

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 493

Received at London Office 15 MAR 1926

Date of writing Report 11th March 1926 When handed in at Local Office 13 - 3 1926 Port of Rouen
 No. in Survey held at Rouen Date, First Survey September 2nd Last Survey Feb. 1st 1925-6
 Reg. Book. Number of Visits 23

on the Single Twin Triple Quadruple Screw vessel "TIJUCA" Tons Gross 5374
Net 3251
 Built at Rouen By whom built Chantiers de Normandie Yard No. E-5 When built 1926
 Engines made at Copenhagen By whom made Burmeister & Wain Engine No. 1100 When made 1924-25
 Donkey Boilers made at Penhoët, St. Margain By whom made Ch. et Al. de St. Margain Boiler No. 1200 When made 1925
 Brake Horse Power 3000 Owners W. H. Wilhelmsen Port belonging to Dansburg
 Nom. Horse Power as per Rule 714 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which vessel is intended World wide

OIL ENGINES, &c. Type of Engines 2- Vert. Diesel Oil Engines 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 630 mm Length of stroke 1100 mm No. of cylinders 12 No. of cranks 12
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 892 mm Is there a bearing between each crank Yes
 Revolutions per minute 135 Flywheel dia. 2620 mm Weight 8.3 tons Means of ignition Compressed air Kind of fuel used Heavy oil, 44°
from about 150°

Crank Shaft, dia. of journals as per Rule 390 mm Crank pin dia. 390 mm Crank Webs as per Rule 740 mm Thickness parallel to axis 266 mm
as fitted 266 mm shrunk Thickness around eyehole 172 mm

Flywheel Shaft, diameter as per Rule 390 mm Intermediate Shafts, diameter as per Rule 260 mm Thrust Shaft, diameter at collars as per Rule 11 1/2"
as fitted as fitted as fitted

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 288 mm Is the shaft shaft fitted with a continuous liner Yes
as fitted as fitted as fitted

Bronze Liners, thickness in way of bushes as per Rule 16.3 mm Thickness between bushes as per Rule 13.5 mm Is the after end of the liner made watertight in the
as fitted as fitted as fitted

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

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after
 end of the tube shaft None Length of Bearing in Stern Bush next to and supporting propeller 1,300 mm

Propeller, dia. 3.50 m Pitch 3.35 m No. of blades 4 Material Brass whether Moveable Fixed Total Developed Surface 3.74 sq. feet
metric

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication
forced Thickness of cylinder liners 46 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine exhaust

Cooling Water Pumps, No. 2- 150 tons 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. 2 Diameter 160 mm Stroke 196 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size 2 main - 160 mm x 196 mm; 1 bilge - 20 tons; 1 ballast 150 tons
 How driven Main engines Electric motor Electric motor

Ballast Pumps, No. and size One - 150 tons Lubricating Oil Pumps, including Spare Pump, No. and size Two - 50 tons each
 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 One - 94 mm ster. int.; Four - 54 mm ceffidam 1 - 100 mm 90 mm

In Holds, &c. 1-FP 60 mm; 1-AP 60 mm; 2-N-1 90 mm; 2-N-2 90 mm; 2-N-3 90 mm also 1 ceffidam 60 mm; 2-N-4 90 mm; 2-N-5 50 mm and 1 90 mm
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two main (p.r.s.) - 94 mm; Two bilge (p.r.s.) - 74 mm; One ballast
(204) 152 mm

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions 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 Yes Are they fitted with Valves or Cocks Valves & 1 D.B. Boardroom cock
38 ft. Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above on the the deep water line Yes

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 Yes
 What pipes pass through the bunkers Yes How are they protected Yes

What pipes pass through the deep tanks Yes Have they been tested as per Rule Yes
steel

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
give

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 top platform

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

Main Air Compressors, No. 2 No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. 3 No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Small Auxiliary Air Compressors, No. 1 No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓
as fitted ✓

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓

Can the internal surfaces of the receivers be examined ✓ What means are provided for cleaning their inner surfaces ✓

Is there a drain arrangement fitted at the lowest part of each receiver ✓

High Pressure Air Receivers, No. ✓ Cubic capacity of each ✓ Internal diameter ✓ thickness ✓
10, 17, 20, 23 Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓

Starting Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓
20, 23, 27, 2 Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓

3, 5, 7, 9, 11 144

IS A DONKEY BOILER FITTED?

Yes ✓

If so, is a report now forwarded?

Yes ✓

PLANS. Are approved plans forwarded herewith for Shafting Approved 5-6-24 ✓ Receivers ✓

Separate Tanks ✓

Donkey Boilers ✓

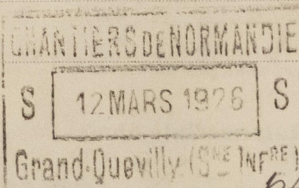
General Pumping Arrangements Approved Paris 16-10-24

Oil Fuel Burning Arrangements Approved 30-10-25

SPARE GEAR

As per attached list, checked after placing aboard and found correct.

The foregoing is a correct description.



Manufacturer.

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of visits

1925, Sept 2, Oct 14, 26, Nov 2, 18, 23, 27, Dec 9, 10, 11, 12, 16, 18, 19, 21, 22, 1926 Jan 15, 27, 29, 31, Feb 1, 23

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓

Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts 9-12-24 to 17-3-25 ✓ Tube shaft ✓

Screw shafts 15-4-25 Propeller 6-5-25 Stern tube 15-17-4-25 Engine seatings 18-11-25 Engines holding down bolts 18-11-25

Completion of fitting sea connections 2-9-25 Completion of pumping arrangements 12-12-25 Engines tried under working conditions 1-2-26

Crank shaft, Material ✓ Identification Mark ✓ Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material Steel Identification Marks 223, 247, 266, 268, 269, 270, 272, 283

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Steel Identification Marks 3 shafts - 15-16

Is the flash point of the oil to be used over 150° F. Yes

Is this machinery duplicate of a previous case ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The Oil Engine Machinery, as per Copenhagen Report No. 7131, (forwarded herewith), has been fitted on board this vessel and the general machinery installation constructed and fitted in a satisfactory manner and to the Rules requirements and approved plans. The Machinery on completion has been tested and manoeuvred under working conditions and found satisfactory. The Machinery of this vessel is eligible in my opinion to be classed and to have the notation of "Oil Engines" and records of L.M.C. 3,26 and C.L. in the Register Book.

The amount of Entry Fee ... £ : When applied for, Special sitting 5000 : 13-3-1926 Donkey Boiler Fee 250 : When received, Travelling Expenses (if any) 255.00 : 16-4-1926 Interim cert 420.00 : Committee's Minute FRI. 19 MAR 1926

Assigned

+ L.M.C. 3,26. C.L. Oil Engines

Engineer Surveyor to Lloyd's Register of Shipping.



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