

# REPORT ON OIL ENGINE MACHINERY.

No. 1477

16 DEC 1955

Received at London Office

Date of writing Report. 29th Nov. 1955 When handed in at Local Office. 29th Nov. 1955 Port of Bremen

Survey held at Bremerhaven Date, First Survey 14th June, Last Survey 29th Nov. 19 55

Number of Visits 10

Single Screw vessel. M.V. "TARAPACA" Tons Gross            Net           

Built at Bremerhaven By whom built Rickmers Yard Yard No. 272 When built 11/55

Engines made at Köln By whom made Deutz Engine No. 4483631/38 When made 1955

Monkey Boilers made at - By whom made - Boiler No. - When made -

Indicated Horse Power 1650 BHP Owners Corporation De Fomento Port belonging to Valparaiso

N. Power as per Rule 330 Is Refrigerating Machinery fitted for cargo purposes yes, not Is Electric Light fitted yes

Trade for which vessel is intended Ocean going.

MAIN ENGINES, &c. — Type of Engines RBV 8 M - 366 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 55 kgs/cm<sup>2</sup> Diameter of cylinders 420 mm Length of stroke 660 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 8.2 kgs/cm Ahead Firing Order in Cylinders            Span of bearings, adjacent to the crank, measured

from inner edge to inner edge            Is there a bearing between each crank yes Revolutions per minute 250

Flywheel dia. 2100 mm Weight 9850kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>) 27 cm<sup>2</sup> Means of ignition Diesel Kind of fuel used oil

Crankshaft, (Solid forged            Semi built            All built           ) dia. of journals 270 mm Crank pin dia. 265 mm Crank webs            Mid. length breadth            Thickness parallel to axis           

Flywheel            as per Rule            as fitted            Intermediate Shafts, diameter            as per Rule            as fitted            Thrust Shaft, diameter at collars            as per Rule            as fitted           

Propeller Shaft, diameter            as per Rule            as fitted            Screw Shaft, diameter            as per Rule            as fitted            Is the (screw) shaft fitted with a continuous liner           

Bronze Liners, thickness in way of bushes            as per Rule            as fitted            Thickness between bushes            as per Rule            as fitted            Is the after end of the liner made watertight in the

propeller boss            If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner           

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-

corrosive            If two liners are fitted, is the shaft lapped or protected between the liners            Is an approved Oil Gland or other appliance fitted at the after

end of tube shaft yes If so, state type Cedervall Length of bearing in Stern Bush next to and supporting propeller 980 mm

Propeller, dia. 2700 mm Pitch 1730 mm No. of blades 3 Material Bronze whether moveable no Total developed surface 3.2 m<sup>2</sup> sq feet

Moment of inertia of propeller (lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>)            Spare " 3100 " Kind of damper, if fitted Friction-type

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of

lubrication forced Thickness of cylinder liners            Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

           lagged with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

back to the engine            Cooling Water Pumps, No. two Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Bilge Pumps worked from the Main Engines, No.            Diameter            Stroke            Can one be overhauled while the other is at work           

Pumps connected to the Main Bilge Line (No. and size 1 x 80 m<sup>3</sup>/h - 20 metres, 1 x 40 m<sup>3</sup>/h - 50 metres How driven electric electric

Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements           

Ballast Pumps, No. and size one, 80 m<sup>3</sup>-20 metres Note: 2 ME att. lub-oil pumps 11 m<sup>3</sup>/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size one, spare, 12 m<sup>3</sup>/h 50 metres

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary

bilge pumps, No. and size:—In machinery spaces E.R. 4 x 65 mm Ø - 1 x 65 mm Ø - Tunnelrecess Tunnelwell & T. fwd. 2 x 65 mm Ø In pump room           

holds, &c. H.No. 1 2 x 65 mm Ø - H.No. 2 4 x 65 mm Ø - H.No. 3 2 x 65 mm Ø - Chainlocker Co-dam, fr. 52/54 1 x 25 mm Ø - 1 x 65 mm Ø

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 x 80 mm Ø - 1 x 100 mm Ø

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction in the machinery spaces led from easily

accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the Ship no, seachests Are they fitted with valves or cocks valves Are they fixed

efficiently high on the ship's side to be seen without lifting the platform plates yes Are the overboard discharges above or below the deep water line above

Are they each fitted with a discharge valve always accessible on the plating of the vessel yes Are the blow off cocks fitted with a spigot and brass covering plate           

Do that pipes pass through the bunkers none How are they protected           

Do that pipes pass through the deep tanks none Have they been tested as per Rule           

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery

spaces, or from one compartment to another yes Is the shaft tunnel watertight yes Is it fitted with a watertight door yes worked from E.R. TRUNK PASSAGE

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork           

Main Air Compressors, No.            No. of stages            diameters            stroke            driven by           

Auxiliary Air Compressors, No. one, 750 RPM No. of stages two diameters 110/100 mm stroke 110 driven by Diesel dr.

Small Auxiliary Air Compressors, No.            No. of stages            diameters            stroke            driven by           

Is that provision is made for first charging the air receivers hand worked compressor and 40 l air bottle starts 25 KW harb.-gen.

Scavenging Air Pumps, No. scavenge turbs. blower diameter M.E. att. stroke            driven by           

Auxiliary Engines crank shafts, diameter            as per Rule see Augsburg Certs. No. three - port fwd.            Position port aft inb. & outb., harb.-gen. comp

Have the auxiliary engines been constructed under special survey yes Is a report sent herewith yes Panel ER stb.

AUGSBURG No 840.

003106-003115-0236

**AIR RECEIVERS:**—Have they been made under survey **yes** State No. of report or certificate **Emergency 55/2**  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule. **yes** / **Main 55/1075 D.F.C. - Air 55-205 D.F.C.**  
 Can the internal surfaces of the receivers be examined and cleaned. **yes** Is a drain fitted at the lowest part of each receiver. **yes**  
**Injection Air Receivers, No.** - Cubic capacity of each. - Internal diameter. - thickness. -  
 Seamless, welded or riveted longitudinal joint. - Material. - Range of tensile strength. - Working pressure. **15 mm Actual. -**  
**Starting Air Receivers, No.** **4** Total cubic capacity. **250** Internal diameter. - thickness. **10 mm**  
 Seamless, welded or riveted longitudinal joint. **welded** Material **SMOH-steel** Range of tensile strength. **42.4-46.2** Working pressure. **30 Actual Em. 40**

**IS A DONKEY BOILER FITTED** **no** If so, is a report now forwarded. **--**  
 Is the donkey boiler intended to be used for domestic purposes only. **--**

**PLANS.** Are approved plans forwarded herewith for shafting. **yes** Receivers. **no** Separate fuel tanks. **no**  
 (If not, state date of approval) Donkey boilers. **none** General pumping arrangements. **yes** Pumping arrangements in machinery space. **yes**  
 Oil fuel burning arrangements. **--**  
 Have Torsional Vibration characteristics been approved. **--** Date of approval. **--**

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied. **yes**  
 State the principal additional spare gear supplied. **spare, cast iron propeller, spare screwshaft.**

The foregoing is a correct description, *[Signature]* Manufacturer.

Dates of Survey while building  
 During progress of work in shops - - June 14, 22, 24, 28, 30, July 3, 10, 24, 29, August 19, 20, September 3, October 9, 14, 1955.  
 During erection on board vessel - - October 25, November 14, 17, 30, December 2, 1955.  
 Total No. of visits. **20**

Dates of examination of principal parts—Cylinders.  Govers.  Pistons.  Rods. - Connecting rods.   
 Crank shaft.  Flywheel shaft.  Thrust shaft.  Intermediate shafts. **3.9.55** Tube shaft. -  
 Screw shaft. **19.8.55** Propeller. **20.8.55** Stern tube. **19.8.55** Engine seatings. **4.9.55** Engine holding down bolts. **14.10.55**  
 Completion of fitting sea connections. **20.8.55** Completion of pumping arrangements. **31-10-55** Engines tried under working conditions. **24-11-55**  
 Crank shaft, material **SMOH-steel** Identification mark **434 H.S. 29.6** Flywheel shaft, material **SMOH Steel** Identification mark **HK 15A 23**  
 Thrust shaft, material **SMOH-steel** Identification mark **LLOYD'S TEST D.S.F. 4.8.55** Intermediate shafts, material **SMOH Steel** Identification marks **4849, 5457**  
 Tube shaft, material - Identification mark - Screw shaft, material **SMOH-steel** Identification mark -  
 Identification marks on air receivers **LLOYD'S TEST D.S.F. T.P. 48.5 ATM. N.O. 100-6789** **LLOYD'S TEST D.S.F. T.P. 33 ATM. N.O. 15-6449** **LLOYD'S TEST D.S.F. T.P. 40 ATM. N.O. 16-8.55**  
**29.4.55 U.S.** **100-6788** **21.1.55 U.S.**

Welded receivers, state Makers' Name. **Wilhelm Siebel, Freudenberg, SIEGEN.**  
 Is the flash point of the oil to be used over 150°F. **yes**  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with. **yes**  
 Description of fire extinguishing apparatus fitted. **Chemical fire extinguishers, fire hydrants and hoses.**  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. **no** If so, have the requirements of the Rules been complied with. **--**  
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with. **--**  
 Is this machinery duplicate of a previous case. **yes** If so, state name of vessel. **PANTOFAGHSTA.**

**General Remarks** (State quality of workmanship, opinions as to class, &c.) **The main- and auxiliary engines of this vessel have been constructed under Special Survey (see certificates attached). They have been installed in accordance with the Society's Rules, the approved plans and the Secretary's letters and the materials and the workmanship are good. The machinery has been examined under working conditions during sea-trials and found good. The machinery of this vessel is eligible in my opinion to have the record of +LMC 11.55 - TS OG - Oil Engine 4SCSA - 8 cyl's 420/600 - 350 MM. 330**  
**Crankcase explosion devices are fitted to main- and auxiliary engines.**

The amount of Entry Fee ... £ **76 : 5 : 0**  
 Special ... £ : :  
 Donkey Boiler Fee... £ : :  
 Travelling Expenses (if any) £ **16 : 0 : 0**  
 When applied for **A/c rendered from London 30/1/56**  
 When received **19**  
**A.R. MacArthur** Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **FRIDAY 10 FEB 1956**  
 Assigned **+LMC 11.55**  
**OG.**



Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)