

1. PREAMBLE

Ship's name	LPG/C VENTURE GAS
Owners	VENTURE GAS SHIPPING S.A
Flag – Registry	LIBERIA
Builder	1990 / KAWASAKI HEAVY INDUSTRIES
Delivery	28/06/1990
Class	NKK
IMO No.	8818207

GT (International)	42465
NT (International)	15521
GRT (Suez)	44359.27
NRT (Suez)	37291.81
GRT (Panama)	N/A
LWT (MT)	16430

Is vessel approved?	
USCG	NO
IMO	YES

2. HULL

	Metres	Feet
LOA	224.05	735.07
LBP	212.47	697.08
Breadth	36	118.1
Depth	20.70	67.91
Air draft (fm Summer LL)	37.34	122.48

	Draft (m)	Corresponding DWT
Tropical	11.248	51235T
Summer	11.019	49701T
Winter	10.79	48171T

TPC fully loaded (MT)	66.90T

Estimated Mean draft with full bunkers and 98% cargo & full bunkers			
Cargo	Mean draft (m)	DWT	displacement
BUTANE	10.7M	47759.8	68880
PROPANE	10.48	46285.8	70040

3. COMMUNICATION EQUIPMENT

International call sign	D5QJ3
Radio station	JRC NDZ-227
Inmarsat F33	N/A
- Telephone FBB	+870 773309821
- Telephone	N/A
- Telefax	+870 783320640
- Telex	636018584 VENTURE X
Inmarsat C	463724934@stratosmobile.net
MMSI	636018584
Cell phone	N/A
E-Mail	master.venturegas@amosconnect.com

4. MACHINERY

Main Engine	
Maker/model	KAWASAKI MAN - B&W 5S70MCE
MCR	12400BHP AT 80 RPM 9120KW
Grade fuel used	380 CST AT 50°C

Auxiliaries Engines	
Type/Model	T 260L-ET
Maker	YANMAR DIESEL
Output(KW/RPM)	1000KW
Generator	3 UNIT
Grade fuel used	380 CST AT 50°C

2016

GAS FORM C**Speed**

Guarantee average loaded/ ballast speed (kt)	13KN
Draft at Guarantee average loaded/ ballast speed (m)	11.60m / 7.50m

Consumption

	Consumption at sea	Consumption at port
Main engine (IFO)	13 knts : 27.5T / 25.8T(Ballast)	NA
Aux. Engines (IFO)	6.0T	3.0 T
Number of A/E in use	2	1

MDO Consumption alongside in port	NA	NA
Inert Gas plant when operating	5T	
Boiler consumption (MT/day)	2T	

Permanent bunkers capacity (Excl. daily service tanks) @ 98%

HFO (MT)	2166.87
MDO (MT)	649.93

5. CARGO INSTALLATION

Re-liquefaction plant Type	2 STAGE DIRECT TYPE OIL FREE
Minimum temperature can maintain	-45C

Tank No.	Capacities		BUTANE 0.580 @ -3° C	PROPANE 0.5085 @ -41.0° C	Ethylene 0.5653 -101.5	NH3 0.682 @ -33.4 ° C	Butadiene 0.653 @ -5 °C
	100% M³	98% M³					
1	14980.878	14798.470	8850	8557	NA	NA	NA
2	20112.232	19856.224	11876	11481	NA	NA	NA
3	20135.912	19875.268	11895	11500	NA	NA	NA
4	19979.146	19718.458	11793	11402	NA	NA	NA
Total	75208.168	74248.420	44414	42940	NA	NA	NA

Carried Products

BUTANE (UN1011)
PROPANE (UN1978)
LPG MIX (UN1011 / 1978)

Cooling before loading

(for fully-refrigerated vessels what quantity of cargo is needed and which is the corresponding time to pre-cool the tanks and have them ready to load?)

NA	MT	Hrs
PROPANE	400	24 HRS.
BUTANE	400	20 HRS.

6. CARGO TANKS

Type	INDEPENDENT TANK TYPE A	
Material	CARBON MANGANESE STEEL	
MARVS	0.25 Kg/cm ²	
	-0.07 Kg/cm ²	
Maximum Vacuum	-0.07 Kg/cm ²	
Minimum pressure	0.02 Kg/cm ²	
Minimum temperature acceptable in tanks	-45C	
Maximum Specific Gravity	0.6050	
Maximum Loading rate – m ³ /hour	With vapour return: BUTANE:4000M3/HR – PROPANE:4000M3/HR Without vapour return: BUTANE: 3000M3/HR PROPANE: 1500M3/HR	
Number of deck tanks	N/A	

7. CARGO PUMPS

Number/Type	8 X 600 M3 / VERTICAL ELECTRIC MOTOR DRIVEN SUBMERGE CENTRIFUGAL FIXED TYPE	
Maker	SHINKO INDUSTRIES	
Location	AT AFT BOTTOM OF CARGO TANK	
Max permissible specific gravity	0.5791 @15 C	
Cargo remaining onboard in cargo tanks after total completion pumping	280 MT	
Cargo remaining onboard in cargo tanks (heel) after completion pumping	35 MT	
Total head when working in series with booster pump	120mlc	

Booster pumps (number/type)	1 / CENTRIFUGAL
Maker	HAMWORTHY SVANEHOJ (500m ³)

Stripping	
Stripping system	DRIVE BY MAIN CARGO PUMPS
Time required for all liquid cargo	126 HRS BY EDUCTOR

Loading Rates	
Loading rate (with vapour return) -BUTANE	4000T/H
Loading rate (with vapour return) – PROPANE*	4000T/H
Loading rate (without vapour return line) – PROPANE	1500T/H
Loading rate (without vapour return line) – BUTANE	3000T/H

(*)Note: for pressure or semi-refrigerated vessels using the cargo heater with sea temperature +15° C

Time for discharging full cargo using all pumps against no backpressure		
	With vapour return line (hours)	Without vapour return line (hours)
Discharging rate (atm)	17.5 HRS.	17.5 HRS.
Discharging rate (1 bar)	17.5 HRS.	17.5 HRS.
Discharging rate (5 bars)	22.0 HRS.	22.0 HRS.
Discharging rate (10 bars)	N/A	N/A

8. CARGO COMPRESSORS

Number/Type	4 /2K 160-2F
Maker/Model	SULZER BURCKHARDT
Total Swept volume	PROPANE = 1026m ³ /hr. 171700kCAL BUTANE = 1395m ³ /hr. 251100 kCAL
Can re-liquefy VCM	N/A

	Ethylene	Propane	Butane
Refrigeration Capacity	NA	1026 m ³ /hr 171700Kcal	1395 m ³ /hr 251100 kCAL
Suction pressure	NA	0.2	0.2

9. INERT GAS SYSTEM

Does the vessel use inert gas?	YES
Method	FLUE GAS
Maker	GADELIUS
Fuel used	MDO

Does the vessel produce inert gas?	YES
Type	NA
Daily production	5000 M3/HR

Composition of inert gas	
Carbon dioxide	ABT. 15 %
Oxygen max.	MAX 0.5 %
Carbon monoxide max.	MAX 1000 PPM
Hydrogen max.	MAX 1000 PPM
Nitrogen	BALANCE
Soot	0
Suphur oxides max.	MAX 50 PPM
Dewpoint	+5 °C - SATURATED AT SPECIFIED TEMP. / PRESS.

State if any shore supply of liquid nitrogen may be required	
May be required for pumping tanks prior to loading butadiene and ammonia	
What quantity?	N/A

10. GAS FREEING

Can this operation be carried out at sea?	YES
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State method incl. all details	
For LPG	PUDDLE HEATING / INERTING / AERATING
For NH ₃	N/A

Advise time required and consumption of inert gas if any	
From LPG about	108 HRS./ 100,000 m3
From NH ₃	N/A
Is the vessel equipped with inert gas blower?	YES
Capacity	5000 M3/HR

Ventilation fan

20000M3/H

11. CHANGING GRADE

Can this operation be carried out at sea?

YES

State method used and time required for charging from NH₃ to LPG and vice versa, to reach 50 ppm to previous cargo in tanks atmosphere, the tanks being dry and free of moisture (dewpoint plus 10° C)

From NH₃ to LPG

N/A

Time required

N/A

From NH₃ to LPG

N/A

Time required

N/A

Can vessel reduce in tank atmosphere and gas installation concentration of previous cargo below 50 ppm?

N/A

Method used, time required and extra shore supply if any

N/A

How can it be checked that no liquid gas remain onboard

Remote temperature sensor at tank bottom

12. CARGO HEATER

Cargo Heater

1

Maker

HAMWORTHY GAS SYSTEM

Type

SEAWATER TYPE TUBE DIRECT

Discharging rate for C3 & NH₃ to be brought fm atmospheric pressure to -5° C @ S.W 15° C

500M3/H

N/A

State discharging rate for propane with 2.5 mol % ethane to be brought from -44oC to -5oC at sea temperature of 15oC

500M3/H

13. CARGO VAPOURIZER

In case of need of vapour gas during discharge, can vessel produce its own if no shore gas available?

YES CARGO
VAPOURISER
EXISTING

14. REFRIGERATING APPARATUS

It is independent of cargo?	YES
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15. MEASURING APPARATUS

What gauges onboard	ELECTROMAGNETIC FLOAT TYPE
Location and type	CARGO CONTROL ROOM
Number of temperature sensors/gauges per tank	7 / 2
Number of pressure sensors/gauges on tank	3 / 3

16. SAMPLES

Where samples can be taken?	FROM TANK DOME SAMPLE POINT
Are sample bottles available onboard?	NO

17. CARGO LINES

Is vessel fitted with midship manifolds	YES
Number of lines on each side	4
Lines Configuration	V / L / L / V
Distance from cargo manifold to bow	115.95 M
Distance from manifold to stern	108.1 M
Height upper cargo manifold above main deck	1.7M
Height above Summer Draft mark	11.731 M
Height upper cargo manifold waterline when LWT	15.781 M
Height upper cargo manifold above waterline when in ballast	15.45 M
Distance manifold from ship's rail	2970 MM
Distance between liquid lines	2400 MM
Distance between vapour lines	7200 MM
Distance between loading and vapour return connections	2400 MM
Is vessel fitted with stern discharge	N/A
Is vessel fitted with fore discharge	N/A

Note: Above distances from center line of liquid and vapour crossovers

Dimension of lines		
	Diameter	Flange size
Liquid (P/S)	400mm	300mm
Vapour	300mm	200mm
Booster	N/A	N/A

What reducers onboard			
Number of reducer	Diameter	Length	Pressure rating
1	16 X 150 / 12 X 150		
1	16 X 300 / 12 X 300		
1	16 X 150 / 10 X 300		
2	14 X 150 / 12 X 150		
1	12 X 300 / 12 X 300		
1	12 X 300 / 12 X 150		
3	12 X 150 / 12 X 150		
1	12 X 300 / 10 X 300		
1	12 X 300 / 10 X 150		
2	12 X 150 / 10 X 150		
1	12 X 300 / 8 X 300		
6	12 X 150 / 8 X 150		
1	12 X 300 / 6 X 300		
1	12 X 300 / 6 X 150		
2	12 X 150 / 6 X 150		
2	10 X 150 / 8 X 150		
1	8 X 150 / 8 X 150		

18. LIFTING APPLIANCES

Where situated		MID SHIP CRANE
Number and lifting capacity		1 X 5T SWL
Max. distance from ship's side of lifting hook		4.5M

19. HOSES

For what products are hoses suitable				
Number	Length	Diameter	Working pressure	Flange
NA				
NA				

20. SPECIAL FACILITIES

How many grades can vessel segregate? 2 GRADES <i>(Tk2 & Tk4 must be of SAME GRADE)</i>	
Indicate systems	SYSTEM 1 / SYSTEM 2
Is vessel able to load/discharge two or more grades simultaneously?	YES / 2 GRADES
Can vessel sail with slack tanks?	YES
Is vessel fitted with purge tank?	NO