

REPORT ON OIL ENGINE MACHINERY.

No. 105

-1 DEC 1930

Received at London Office 3 JUL 1930

Date of writing Report 30th June 1930 When handed in at Local Office 30th June 1930 Port of Winterthur
 No. in Survey held at Winterthur Date, First Survey 5th April 29 Last Survey 1st June 1930
 Reg. Book. Number of Visits

on the Single Screw vessel Single Screw Motor Vessel "TABIAN" Tons Gross 2506.5
Twin Net 4844.69
Triple
Quadruple
 Built at Amsterdam By whom built The Nederland S. B. Co. Yard No. 203 When built 1930
 Engines made at Winterthur By whom made Messrs. Sulzer Bros. Engine No. 6117 When made 1930
 Donkey Boiler made at Haarlem By whom made Werk Huterhina Boiler No. 362 When made 1930
 Brake Horse Power 7000 Owners The Nederland S. B. Co. Port belonging to Amsterdam
 Nom. Horse Power as per Rule 1450 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended East Indies 32716 58116

L ENGINES, &c.—Type of Engines Sulzer Diesel Engines 2 or 4 stroke cycle 2 Single or double acting single
 Maximum pressure in cylinders 550 lbs Diameter of cylinders 820 mm. Length of stroke 1440 mm. No. of cylinders 8 No. of cranks 8
 Mean of bearings, adjacent to the Crank, measured from inner edge to inner edge 230 mm. Is there a bearing between each crank yes
 revolutions per minute 106 Flywheel dia. 2800 mm. Weight 4600 Kg. Means of ignition Temperature due to Kind of fuel used heavy fuel oil
 Crank Shaft, dia. of journals as per Rule 533 mm. Crank pin dia. 580 mm. Crank Webs Mid. length breadth 1040 mm. Thickness parallel to axis 390 mm.
 as fitted 580 Mid. length thickness 390 Thickness around eye-hole 310
 Flywheel Shaft, diameter as per Rule 533 Intermediate Shafts, diameter as per Rule 415 mm Thrust Shaft, diameter at collars as per Rule 533
 as fitted 580 as fitted 440 mm as fitted 580
 Tube Shaft, diameter as per Rule 471 Screw Shaft, diameter as per Rule 490 mm Is the tube shaft fitted with a continuous liner yes
 as fitted 471 as fitted 490 mm Is the screw shaft fitted with a continuous liner yes

Propeller—Is the after end of the liner made watertight in the stern tube yes
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yes
 Is the after end of the liner made watertight in the stern tube yes
 Is the space charged with a plastic material insoluble in water and non-corrosive yes
 Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft yes
 Length of Bearing in Stern Bush next to and supporting propeller 1960 mm
 Propeller, dia. 19'-0" Pitch 16'-0" No. of blades 4 Material bronze whether Moveable no Total Developed Surface 110 sq. feet
 Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged yes Means of lubrication oil
 Thickness of cylinder liners 60 mm. Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with 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 yes

Bilge Pumps—Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 No. of pumps worked from the Main Engines, No. 2 Diameter 150 Stroke 150 Can one be overhauled while the other is at work yes
 Pumps connected to the Main Bilge Line No. and Size 2 - 150 ton Centex pumps How driven electro motor
 Last Pumps, No. and size 1 - 220 ton Centex Lubricating Oil Pumps, including Spare Pump, No. and size 2 combined bearing and crosshead pumps (stand by)
 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 2 - 3 1/2" in each Hold 1 - 3 1/2" in tunnel and 1 - 3 1/2" in Cofferdam
 Holds, &c. 6 - 3 1/2" [surrounding tubes - oil]

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 - 3 1/2" and 1 - 6" direct to ballast pump
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces 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 & Cocks for donkey boiler
 Are they fixed sufficiently 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 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
 Do pipes pass through the bunkers no pipes How are they protected yes
 Do pipes pass through the deep tanks no pipes Have they been tested as per Rule yes

Water 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 upper deck
 Are food vessels, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Air Compressors, No. 2 No. of stages 3 Diameters 570/480/150 Stroke 720 mm. Driven by crankshaft
 Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 110/35 Stroke 120 mm. Driven by hot bulb engine
 Scavenging Air Pumps, No. 1 Tandem double acting Diameter 1860 mm. Stroke 960 mm. Driven by crank shaft
 Auxiliary Engines crank shafts, diameter as per Rule 165 mm as fitted 170
3 & 4 Auxiliary Engines (removed by)

AIR RECEIVERS—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
 Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces 250 litres
 Is there a drain arrangement fitted at the lowest part of each receiver yes
 High Pressure Air Receivers, No. 1 Cubic capacity of each 250 litres Internal diameter 360 mm thickness 12 mm
 Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 55 To 61.5 Kg/mm² Working pressure by Rules 76.6 Kg/cm²
 Starting Air Receivers, No. 2 Total cubic capacity 26 cub. metres Internal diameter 1400 mm. thickness 26 mm.
 Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 55 To 61.5 Kg/mm² Working pressure by Rules 44.2 lbs

IS A DONKEY BOILER FITTED? *7 Yes*

If so, is a report now forwarded? *Yes*

PLANS. Are approved plans forwarded herewith for Shafting *29-5-29*
(If not, state date of approval)

Receivers *2500 litres* *6-5-29* Separate Tanks
800 " " *3-5-27*
Oil Fuel Burning Arrangements
Injection res. *5-4-29*
250 litres starting res. 28-5-27

Donkey Boilers

General Pumping Arrangements

SPARE GEAR

As per attached list and one spare Pulshaft & propeller

The foregoing is a correct description of

Sulzer Brothers

Limited

Manufacturer.

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5-4-29, 2-5-29, 7-5-29, 13-5-29, 22-5-29, 30-5-29, 4-6-29, 21-6-29, 8-7-29, 10-7-29, 16-7-29, 29-8-29, 3-9-29,
10-9-29, 11-9-29, 20-9-29, 28-9-29, 30-9-29, 9-10-29, 11-10-29, 12-10-29, 14-10-29, 15-10-29, 24-10-29, 28-10-29, 30-10-29,
31-10-29, 5-11-29, 7-11-29, 8-11-29, 26-11-29, 27-11-29, 3-12-29, 4-12-29, 10-12-29, 12-12-29, 19-12-29, 13-1-30, 21-1-30,
22-1-30, 23-1-30, 24-1-30, 27-1-30, 28-1-30, 29-1-30, 31-1-30, 1-2-30, 3-2-30, 6-2-30, 7-2-30, 19-2-30, 25-2-30,
26-2-30, 13-3-30, 14-3-30, 27-3-30, 8-4-30, 9-4-30, 10-4-30, 11-4-30, 12-4-30, 24-4-30, 1-6-30,
Total No. of visits *10 June 24-27 June 31 July 4-7-15 Aug Sept 2-9-15-29-30 Oct 6-10-20; Nov 8-24 = 63 + 18*

Dates of Examination of principal parts—Cylinders *8-4-30* Covers *8-4-30* Pistons *8-4-30* Rods *10-4-30* Connecting rods *11-4-30*

Crank shaft *19-2-30* Flywheel shaft *19-2-30* Thrust shaft *19-2-30* Intermediate shafts *4 Aug - 9 Sept* Tube shaft *✓*

Screw shaft *24-27 May* Propeller *24-27 May* Stern tube *24-27 May* Engine seatings *29 Sept & Nov* Engines holding down bolts *15-24 Sept & 2 Nov*

Completion of fitting sea connections *27 May* Completion of pumping arrangements *10 Oct* Engines tried under working conditions *2 Nov*

Crank shaft, Material *Ann. S.M. Eng. Steel* Identification Mark *Lloyd's M.K. 2704 30-11-29* Flywheel shaft, Material *Ann. S.M. Eng. Steel* Identification Mark *Lloyd's M.B. 8487 24-6-29*

Thrust shaft, Material *Ann. S.M. Eng. Steel* Identification Mark *See flywheel shaft* Intermediate shafts, Material *SMS* Identification Marks *8854 M. 10. 21-7-29*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *SMS* Identification Mark *4204 D 314050*

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

Is this machinery duplicate of a previous case *Yes*. If so, state name of vessel *"Talissee" and "Janumba"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been constructed under special survey in accordance with the requirements of the Rules, the Secretary's letters and the approved plans. Materials and workmanship good. The main and auxiliary engines and their accessories have been dispatched to Amsterdam where the trials will be run when the machinery is installed in the vessel.*

The amount of Entry Fee ... £ *6-0-0* : When applied for, *28 June 1930*
Special ... £ *136-5-0*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : *When received, 12 July 1930*

W.G. Tallis
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 9 DEC 1930*
Assigned *See Ann's F.B. Rpt 13112*



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

Rpt. 5b.
Date of writing Report
No. in Surveyor's Reg. Book
on the
Master
Boilers made at
Owners
VERTICAL
Made at *How*
tested by hydraulic
No. of safety valves
enter the donkey
strength *44/50 kg*
Lap of plating
Radius of do.
Thickness of fun
plates *10 mm*
Thickness of wa
Dates of Survey while building
Durin wor
Durin bo
Total
GENERAL
"TARA"
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Survey
by
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by
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Assign