

REPORT ON OIL ENGINE MACHINERY.

No. 1619 ^A

Received at London Office

Writing Report 3rd May 1934 When handed in at Local Office 19 Port of Bremen and Vienna
Augsburg 15th June 1933 Augsburg 11th Nov. 1933
 Survey held at Augsburg and Budapest Date, First Survey Vienna 8th July 1933 Last Survey Vienna 28th Apr. 1934
 Number of Visits 27

on the Single Twin Triple Quadruple Screw vessel motor-tanker, named "Danube Shell II" Tons ^{Gross} — _{Net} —
 at Budapest (Hungary) By whom built Ganz & Co., Ltd. Yard No. 1430 When built 1933/34
 es made at Augsburg By whom made Maschinenfabr. Augsb.-Königsbr. Engine No. 280390 When made 1933
 y Boilers made at — By whom made — Boiler No. — When made —
 Horse Power 2 x 600 Owners International Inland Waterway Co. Port belonging to London
 Horse Power as per Rule 241 Is Refrigerating Machinery fitted for cargo purposes — Is Electric Light fitted yes
 for which vessel is intended River Danube 14 3/8 19 1/6

ENGINES, &c.—Type of Engines 2 x G 6 Vu 50 2 or 4 stroke cycle 4 Single or double acting single

m pressure in cylinders 4.8 atm. Diameter of cylinders 365 mm Length of stroke 500 mm No. of cylinders 6/motor No. of cranks 6/motor
 adicated Pressure 6.7 atm.

bearings, adjacent to the Crank, measured from inner edge to inner edge 456 mm Is there a bearing between each crank yes

ions per minute 305 Flywheel dia. 1300 mm Weight 2080 kg Means of ignition airless inj. Kind of fuel used gas oil

Shaft, dia. of journals as per Rule 220 mm Crank pin dia. 220 mm Crank Webs Mid. length breadth 360 mm Thickness parallel to axis 115 mm
as fitted 220 mm Mid. length thickness Thickness around eyehole

eel Shaft, diameter as per Rule 220 mm Intermediate Shafts, diameter as per Rule 140 mm Thrust Shaft, diameter at collars as per Rule 145 mm
as fitted 220 mm as fitted 140 mm as fitted 145 mm

Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule 156/160 mm Is the tube screw shaft fitted with a continuous liner 3 single liners
as fitted — as fitted 156/160 mm

Liners, thickness in way of bushes as per Rule 10 mm Thickness between bushes as per rule — Is the after end of the liner made watertight in the —
as fitted 10 mm as fitted —

er boss no If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —

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 grease

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 the tube —

yes If so, state type stuffing-box, drawing No 660-0668 Length of Bearing in Stern Bush next to and supporting propeller 656 mm

eller, dia. 1950 Pitch 1300 No. of blades 4 Material house whether Moveable no Total Developed Surface 20.1 sq. feet

od of reversing Engines directly, by comp. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication —

used Thickness of cylinder liners 27 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with —

nducting 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 —

ng Water Pumps, No. 2 worked from engines Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Pumps worked from the Main Engines, No. 1 on each Diameter 130 mm Stroke 210 mm Can one be overhauled while the other is at work yes

ps connected to the Main Bilge Line No. and Size 1 for the fore & 1 for the aft bilge-line, each of 42 m³/hour capacity
How driven centrifugal pumps, electrically driven

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 —

gements — main motor 3.3 m³/h each
 Cargo — Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 doubl. pumps,

two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge —

ps, No. and size:—In Machinery Spaces 2 of 64 mm φ (aux. bilge pump) 2 of 80 mm φ (main pump) In Pump Room —

olds, &c. 8 holds, each with 1 suction of 100 mm (for cargo!)

ependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 electrically driven centrif. pump cap. 42 m³/h.

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces —

om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes (accessible by removable covers of floor)

all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks valves

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

they each fitted with a Discharge Valve always accessible on the plating of the vessel not Are the Blow Off Cocks fitted with a spigot and brass covering plate —
(conf. letter 31. II. 34)

t pipes pass through the bunkers — How are they protected —

t pipes pass through the deep tanks — Have they been tested as per Rule —

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

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 —

partment to another yes Is the Shaft Tunnel watertight — Is it fitted with a watertight door — worked from —

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

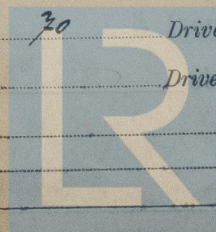
ain Air Compressors, No. 1 No. of stages 2 Diameters 170/160 mm Stroke 160 mm Driven by Auxiliary Diesel

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 145/45 mm Stroke 150 mm Driven by Main engines

small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 65/58 Stroke 70 Driven by Hand

scavenging Air Pumps, No. — Diameter — Stroke — Driven by —

Auxiliary Engines crank shafts, diameter as per Rule 105 mm
as fitted 105 mm



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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 and cleaned *yes*

Is a drain fitted at the lowest part of each receiver *yes*

High Pressure Air Receivers, No. 2

Cubic capacity of each *1100 liter*

Internal diameter *800 mm*

thickness *17 mm*

Seamless, lap welded or riveted longitudinal joint *riveted*

Material *S. M. steel*

Range of tensile strength *44-50 kg/mm²*

Working pressure

by Rules

Actual *30 atm*

Starting Air Receivers, No. 1

Total cubic capacity *55 liter*

Internal diameter *249 mm*

thickness *9 mm*

Seamless, lap welded or riveted longitudinal joint *seamless*

Material *S. M. steel*

Range of tensile strength *45-52 kg/mm²*

Working pressure

by Rules

Actual *30 atm*

IS A DONKEY BOILER FITTED? *not*

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*

(If not, state date of approval)

Receivers *29.6.33; 14.6.32* Separate Tanks

Donkey Boilers *—*

General Pumping Arrangements *yes*

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied *Pistons, Cylinder cover, Liners, Bearings, Valves, Bolts,*

Fuel pump with accessories, Torches, Springs, Piston-Rings, Connecting-rod,

Fuel pipes, Piston & valves for water pumps, etc. etc.

One pair of propellers, 1 screw-shaft.

The foregoing is a correct description, *

GANZ & Co. Ltd.,

Electrical & Mechanical Engineers,

Railway Carriage Manufacturers & Shipbuilders

Manufacturer.

* Relating details not men
in the report of Sur
of Augsburg.

Dates of Survey while building
During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits *20*

Dates of Examination of principal parts—Cylinders *21.8.33* Liners *6.7.33; 13.10.33; 8.11.33*
Crank shaft *13.10.33* and eng crank *13.10.33* Covers *18.7.33* Pistons *13.10.33* Rods *25-31.8.33*
Screw shaft *13.10.33* Propeller *1.3.34* Stern tube *1.3.34* Engine seatings *2.3.34* Engines holding down bolts *2.3.34*
Completion of fitting sea connections *1.3.34* Completion of pumping arrangements *20.4.34* Engines tried under working conditions *6.7.8.31*
Crank shaft, Material *S. M. Steel* Identification Mark *VS 15 77, 17.8.33* Flywheel shaft, Material *S. M. Steel* Identification Mark *VS 15 77, 17.8.33*
Thrust shaft, Material *S. M. Steel* Identification Mark *H. 2. 4. 3. 34* Intermediate shafts, Material *S. M. Steel* Identification Marks *VS 15 77, 17.8.33*
Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *S. M. Steel* Identification Mark *VS 15 77, 17.8.33*

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 *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.)

These heavy oil engines have been constructed under special Survey accordance with the Loc. Rules and Regulations as well as with the plans and instructions thereto. The materials used in the construction are good and the workmanship satisfactory. The engines have been tested on the makers test bed during about 9 normal load and 2 hours at 10% and 20% overload in the presence of Mr. V. Larowok of Augsburg and were found to work satisfactorily. The crankshaft of the starboard engine has been tested by the Germ. Lloyd's surveyor, see London letter 11.8.33. In my opinion the vessel in which these engines are fitted will be eligible for notation of LMC April 1934. The whole machinery has been fitted satisfactorily on board and tried under full working conditions on the 28th April.

The amount of Entry Fee *£* :
Special *£* :
Donkey Boiler Fee *£* :
Travelling Expenses (if any) *£* :
Hull Rpt: *19.*

Committee's Minute

Assigned *+ LMC, 4.34 oil Eng. O.G.*

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