

REPORT ON OIL ENGINE MACHINERY.

No. 51840

21 OCT 1931

Received at London Office

16th Oct. 1931 When handed in at Local Office 17th Oct. 1931 Port of GLASGOW.

Survey held at Glasgow Date, First Survey 11th Aug 1930 Last Survey 14th Oct. 1931.

Type of Engines Single on the Twin Screw vessel "CLIONA" Tons Gross 8375 Net 4948

By whom built Harland & Wolff Ltd. Yard No. 908A. When built 1931-10.

By whom made do. Engine No. 908 When made 1931.

By whom made do. Boiler No. 908 When made 1931.

Key Boilers made at Belfast Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to London.

Horse Power 4200. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Torse Power as per Rule 877 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

for which vessel is intended Foreign.

Type of Engines Vertical reciprocating 2 or 4 stroke cycle 4 Single or double acting Single

pressure in cylinders 500 lb./sq. in. Diameter of cylinders 700 mm. Length of stroke 1400 mm. No. of cylinders 12 No. of cranks 12

bearings, adjacent to the Crank, measured from inner edge to inner edge 970 mm. Is there a bearing between each crank Yes

as per minute 120 Flywheel dia. 2218.5 mm. Weight 1075 kgs. Means of ignition Compression Kind of fuel used Heavy oil.

shaft, dia. of journals as per Rule 442 mm. Crank pin dia. 456 mm. Crank Webs Mid. length breadth 732 mm. Thickness parallel to axis 285 mm.

as fitted 456 mm. Thrust Shaft, diameter at collars as per Rule 21-9-30. Is the tube screw shaft fitted with a continuous liner Yes

Screw Shaft, diameter as per Rule 25-9-30. Is the tube screw shaft fitted with a continuous liner Yes

Liners, thickness in way of bushes as per Rule 25-9-30. Thickness between bushes as per Rule 21-9-30. Is the after end of the liner made watertight in the

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

er 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

ners 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

If so, state type No Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

er, dia. 14'-6" Pitch 11'-10" No. of blades 3 each Material Bronze whether Moveable No Total Developed Surface 53 sq. feet

of reversing Engines Compression Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Thickens of cylinder liners 50 to 30 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

acting 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

Water Pumps, No. 2-Off Main S.p. 2-Off S.p. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

umps worked from the Main Engines, No. 2 Diameter 165 mm. Stroke 300 mm. Can one be overhauled while the other is at work Yes

connected to the Main Bilge Line No. and Size 2-Off. 8" x 8" x 10" Duplex. How driven Steam

Pumps, No. and size 2-Off. 8" x 8" x 10" Duplex. Lubricating Oil Pumps, including Spare Pump, No. and size 6-Off. each 40 tons/hr.

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

No. and size:—In Machinery Spaces 2@ 3 1/2"; 2@ 2 1/2"; 2@ 2 1/2" from cofferdams In Pump Room 1@ 10 1/2" (Fore) 3@ 3" (Main)

, &c. Fore 'Tween deck—2@ 2"; Fore hold—2@ 3 1/2"; Cofferdams—2@ 4"

ndent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1@ 5"; 2@ 6"

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

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 Yes Are they fitted with Valves or Cocks Both

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

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

pes pass through the bunkers Yes How are they protected

pes pass through the deep tanks Yes Have they been tested as per Rule

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

rangement 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

ment to another Yes Is the Shaft Tunnel watertight None fitted Is it fitted with a watertight door Yes worked from

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

Air Compressors, No. Two No. of stages Three Diameters 250, 675, 500 mm. Stroke 410 mm. Driven by Main Engines.

ary Air Compressors, No. One No. of stages Three Diameters 18 3/4", 11 1/2" x 5" Stroke 12" Driven by Steam Engine.

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

aging Air Pumps, No. Diameter Stroke Driven by

ary Engines crank shafts, diameter as per Rule Amsterdam Report—N° 12,234 (herewith). Replaced by Steam Eng.

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes Is a drain fitted at the lowest part of each receiver Yes

internal surfaces of the receivers be examined and cleaned Yes Cubic capacity of each 400 lbs. each Internal diameter 492 mm. thickness 19.5 mm.

Pressure Air Receivers, No. Two Seamless Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 1100 lbs./sq. in. Actual 900 lbs./sq. in.

s, lap welded or riveted longitudinal joint Total cubic capacity 1400 ft. 3 Internal diameter 5'-10 5/16" thickness 1"

g Air Receivers, No. Two Riveted Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 371 lbs./sq. in. Actual 356 lbs./sq. in.

ness, lap welded or riveted longitudinal joint

IS A DONKEY BOILER FITTED? *Yps. Jno S.E.* If so, is a report now forwarded? *Yps. Bel. 10.31*

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting *2-8-30-Lm. th. & Bel. 25-9-30.* (If not, state date of approval)

Donkey Boilers *No*

General Pumping Arrangements *Yps*

Receivers *Yps*

Separate Tanks *None fitted*

Oil Fuel Burning Arrangements *Yps*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yps.*

State the principal additional spare gear supplied

*3- Cylinders covers + 4- Liners. 11 Exhaust Valves.
3- Pistons + 42- Piston Rings. 1- Inlet Valve.
1- Piston Rod + 1- Connecting Rod.
1- Propeller Shaft + 2- Best Iron Propellers.*

The foregoing is a correct description,

For HARLAND AND WOLFF, LIMITED

Archibald Paterson

Manufacturer.

Acting Finnieston Secretary
Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits *89*

Dates of Examination of principal parts—Cylinders *21-4-31* Covers *21-4-31* Pistons *20-3-31* Rods *20-3-31* Connecting rods *3-4*

Crank shafts *5. 18-2-31* Flywheel shaft *None* Thrust shafts *5. 9-2-31* Intermediate shafts *10-2-31* Tube shaft *P. 19-1*

Screw shafts *24-12-30* Propellers *10-3-31* Stern tube *5. 24-12-30* Engine seatings *10-3-31* Engines holding down bolts *5. 22-*

Completion of fitting sea connections *26-3-31* Completion of pumping arrangements *14-10-31* Engines tried under working conditions *14-10-*

Crank shaft, Material *Steel* Identification Mark *As per attached list* Flywheel shaft, Material *None* Identification Mark *—*

Thrust shafts, Material *Steel* Identification Mark *As 47368 JWS* Intermediate shafts, Material *Steel* Identification Marks *S. 429*

Tube shaft, Material *None* Identification Mark *—* Screw shafts, Material *Steel* Identification Mark *2068, 42*

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yps.*

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 *—*

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 *No* If so, state name of vessel *—*

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines have been built*

Special Survey in accordance with the Society's Rules & approved plans. Along with the Donkey Boilers (Bel. Rpt. 105-75) they have been properly fitted in the vessel and tried under full power at sea with satisfactory result. The material workmanship are good.

This vessel's Machinery is eligible, in my opinion, to be classed in the Register Book with Records: + L.M.C. 10.31 — Oil Engines; 2 D.B. — 150 lb.; C.L..

The amount of Entry Fee .. £ *6* : - - - - - When applied for, *10.10.1931*
Special £ *118* : *16/-*
Donkey Boiler Fee £ : : : : : When received, *4.11.1931*
Travelling Expenses (if any) £ : : : : : *—*

Committee's Minute **GLASGOW 20 OCT 1931**

Assigned *+ L.M.C. 10.31 - 2 D.B. - 150 lb.*

CERTIFICATE WRITTEN.

J.D. Boyle
Engineer Surveyor to Lloyd's Register of Shipping

L © 2020 Lloyd's Register Foundation