

REPORT ON OIL ENGINE MACHINERY.

No. 24 115

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Date of writing Report 28th June 1939 When handed in at Local Office 19 Port of HAMBURG
 No. in Survey held at Angsburg and HAMBURG Date, First Survey 2nd May 1938 Last Survey 20th June 1939
 Reg. Book. 88230 on the Single Twin Triple Quadruple Screw vessel GALLIA Number of Visits Angsburg 83
 Tons { Gross 9974
 Net 5798

built at HAMBURG By whom built Deutsche Werft A.G. Yard No. 227 When built 1939
 Engines made at Angsburg By whom made Maschinenfabrik Angsburg-Hamburg Engine No. 68560 When made 1939
 Monkey Boilers made at HAMBURG By whom made Deutsche Werft A.G. Boiler No. 803804 When made 1939
 Brake Horse Power 2 x 2550 Owners The Texas Co. (Norway) A/S. Port belonging to Oslo
 Nom. Horse Power as per Rule 1170 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended Carrying Petroleum in bulk.

L ENGINES, &c. Type of Engines Heavy oil Engines Maker's type 2 x 82 mm 52/90 2 or 4 stroke cycle 2 Single or double acting single
 Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 520 mm Length of stroke 900 mm No. of cylinders 2 x 8 No. of cranks 2 x 8
 Mean Indicated Pressure 5.5 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 680 mm Is there a bearing between each crank yes
 Revolutions per minute 166 Flywheel dia. 1932 mm Weight 980 kgs Means of ignition diesel system Kind of fuel used diesel oil

Crank Shaft, { Solid forged as per Rule 319 mm
 { Semi-built as fitted 350 mm
 { All built as fitted 350 mm
 Crank pin dia. 350 mm Crank Webs Mid. length breadth 520 mm Thickness parallel to axis shrunk
 Mid. length thickness 160 mm Thickness around eyehole shrunk
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 255 mm Thrust Shaft, diameter at collars as per Rule 268 mm
as fitted as fitted 260 mm as fitted 330 mm

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 282 mm Is the { screw } shaft fitted with a continuous liner { yes
as fitted as fitted 282 mm

Bronze Liners, thickness in way of bushes as per Rule 16.2 mm Thickness between bushes as per Rule 12.15 mm Is the after end of the liner made watertight in the
as fitted 22 mm as fitted 16 mm

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 no

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 no

If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube no

Shaft no If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 1500 mm

Propeller, dia. 3800 mm Pitch 2660 mm No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 4,413 sq. feet

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 40 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water-cooled 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 no

Bolting Water Pumps, No. 4 { 2 rotary pumps driven by steam eng. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 { 2 rotary pumps driven by steam eng. 5 revolutions/min

Large Pumps worked from the Main Engines, No. 2 Diameter 250 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 4 two bilge pumps each 50 m³/h, one bilge pump 50 m³/h, 1 ballast pump 70 m³/h
 { How driven by main engine steam duplex pumps steam duplex pumps

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 no

Ballast Pumps, No. and size 1 of 70 m³/h, steam duplex Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3 one on each main eng. 90 m³/h
one steam duplex p. 75 m³/h

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 5 one of 90 mm φ frame 9/10, two of 90 mm φ frame 35/36, two of 90 mm φ frame 47/49 In Pump Room three of 90 mm φ

Holds, &c. connected to ballast pumps in forepeak pump room 50 m³/h two of 90 mm φ for cargo hold frame 183/184, one of 60 mm φ for pump room frame 196/197

Dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 bilge 110 mm φ, ballast 125 mm φ, circ. cooling water 125 mm φ

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

Sea Connections fitted direct on the skin of the ship upper fitted on chests welded to skin of vessel lower on margin plate Are they fitted with Valves or Cocks yes

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

Do pipes pass through the bunkers oil fuel suction pipes from cofferdams frame 53/54 = 150 mm φ How are they protected strong steel tube, 4.5 mm thickness of wall

Do pipes pass through the oil fuel tanks oil fuel 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

department to another yes Is the Shaft Tunnel watertight machinery aft Is it fitted with a watertight door no worked from no

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork no

Auxiliary Air Compressors, No. two No. of stages two Diameters 105 x 220 mm Stroke 220 mm Driven by steam eng / 400 rev/min

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

Is that provision is made for first Charging the Air Receivers Compressors driven by steam engines

Scavenging Air Pumps, No. two rotary blowers, n = 707 Diameter output 434 m³/h Stroke no Driven by main engines

Auxiliary Engines crank shafts, diameter as per Rule for single-cyl. steam engines driving starting air comp. & generators 90 mm φ Makers' Standard Types yes
as fitted circulating cooling w. pumps 60 mm φ

Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith for starting air compressors Certificate attached yes

AIR RECEIVERS:—Have they been made under survey *yes* State No. of Report or Certificate *Certificates of material*
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 and cleaned *yes* by *manhole* Is a drain fitted at the lowest part of each receiver *yes*
WHISTLE
Injection Air Receivers, No. *1* Cubic capacity of each *0.8 m³* Internal diameter *700 mm* thickness *8 mm*
Seamless, lap welded or riveted longitudinal joint *riveted* Material *S-M-Steel* Range of tensile strength *41-47 kg/cm²* Working pressure by Rules *8 kg/cm²*
Actual *8 kg/cm²*
Starting Air Receivers, No. *three* Total cubic capacity *each 10 m³* Internal diameter *1750 mm* thickness *24.5 mm*
Seamless, lap welded or riveted longitudinal joint *riveted* Material *S-M-Steel* Range of tensile strength *ends 41-47* Working pressure by Rules *35 kg/cm²*
Actual *35 kg/cm²*

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*
Is the donkey boiler intended to be used for domestic purposes only *-* *Thrust shaft 20.4.1939*
PLANS. Are approved plans forwarded herewith for Shafting *28.8.36 - 8.10.36* Receivers *27.6.36 - 29.8.36* Separate Fuel Tanks *4.12.36*
(If not, state date of approval)
Donkey Boilers *14.5.36 - 3.9.36* General Pumping Arrangements *26.11.36 - 13.12.38* Pumping Arrangements in Machinery Space *30.9.38*
Oil Fuel Burning Arrangements *8.3.37*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*
State the principal additional spare gear supplied *2 pistons, 2 cyl. covers, 2 upper & 2 lower cylinder liners, 6 starting/safety valves, 2 bronze propellers marked: LLOYDS No. 874 H.K. 21.2.39, LLOYDS No. 197 H.K. 13.2.39, 2 propeller shafts marked: LLOYDS 2056 H.K. 14.3.39, LLOYDS 2059 H.K. 14.3.39*

The foregoing is a correct description.

DEUTSCHE WERFT
AKTIENGESELLSCHAFT

Manufacturer.

Please see Augsburg Report dated 26th April 1939.
Dates of Survey while building { During progress of work in shops - *1938 Dec. 17, 20, 1939 Jan. 3, 16, 18, Feb. 7, 11, 15, 22, March 12, 20, 21, 22, 25, 28, 31, April 1, 5, 11, 13, 14, 15, 18, 19, 21, 26, 27, May 3, 5, 10, 12, 16.*
During erection on board vessel - *1939 March 27, April 4, 12, 17, 21, 24, 25, May 2, 8, 10, 15, 19, 22, 26, 31, June 1, 5, 7, 9, 12, 15, 17, 20.*
Total No. of visits *56*

Dates of Examination of principal parts—Cylinders *Please* Covers *see* Pistons *Augsburg* Rods *Report* Connecting rods *dated 26.4.39*
Crank shaft *-* Flywheel shaft *-* Thrust shaft *29.4.39* Intermediate shafts *18.15.4.39* Tube shaft *-*
Screw shaft *13+14.4.39* Propeller *13+21.2.39* Stern tube *5+11.4.39* Engine seatings *21.4.39* Engines holding down bolts *31.5.39*
Completion of fitting sea connections *17.4.39* Completion of pumping arrangements *31.5.39* Engines tried under working conditions *12+20.6.39*
Crank shaft, Material *S-M-Steel* Identification Mark *2.4.13449.15.12.38* Flywheel shaft, Material *-* Identification Mark *-*
Thrust shaft, Material *S-M-Steel* Identification Mark *2057+2058 H.K. 14.3.39* Intermediate shafts, Material *S-M-Steel* Identification Marks *1906+1907 V.S.*
Screw shaft, Material *S-M-Steel* Identification Mark *2056+2060 H.K. 14.3.39* Screw shaft, Material *S-M-Steel* Identification Mark *1905 V.S. 10.3*
Identification Marks on Air Receivers *for air whistle: No. 1260 LLOYDS TEST 16 ATM. W.P. 8 ATM. H.R. 3.5.39. for starting air: No. 2327 + 2328 LLOYDS TEST 39 ATM. W.P. 25 ATM. P.K. 27.4.39.*

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*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *-* 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 *NUOVA GRANADA, GERMANIA, BRITANNIA.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The two main engines have been built at Augsburg under Special Survey of the Society's Surveyors. Material and workmanship of this machinery are of good quality and the outfit is ample. It has been fitted under Special Survey at Hamburg in accordance with the approved plans, the Secretary's letters and otherwise in conformity with the requirements of the Rules. During the trial trips the machinery has given satisfaction under full working and manoeuvring conditions. The machinery is eligible in my opinion to be classed with notation in the Register Book: **LMC 6.39 Oil Eng TS (CL).***

The amount of Entry Fee *1/5 £ R.M. : 24-* When applied for, *22.6.19.39*
Special ... *1/5 £ " : 517-*
Donkey Boiler Fee ... *3 " : 905-* When received, *8.7.19.39*
3 STARTING AIR RECEIVERS ... *3 " : 210-*
Travelling Expenses (if any) £ ... *64-*

Committee's Minute *24 JUL 1939*

Assigned *+ LMC 6.39 LDB 171 CL*

Engineer Surveyor to Lloyd's Register of Shipping.

Jb. Rohrs



Lloyd's Register Foundation