

REPORT ON OIL ENGINE MACHINERY.

6 OCT 1933

Received at London Office

Date of writing Report 30th Sept 1933 When handed in at Local Office Hamburg Port of Hamburg
 No. in Survey held at Hamburg Date, First Survey 27th October 1932 Last Survey 21st Sept. 1933
 Reg. Book. Number of Visits 28

on the Single Twin Triple Quadruple Screw vessel D.L. Harper (Oil engine) Tons Gross 72336
Net 7020

Built at Hamburg By whom built Deutsche Werft A.G. Yard No. 149 When built 1933
 Engines made at Augsburg By whom made M. A. N. Engine No. 330529 When made 1932/33
 Donkey Boilers made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 479/80 When made 1933
 Brake Horse Power 2 x 2250 Owners Balt. amerik. Petroleum Import Ges. Port belonging to Danzig
 Nom. Horse Power as per Rule 783 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended Tanker Service

OIL ENGINES, &c.—Type of Engines D 4 7u 60/90 23 5/8" 2 or 4 stroke cycle 2 Single or double acting double
 Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 4 No. of cranks 4
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 852 mm Is there a bearing between each crank yes
 Revolutions per minute 118 Flywheel dia. 2100 Weight 7500 kg Means of ignition airless ign. Kind of fuel used amerik. gas oil.
 Crank Shaft, dia. of journals as per Rule as approved Crank pin dia. 390 mm Crank Webs Mid. length breadth 640 mm Thickness parallel to axis 177.5 mm
as fitted 390 mm Mid. length thickness 240 mm Thickness around eyehole 240.0 mm
 Flywheel Shaft, diameter as per Rule as approved Intermediate Shafts, diameter as fitted 446 mm Thrust Shaft, diameter at collars as per Rule as approved
as fitted 380 mm
 Tube Shaft, diameter as per Rule as approved Screw Shaft, diameter as fitted 400 mm Is the tube shaft fitted with a continuous liner yes
as fitted
 Bronze Liners, thickness in way of bushes as per Rule as approved Thickness between bushes as fitted 18 mm Is the after end of the liner made watertight in the
 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 no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1955
 Propeller, dia. 4250 mm Pitch 3500 mm No. of blades 4 Material bronze whether Moveable moveable Total Developed Surface 4,154 m²
 Method of reversing Engines directly by means of compr. air. Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
forced Thickness of cylinder liners 42.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or 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 yes
 Cooling Water Pumps, No. each main eng. 3 x 2 1/2 200; 7 driven by steam 240/320/350 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. 7, each Diameter 275 mm Stroke 200 mm Can one be overhauled while the other is at work yes
 Pumps connected to the Main Bilge Line No. and Size 3; 2 x 275/2000 i.l.; 2/10/300 2 driven from main eng. 275/200
How driven 2 from main eng. 1 by steam. 1, driven by steam, 130/150/300
 Cargo Pumps, No. and size 2, 360 540 Tandem 320/220 Lubricating Oil Pumps, including Spare Pump, No. and size 3, 7 by steam 170/200/525
 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 7, 5 x 90, 2 x 60, 3 x 80, 1 x 70, 1 x 70, 1 x 70, 1 x 70
 In Holds, &c. frame 47 x 2 x 60; frame 49/50 = 1 x 125; Cofferd. round about lubricating oil tank 2 x 90
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1, 125; 100/210/300; 1, 175; 1 driven by steam 240/320/350
 Are all the Bilge Suction pipes in Holds and Tanks 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 and Cocks
 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 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 yes
 What pipes pass through the fuel oil Bilge line from Cofferdam How are they protected
 What pipes pass through the cargo lines only (heating coils for deck) Have they been tested as per Rule yes
 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 mach. aft Is it fitted with a watertight door worked from
 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. 1 No. of stages 2 Diameters 280/245 Stroke 330 mm Driven by steam engine
 Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 180/70 Stroke 120 mm Driven by steam engine
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 180/70 Stroke 120 mm Driven by steam engine
 Scavenging Air Pumps, No. 1 each main engine Diameter 2 x 1080 mm Stroke 760 mm Driven by main engine
 Auxiliary Engines crank shafts, diameter as per Rule Makers Type of Standard Auxiliary Steam Engine.
as fitted 75 mm and 85 mm

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 manholes + doors
 Is there a drain arrangement fitted at the lowest part of each receiver yes
 High Pressure Air Receivers, No. 7 one Cubic capacity of each 1.720 m³ Internal diameter 800 mm thickness 10 mm
 Seamless, lap welded or riveted longitudinal joints yes, double butt Material 0.4 Steel Range of tensile strength 41/47 kg/mm² Working pressure by Rules 70, 9 kg/cm²
 Starting Air Receivers, No. 2 Total cubic capacity 2 x 18 = 36 m³ Internal diameter 7900 mm thickness 25 + 25.5 mm
 Seamless, lap welded or riveted longitudinal joints yes, double butt Material 0.4 Steel Range of tensile strength 41/47 kg/mm² Working pressure by Rules 26, 5 kg/cm²

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IS A DONKEY BOILER FITTED? yes. If so, is a report now forwarded? yes
 PLANS. Are approved plans forwarded herewith for Shafting yes. Receivers yes
 (If not, state date of approval) Donkey Boilers yes General Pumping Arrangements yes Separate Tanks ✓
 Oil Fuel Burning Arrangements yes

SPARE GEAR
 All spare parts as required by the Rules have been supplied and a number of parts in addition.

The foregoing is a correct description,
DEUTSCHE WERFT
AG, JENGBELLSCHAFT
 3.10.1933. Manufacturer.

Dates of Survey while building
 During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits 28
 Please see Augsburg Report No 1533 dated 8th March 1933 (710)

Dates of Examination of principal parts—Cylinders see Augd. R. Covers see Augd. R. Pistons Augd. Rep Rods Augd. Rep Connecting rods Augd. Rep
 Crank shaft Augd. Report Thrust shaft 27/10/32 Intermediate shafts 27/10/32 Tube shaft ✓
 Screw shaft 10/11/32 Propeller 10/12/32 Stern tube 22/11/32 Engine sealings 17/17/33 Engines holding down bolts 2/6/33
 Completion of fitting sea connections 10/12/32 Completion of pumping arrangements 16/9/33 Engines tried under working conditions 2-6/9/33
 Crank shaft, Material O.H. Steel Identification Mark LLOYD'S FS. 1530/31/32/33 Flywheel shaft, Material O.H. Steel Identification Mark see Thrust shaft
 Thrust shaft, Material O.H. Steel Identification Mark LLOYD'S 78-21.332 Intermediate shafts, Material O.H. Steel Identification Marks 7350/31 FS. 15.4.32
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material O.H. Steel Identification Marks 7005 MB-19.4.32
 Is the flash point of the oil to be used over 150° F. yes Identification Mark 1394 F.S. 24.4.32
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with yes Identification Mark 1553 54 15.4.32
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Tanker If so, have the requirements of the Rules been complied with yes

Is this machinery duplicate of a previous case yes If so, state name of vessel No 748, "Franz Klaser"
 General Remarks (State quality of workmanship, opinions as to class, &c.)

Material and workmanship of this Oil Engine Machinery are of good quality and the outfit is ample. The material used in the construction are made at works recognized by the Committee and tested in accordance with the Rules. The machinery has been built under Special Survey in compliance with the approved plans, the Secretary's letters and instructions thereto and otherwise in conformity with the Society's Requirements. It has given full satisfaction under working and manoeuvring conditions during a 12 hours trial trip and is eligible in my opinion for notification of:-

✦ L.M.C.-9,33. Oil Engines. Tail Shaft (C.L.) Mach. aft.

The amount of Entry Fee £ 1 : 4 0 When applied for, 19
 Special £ 27 : 16 7 When received, 19 33
 Donkey Boiler Fee £ :
 Travelling Expenses (if any) £ 17 : 6 5

M.A. Schneider
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 13 OCT 1933**

Assigned + L.M.C. 9.33 C.L.
4 DB. 200 lb.

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

