0[°C]	[ton/h]	235
20.5	Cargo Heater Curve:	[Yes/No]	YES

2.21 HYDRATE CONTROL

B21	HYDRATE CONTROL	UNIT	CLIPPER NEPTUN
21.1	Type of Depressant	[Medium]	Ethanol
21.2	Depressant Freezing Point Temperature	[°C]	-114
21.3	Max capacity of depressant	[Liter]	2000
21.4	Means of Injection	[Text]	Hand pump
21.5	Any other system used	[Text]	Hot gas

2.22 CARGO MEASUREMENT

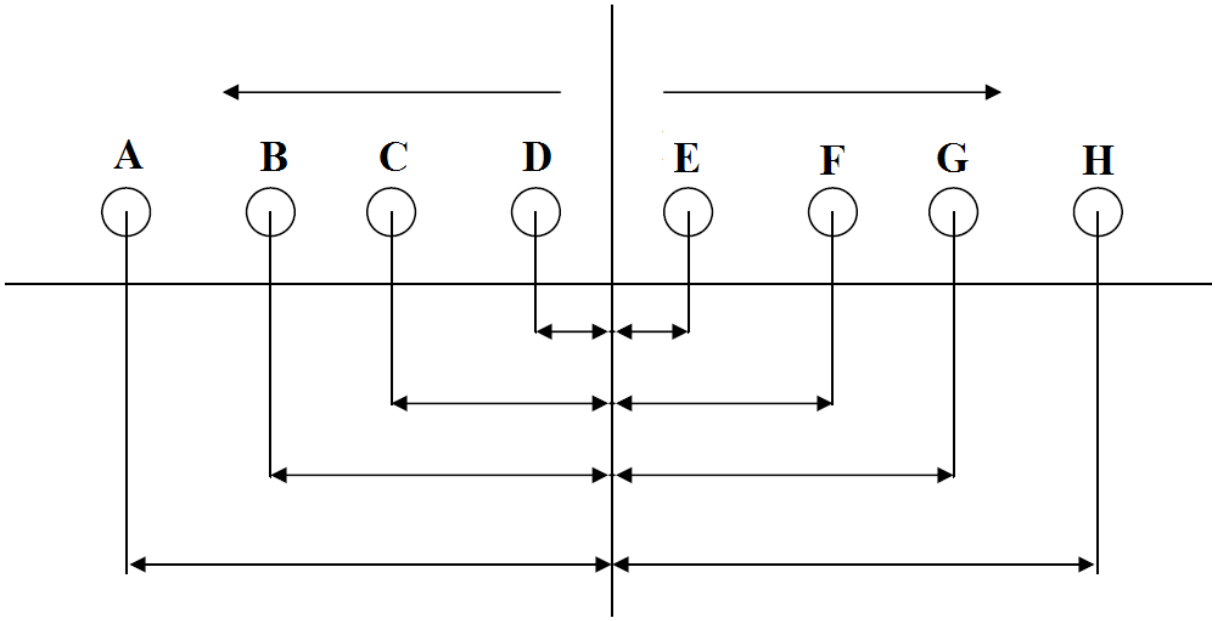
B22	CARGO MEASUREMENT	UNIT	CLIPPER NEPTUN
22.1	**Level Gauges**		
22.1.1	Are level gauges Local or Remote	[Text]	Both
22.1.2	Manufacturer	[Text]	HENRI
22.1.3	Type	[Text]	Float
22.1.4	Rated Accuracy	[-]	± 5 mm
22.1.5	Certifying Authority	[Text]	DNV
22.2	**Temperature Transmitter**		
22.2.1	Manufacturer	[Text]	ABB
22.2.2	Type	[Text]	Electronic
22.2.3	Rated Accuracy	[-]	±0.02 %
22.2.4	Certifying Authority	[Text]	Intertek Caleb Brett – Kimsco
22.3	**Pressure Transmitter**		
22.3.1	Manufacturer	[Text]	ABB
22.3.2	Type	[Text]	Electronic
22.3.3	Rated Accuracy	[-]	± 0.075 %
22.3.4	Certifying Authority	[Text]	Intertek Caleb Brett – Kimsco
22.4	**Oxygen Analyzer**		

22.4.1	Manufacturer	[Text]	Riken
22.4.2	Type	[Text]	RX 415OX
22.4.3	Lowest Level Measurable		
22.5	**Fixed Gas Analyzer**		
22.5.1	Manufacturer	[Text]	Consilium
22.5.2	Type	[Text]	Salwico SW2020 (sampling)
22.6	**Cargo Tank Calibration Tables**		
22.6.1	Are Cargo Tank Calibration tables available	[Yes/No]	YES
22.6.2	Measuring Company	[Text]	Intertek Caleb Brett – Kimsco
22.6.3	Certifying Authority	[Text]	Intertek Caleb Brett – Kimsco
22.6.4	Calibration calculated to .....cm ½ cm.....	[Yes/No]	YES
22.6.5	Tables established to .....cm .....cm.....mm	[Yes/No]	
22.6.6	Trim and List corrections Available	[YES/NO]	YES
22.6.7	Temperature Corrections available	[YES/NO]	YES
22.6.8	Float Gauge Tape Corrections Available	[YES/NO]	YES

2.23 CARGO SAMPLING

B23	CARGO SAMPLING	UNIT	CLIPPER NEPTUN			
23.1	Cargo tank sample level	[Tank]	1	2	3	4
23.1.1	Top	[Yes/No]	Yes	Yes	Yes	Yes
23.1.2	Middle	[Yes/No]	Yes	Yes	Yes	Yes
23.1.3	Bottom	[Yes/No]	Yes	Yes	Yes	Yes
23.2	**Can sample be drawn from?**					
23.2.1	Tank Vapor Outlet	[Yes/No]	YES			
23.2.2	Manifold Liquid Line	[Yes/No]	YES			
23.2.3	Manifold Vapor Line	[Yes/No]	YES			
23.2.4	Pump Discharge Line	[Yes/No]	YES			
23.3	**State connection**					
23.3.1	Type	[Text]	Female, double valve			
23.3.2	Size	[Inch]	0,5			

2.24 CARGO MANIFOLD



B24	CARGO MANIFOLD	UNIT	CLIPPER NEPTUN			
24.1	Distance from center of manifold to:					
24.1.1	Stern	[m]	103,2			
24.1.2	Bow	[m]	101,7			
24.1.3	A	[mm]	5950			
24.1.4	B	[mm]	5450			
24.1.5	C	[mm]	3450			
24.1.6	D	[mm]	1150			
24.1.7	E	[mm]	1150			
24.1.8	F	[mm]	3450			
24.1.9	G	[mm]	5450			
24.1.10	H	[mm]				
24.2	Flange		Duty [Bar]	ASA	Size ["]	[R]aised/[F]lat
24.2.1	A	[COL]	Diesel Oil	150	4	F
24.2.2	B	[COL]	Fuel Oil	150	8	F
24.2.3	C	[COL]	Cargo Liquid	300	14	R
24.2.4	D	[COL]	Cargo Vapor	150	10	R
24.2.5	E	[COL]	Cargo Vapor	150	10	R
24.2.6	F	[COL]	Cargo Liquid	300	14	R
24.2.7	G	[COL]	Fuel Oil	150	8	F
24.2.8	H	[COL]				
24.3	Height above uppermost continuous deck	[mm]	1500			
24.4	Distance from ship side	[mm]	3125			
24.5	Height above load waterline	[mm]	8700			
24.6	Height above light waterline	[mm]	13600			

2.25 CARGO REDUCERS

B25	CARGO REDUCERS	CLIPPER NEPTUN
25.0	**ANSI 300**	**ANSI 300 -150**
25.1	2 off 14"NB 300# ´ 16"NB 300#	2 off 14"NB 300# ´ 16"NB 150#
25.2	2 off 14"NB 300# ´ 12"NB 300#	2 off 14"NB 300# ´ 12"NB 150#
25.3	2 off 14"NB 300# ´ 10"NB 300#	2 off 14"NB 300# ´ 10"NB 150#
25.4	2 off 14"NB 300# ´ 8"NB 300#	2 off 14"NB 300# ´ 8"NB 150#
25.5	1 off 14"NB 300# ´ 6"NB 300#	
25.6		
25.7		
25.8		
25.9		
25.0	**ANSI 150**	**FUEL**
25.1	2 off 10"NB 150# ´ 12"NB 150#	1 off 12"NB 150# ´ 8"NB 150#
25.2	2 off 10"NB 150# ´ 10"NB 150#	1 off 10"NB 150# ´ 8"NB 150#
25.3	2 off 10"NB 150# ´ 8"NB 150#	1 off 8"NB 150# ´ 8"NB 150#
25.4	2 off 10"NB 150# ´ 6"NB 150#	1 off 8"NB 150# ´ 6"NB 150#
25.5		
25.6		
25.7		
25.8		
25.9		

2.26 CONNECTION TO SHORE FOR ESD/COM SYSTEMS

B26	CONNECTIONS TO SHORE FOR ESD AND COM. SYSTEMS	UNIT	CLIPPER NEPTUN
26.1	Is ESD connection to Shore available?	[Yes/No]	YES
26.1.1	System	[Text]	Electric
26.1.2	Type of plug	[Text]	Eletric
26.3	Is Hose or cables Available on Board	[Yes/No]	YES
26.3.1	Specify Length	[m]	30
26.3.2	Specify type	[Text]	Electric

2.27 MANIFOLD DERRICK/CRANE

B27	MANIFOLD DERRICK/CRANE	UNIT	CLIPPER NEPTUN
27.1	Is Manifold Derrick Provided?	[Yes/No]	NO
27.2	Is Manifold Crane Provided?	[Yes/No]	YES
27.3	Is Lifting equipment Same P&SB?	[Yes/No]	YES
27.3.1	If NO, give details	[Text]	
27.3.2	Maximum outreach	[m]	21
27.3.3	Capacity at max. Outreach	[ton]	7,5

2.28 STORES HANDLING

B28	STORES HANDLING	UNIT	CLIPPER NEPTUN
28.1	Number of cranes	[Pcs]	2
28.1.1	Location(s)	[Text]	Aft bridge deck, STB&P

3. ADDITIONAL INFORMATION

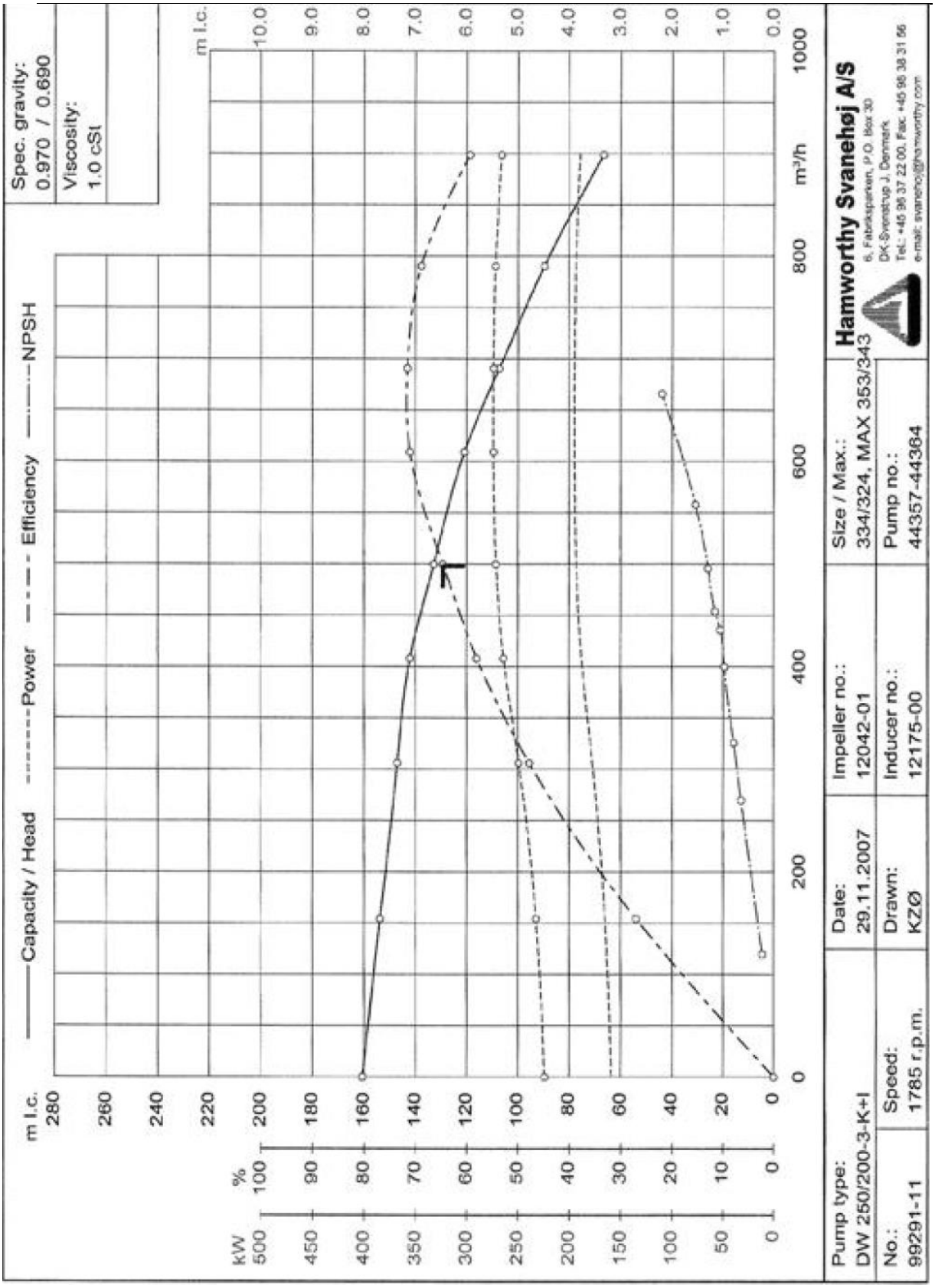
3.1 GENERAL

CODE	C1 NOx factor	UNIT	CLIPPER NEPTUN
1.1.0	**Main engine**		
1.1.1	Power	[kW]	10150
1.1.2	RPM	[RPM]	98
1.1.3	NOx limit	[g/kWh]	17
1.1.4	NOx factor	[g/kWh]	11,7
1.1.5	EIAPP	[Ref]	EIAPP-728-2-A
1.1.6	Issued	[Date]	19.06.2008
1.2.0	**Auxiliary engine 1**		
1.2.1	Power	[kW]	1280
1.2.2	RPM	[RPM]	720
1.2.3	NOx limit	[g/kWh]	12,1
1.2.4	NOx factor	[g/kWh]	11,1
1.2.5	EIAPP	[Ref]	EIAPP-731-4-A
1.2.6	Issued	[Date]	13.04.2013
1.3.0	**Auxiliary engine 2**		
1.3.1	Power	[kW]	1280
1.3.2	RPM	[RPM]	720
1.3.3	NOx limit	[g/kWh]	12,1
1.3.4	NOx factor	[g/kWh]	11,1
1.3.5	EIAPP	[Ref]	EIAPP-731-5-A
1.3.6	Issued	[Date]	13.04.2013
1.4.0	**Auxiliary engine 3**		
1.4.1	Power	[kW]	1280
1.4.2	RPM	[RPM]	720
1.4.3	NOx limit	[g/kWh]	12,1
1.4.4	NOx factor	[g/kWh]	11,1
1.4.5	EIAPP	[Ref]	EIAPP-731-6-A
1.4.6	Issued	[Date]	13.04.2013
1.5.0	**Auxiliary engine 4**		
1.5.1	Power	[kW]	
1.5.2	RPM	[RPM]	
1.5.3	NOx limit	[g/kWh]	
1.5.4	NOx factor	[g/kWh]	
1.5.5	EIAPP	[Ref]	
1.5.6	Issued	[Date]	
CODE	**C2 EGCS/SCRUBBER**	**UNIT**	**CLIPPER NEPTUN**
2.1.0	**Main engine**		
2.1.1	Scrubber installed	[Yes/No]	NO
2.1.2	Maker	[Text]	N/A
2.1.3	Type	[Text]	N/A
2.1.4	VGP compliant	[Yes/No]	N/A
2.2.0	**Auxiliary engines**		
2.2.1	Scrubber installed	[Yes/No]	NO
2.2.2	Maker	[Text]	N/A
2.2.3	Type	[Text]	N/A
2.2.4	VGP compliant	[Yes/No]	N/A
CODE	**C3 HEAT RECOVERY**	**UNIT**	**CLIPPER NEPTUN**
3.1.0	**Main engine**		
3.1.1	Economizer installed	[Yes/No]	YES
3.1.2	Type	[Text]	0
3.1.3	Capacity	[kW]	0
3.1.4	**Auxiliary engines**		
3.1.5	Economizer installed	[Yes/No]	NO
3.1.6	Type	[Text]	0
3.1.7	Capacity	[kW]	0
CODE	**C4 OTHER RELEVANT TECHNICAL INFORMATION**	**UNIT**	**CLIPPER NEPTUN**

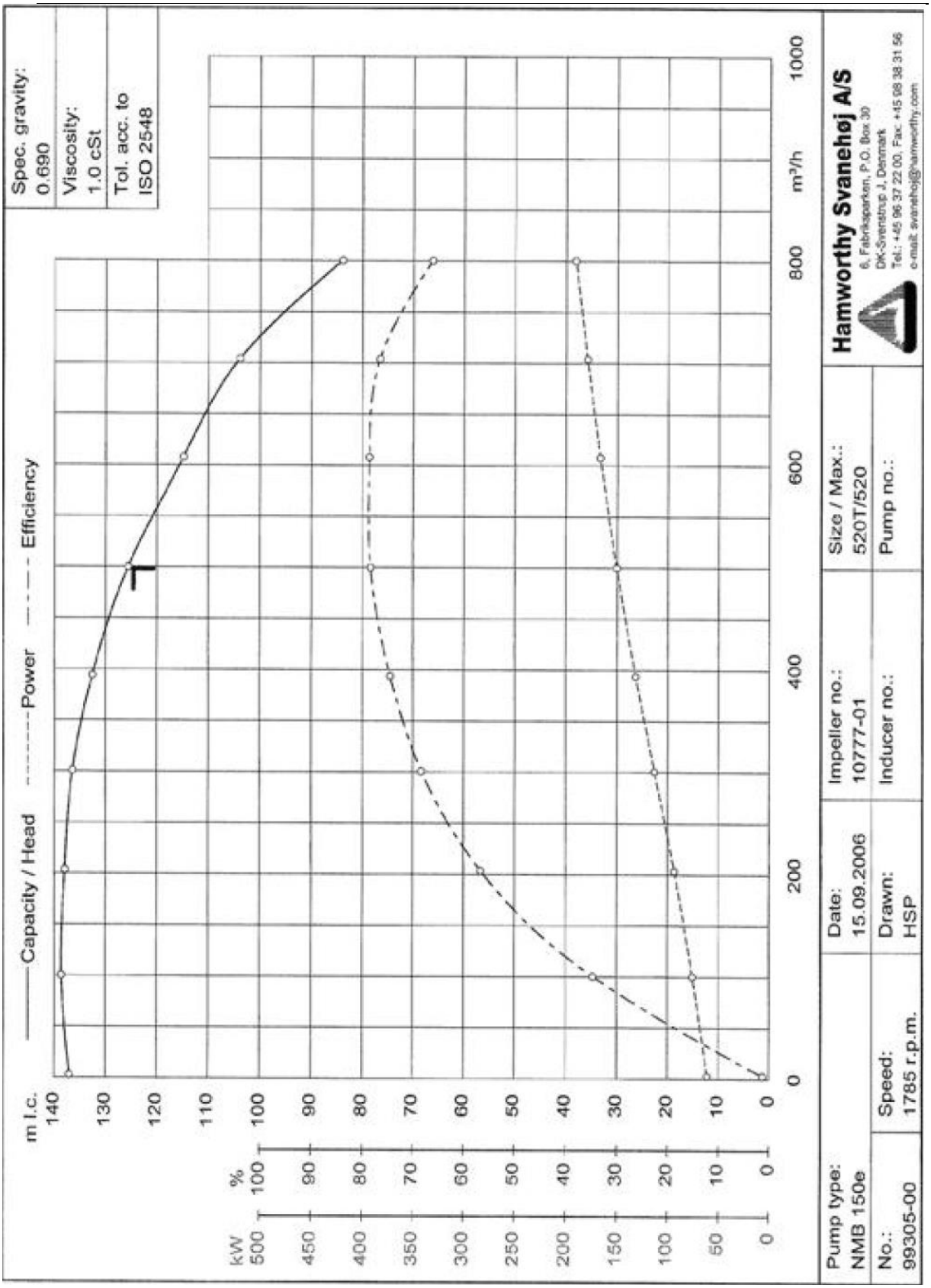
4.0	Rudder type	[Text]	Convential
4.0.1	Number of rudders	[Pcs]	1
4.1	Type of propeller	[Text]	Fixed propeller
4.1.1	Blades	[Pcs]	4
4.2	Mewis Duct	[Yes/No]	NO
CODE	**C5 ENVIRONMENTAL/PERFORMANCE TECHNOLOGIES INSTALLED**	**UNIT**	**CLIPPER NEPTUN**
5.0	EEDI (Energy Efficiency Design Index)	[-]	6,66
5.1	ESI (Environmental Ship Index) - not confirmed	[-]	22,78

4. APPENDIX/DRAWINGS

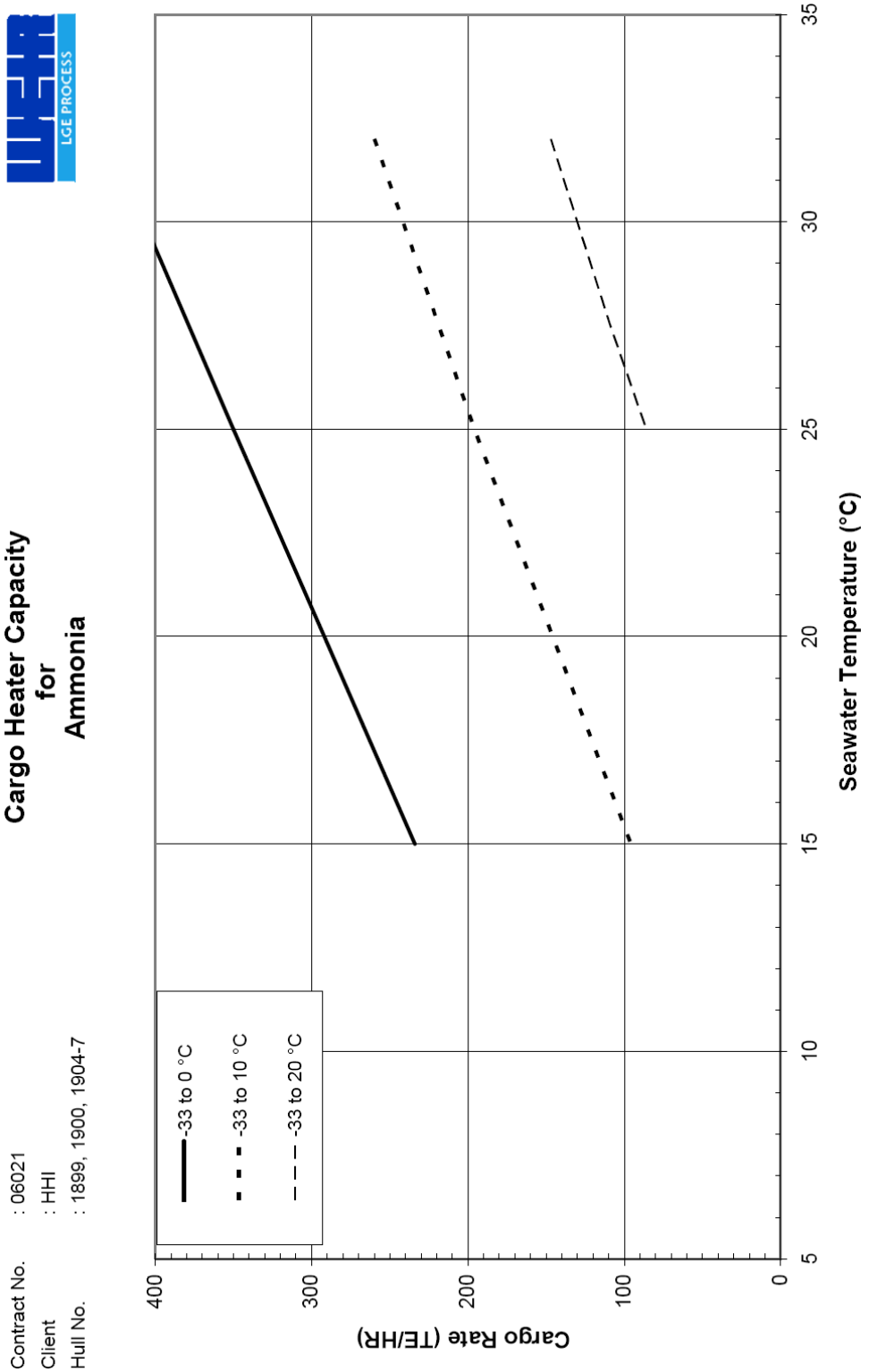
4.1 CARGO PUMPS



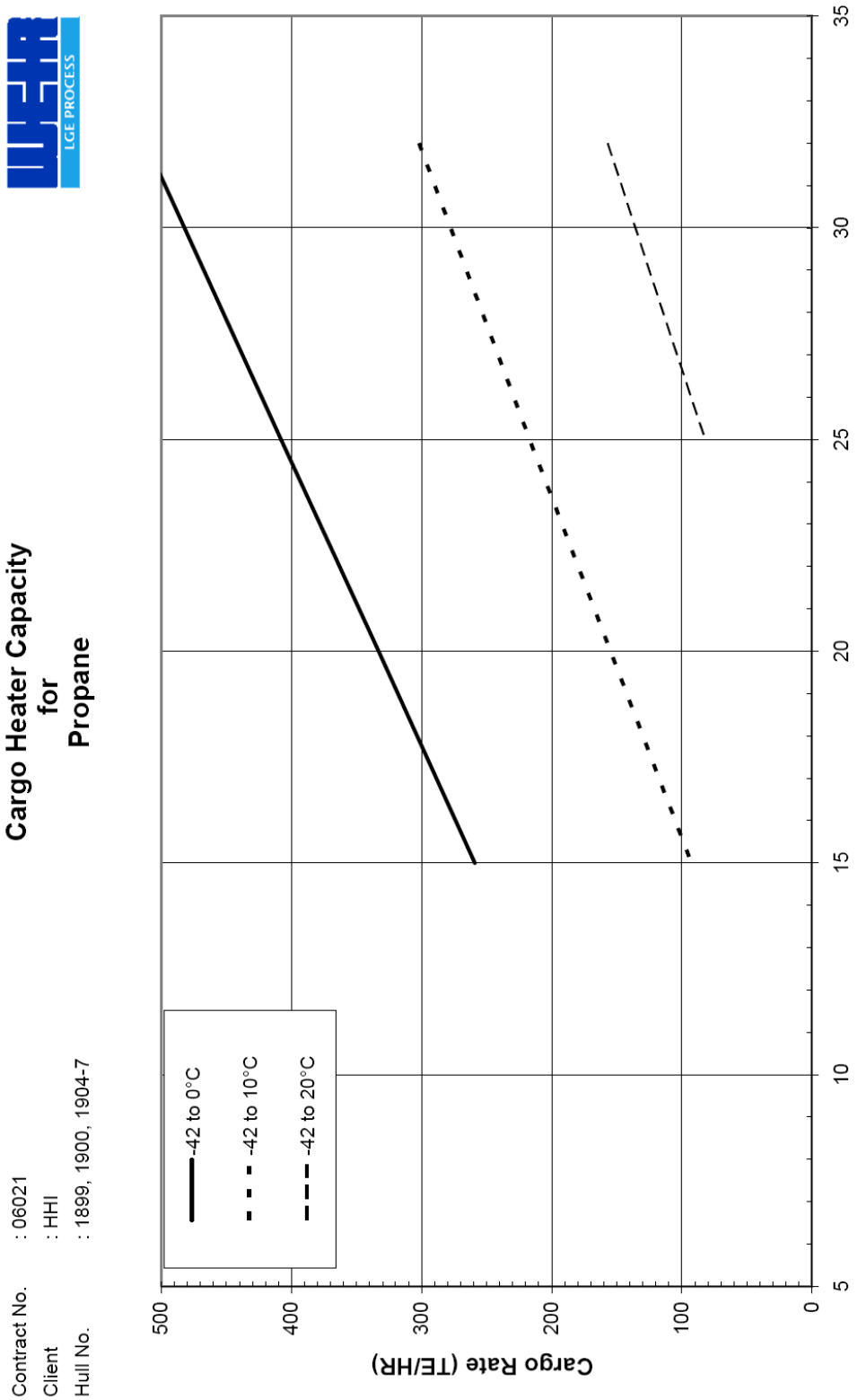
4.2 BOOSTER PUMPS



4.3 RE-HEATER CAPACITY, AMMONIA



4.4 RE-HEATER CAPACITY, PROPANE



4.5 MOORING DIAGRAM

The diagram below illustrates the position of Winch Mounted Wires (W) and Ropes (R) together with Open (O) and Closed (C) Fairleads. Indicate also the position of mooring Bitts (B)