



## COMMUNICATION EQUIPMENT

Call letter	:	<b>9HA3359</b>
Radio Station normally watched	:	<b>GMDSS</b>
Radio MF/HF NBDP	:	<b>FITTED</b>
Radio MF/HFTEL/DSC	:	<b>FITTED</b>
VHF	:	<b>FITTED</b>
Satellite Communication	<b>Inmarsat 'C'</b>	<b>FITTED – TELEX: 42294 7210</b>
	<b>Inmarsat 'F'</b>	<b>FITTED - T EL : 764 8936 51 - 2</b>
		<b>F AX: 7648936 53</b>
		<b>Email : <a href="mailto:gaslegacy@stealth.gr">gaslegacy@stealth.gr</a></b>

## MACHINERY

<b>Main Engine x 1</b>	Type and make	<b>5UEC 33LSII &amp; AKASAKA MITSUBISHI</b>
	Service power	<b>3303 PS at 203 RPM</b>
	No of Cylinders	<b>5 CYLINDERS</b>
	Cyl Bore x Stroke	<b>330 mm x 1050 mm</b>
	Grade of fuel used	<b>HFO 380 CST</b>
<b>Auxiliaries</b>	Type and make (Electrical)	<b>TAIYO ELECT CO.,LTD 3 PHASE / 500 KVA /450V 1200 RPM / 60 Hz</b>
	(Mechanical)	<b>YANMAR DIESEL ENGINE CO.,LTD. S165 L – EN ; 400 KW – 1200 RPM</b>
	Grade of fuel used	<b>MGO</b>
	No off	<b>2</b>
<b>Emergency Gen</b>	Type	<b>YANMAR DIESEL CO.,LTD NF 19-HF , 13 BHP / 1800 RPM (AUTO)</b>
	No off	<b>1</b>
<b>Bow Thruster</b>	Type : Power:	<b>N/A</b>
<b>Boiler</b>	Type	<b>N/A</b>
	Evaporation	
	Max Design Pressure	
	Feed Water Temp	
	No off	
<b>Exhaust Economiser</b>	Type	<b>N/A</b>
	Evaporation	
	No off	
<b>Air Compressors (Main)</b>	Type / Capacity	<b>MATSUBARA IRON WORKS MH – 108 , 15 PS / 1150 RPM 25 Kg/CM2 (AUTO)</b>
	No off	
<b>Air Compressors (Emergency)</b>	Type	<b>YANMAR COMPRESSOR NC 2 , 30 KGF/CM2 (MANUAL)</b>
	No off	
<b>Fuel Oil Purifier</b>	Type	<b>MITSUBISHI KAKOKI KAISHA LTD. SJ – 10F (MANUAL)</b>
	No off	

	Capacity	<b>1900 L/H – 5.5 KW 9000 RPM</b>
<b>Lub Oil Purifier</b>	Type	<b>mitsubishi kakoki kaisha ltd. SJ -10F (MANUAL)</b>
	No off	
	Capacity	<b>1900 L/H – 5.5 KW 9000 RPM</b>
<b>Evaporator</b>	Type	<b>ALFA LAVAL JWP – 26 - C80</b>
	Capacity	<b>10 M3/24 HRS</b>
<b>Fresh Water Sterilizer</b>	Type	<b>NIPPON CONTROL CO.,LTD. L-N201 F , AC 100V / 60 Hz</b>
	Capacity	<b>FLOW RATE : 2000 L/H</b>
<b>Fresh Water Mineraliser (FILTER)</b>	Type / Capacity	<b>NIPPON CONTROL CO.,LTD. L-B-L 3000 L</b>
<b>Waste Oil Incinerator (IMO MEPC 76 (40))</b>	Type	<b>SUNFLAME CO.,LTD. OSV – 10 SA</b>
	Capacity	<b>10 X 10 4      KCAL MJ/HR</b>
<b>Oily Water Separator</b>	Type	<b>TAIKO KIKAI / USC - 10</b>
	Capacity	<b>1.0 M3/HR</b>
<b>Sewage Treatment plant</b>	Type	<b>TAIKO SHIP SEWAGE TREATMENT SBT 2S</b>
	Capacity	
<b>Hot Water Set (Calorifier unit)</b>	No off	<b>HARISON CO.,LTD , CFT – 500 – E 0.04 M3/MIN. TK CAP:500L 440V / 2S KW/60 Hz/3 PHASE (AUTO)</b>
<b>Steering Gear</b>	Type	<b>TOKIMEC INC. JAPAN</b>
	Duty Capacity	<b>14.0 MPA</b>
	Hydraulic pump unit	<b>2 UNITS</b>

**Speed**

**UP TO BEAUFORT SCALE 4, DOUGLAS SEA 3  
About: BALLAST : 12.0 KTS / LADEN : 11.0 KTS**

**CONSUMPTION/ DAY**

		AT SEA	AT PORT
Main Engine	HFO	<b>ABOUT 8.0 MT/DAY BALLAST ABOUT 8.5 MT/D LADEN</b>	<b>NIL</b>
Auxiliary Engine	MGO	<b>ABOUT 1.1 MT/DAY</b>	<b>IDLE/LOADING ABT 0.8 MT/DAY PLUS ABT 1.0 MT/D WHEN INERTING DISCH: ABT 1.4 MT/DAY</b>

Permanent bunker capacity (100%)

HFO : **416.81 M3**  
 Diesel : **89.37 M3**  
 Fresh Water : **160.88 M3**



#### 4. LOADING RATE (TONS/HOUR) – For Full Cargo Parcels

Ex-atmospheric storage with gas 1 tank : 300 m3/Hr

With vapor Return 2 tanks : 500 m3/Hr

Remarks:

\* Based on maximum velocity of 6.5 metres/sec except VCM, and 4.0 meters/sec for VCM in the liquid piping.

\* If cargo temperature is less than 0 °C, shore heater to be used. If ship heater used, max rate is 250 m<sup>3</sup> per hour.

\* Loading by shore pump only, proper size gas return line to be connected

\* Subject to both ship and shore tanks being under favourable conditions

#### 5. CARGO PUMPS

5.1 Type : Deepwell / Centrifugal  
Make : Teikoku Machinery Works Ltd.  
How many : 2 units  
Maximum specific gravity : 0.948 (VCM) S.G. At 0 c

5.2 Capacity (CMB/Hour) : 300 m3/Hr (LPG) / 250 m3/Hr (VCM)  
Two speed or variable speed : One Speed  
Rated kW (each) : 120 Kw  
Working pressure maximum : 20 Kg/CM2

5.3 Location : 1 each cargo tank top  
Removable : no

5.4 Booster pumps : N/A  
Type :  
Maker :

5.5 Capacity (CMB/Hour) : N/A  
Working pressure :

5.6 Location : N/A

5.7 Time to discharge a full liquid cargo using all pumps against back pressure at pump  
1 bar : about hours for LPG = 6 HRS  
5 bars : about hours for LPG = 8 HRS  
10 bars : ----- = 12 HRS

5.8 Nominal back pressure when : about 1 bar  
working In series corresponding : N/A  
head Maximum back pressure : about 5 bar  
Nominal pressure at rail (propane) : about 13 bar at 20 degree C of cargo temperature

5.9 What amount of cargo remains in tanks after completion pumping before stripping:  
- liquid : about per one tank = 0 Liquid  
- vapour : about ton per one tank for LPG = 10 T

#### 6. STRIPPING

6.1 Stripping system, if any : Nil

6.2 Time required to remove all traces of liquid cargo as stated in 5.9 for:  
- LPG : After disch of cargo tank is liquid free

## 7. CARGO COMPRESSORS

- 7.1 Type : **Vertical 1-stage water cooled double acting**  
Make : **Tanabe Pneumatic Machinery Co.,Ltd.**  
How many : **2 units**  
Piston displacement **460 m3/H**  
Rated Kw **75 Kw**  
Stroke **177.8 mm**  
Max discharge pressure **20 Kg/CM2**  
Pressure differential **Normal 4.0 Kg/CM2**
- No of Revolutions **540 RPM**
- 7.2 Are compressors oil free : **YES**
- 7.3 Can they reliquefy VCM without risk : **N/A**
- 7.4 State time to bring full cargo of butane to atmospheric pressure from 0.5 Bars : **Approx. 2 Hrs**

## 8. INERT GAS SYSTEM

- 8.1 Does the vessel use inert gas? : **Nitrogen Generator**  
If so, state utilization and quantities : **200 m3/H**
- 8.2 Can the vessel produce inert gas? : **YES**  
If so, state type and composition of gas produce: **99.90 N2**
- Discharge Capacity **200 m3/H**
- 8.3 Maximum production obtainable **200 M3/H**

- NOTE:- Above quantities obtained at engine room temperature 45° C
- 8.4 State if there are storage facilities for inert gas onboard: **N/A**  
- Size : **N/A**  
- Pressure : **N/A**
- 8.5 State if any shore supply of nitrogen may be required: : **N/A**  
- for what purpose : **N/A**  
- what quantities : **N/A**

## 9. GAS FREEING

- 9.1 State method used giving all details : **Nitrogen Plant / Fans**  
9.2 State time required including stripping : **About 72 hrs**

## 10. CHANGING GRADE

- 10.1 From completion discharge of cargo Propane, time required in hours and inert gas in CBM required to reach a tank and gas installation atmosphere of less than 100 ppm of Propane in Vapour phase.  
**Time required: About 80 hrs**
- 10.2 Can this operation be carried out at sea? : **YES**

- 10.3 Can the ship measure the number of ppm in vapour phase? : **YES**
- 10.4 Has vessel deck tank for changing grade/cooling operations? : **N/A**
- 10.5 Deck tanks : **NIL**  
 Capacity :  
 Purpose :

**11. COOLING BEFORE LOADING : N/A**

**12. CARGO HEATER N/A**

- 12.1 Type :  
 12.2 Inside Diameter  
 12.3 Overall length  
 12.4 Cargo flow rate  
 12.5 Min Inlet Temp  
 12.6 Min Outlet Temp  
 12.7 Required Sea water Capacity  
 12.8 Design Pressure  
 12.9 Hydrostatic Test Pressure  
 12.10 Tightness Test Pressure
- 12.0 State discharging rate for propane to be brought from atmospheric pressure  
 Loading rate for Propane – ° C / 0° C: **about 300 Mt/hr**

**13. CARGO VAPORIZER**

In case vapour gas is needed to feed compressors, can vessel produce its own if no shore available:

**No**

**14. REFRIGERATING APPARATUS NA**

- 14.1 Is it independent of cargo? : **NA**  
 Is so, state cooling agents : **NA**
- 14.2 What minimum temperature can be maintained : **NA**
- 14.3 What time required at sea to lower by 1°C the full cargo of : **NA**

**15. MEASURING APPARATUS**

What gauges on board?

Type : **Float type level gauge**  
 Location : **At each cargo tank dome**

**16. SAMPLES**

- 16.1 State how tank atmosphere samples can be taken and where from?  
 Standard of fitting? : **Close Sampling**  
 : **3/8 inch coupling**
- 16.2 Same question for cargo : **Close Sampling**
- 16.3 Are sample bottles available on board? : **No**

**17. CARGO LINES**

- 17.1 Is ship fitted with a port and starboard cargo manifold? : **Yes**
- 17.2 Position of cargo manifold
- distance from stern (AP) (S / P) : **48.94 M**
  - distance from stem (FP) (S / P) : **39.16 M**
  - height above deck : **0.9 m for Liquid manifold**
  - distance from ship's rail : **2.3 M**
  - underside keel to manifold : **8 M**
- 17.3 Liquid line
- flange-size : **8 in.**
  - type : **ANSI 300**
- Gas line
- flange-size : **5 in.**
  - type : **ANSI 300**
- 17.4 What reducers on board? :
- For Liquid line (low temperature)**  
**8X6 ; 8X5 ; 8X4 ; 8X3 inches**
- For Vapor line (normal temp.)**  
**6X5 ; 4x5 ; 3x5 inches**
- 17.5 Is ship fitted with stern discharge? : **No**
- Liquid line - diameter : **N/A**
  - flange – size : **N/A**
  - type : **N/A**

## 18. HOSES

- Are serviceable hoses available on board? : **None**
- 18.1 :
- Length :
  - Diameter :
  - Flange-size :
  - Type :
  - Bending radius :
- 18.2 Minimum temperature acceptable :  
Maximum pressure acceptable :
- 18.3 For what products are hoses suitable? :

## 19. DERRICKS

- Hose cranes : **YES**
- Where situated : **P/S Manifold**
- Lifting capacity : **0.9 T**
- Working radius : **4.0 M**

## 20. SPECIAL FACILITIES

- 20.1 How many grades can be segregated? : **N/A**
- 20.2 How many cooled? : **N/A**



20.3 Can vessel sail with slack cargo tanks? : **Yes**