

REPORT ON OIL ENGINE MACHINERY

No. 41800.

RECD. 29 MAR. 1922

Received at London Office

Date of writing Report 21. 3. 1922 When handed in at Local Office 21. 3. 1922 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 26. 6. 1919 Last Survey 14. 3. 1922
 Reg. Book. 148. Number of Visits 148.
 on the Single Screw vessels Tauraki Tons { Gross 7113
 { Net 4425
 Master Wm. Denny Built at Dumbarton By whom built Wm. Denny & Co. Yard No. 1039 When built 1922
 Engines made at Glasgow By whom made North British Diesel Engine No. 26 When made 1922
 Donkey Boilers made at Annan By whom made Cochran & Co. Annan, L. Boiler No. When made 1922
 Brake Horse Power Owners Union S.S. Co. of New Zealand Port belonging to London
 Nom. Horse Power as per Rule 963 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

OIL ENGINES, &c.—Type of Engines Twin Diesel 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 450 lb No. of cylinders 8 each No. of cranks 8 Diameter of cylinders 26 1/2
 Length of stroke 47" Revolutions per minute 96 Means of ignition Compression Kind of fuel used above 150°F
 Is there a bearing between each crank yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 35"
 Distance between centres of main bearings 57" Is a flywheel fitted yes Diameter of crank shaft journals as per Rule 16 5/8
 as fitted 16 5/8 Diameter of crank shaft journals as fitted 16 5/8
 Diameter of crank pins 16 5/8 Breadth of crank webs as per Rule as approx. 3 1/2 Thickness of ditto as per Rule as approx. 1 1/2
 as fitted 16 5/8 Diameter of tunnel shaft as per Rule 13.1 Diameter of thrust shaft as per Rule 13.75
 as fitted 14.02 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes
 as fitted 14.25 If the liner is in more than one length are the joints burned yes
 Is the after end of the liner made watertight in the propeller boss 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 If without liners, is the shaft arranged to run in oil yes
 Type of outer gland fitted to stern tube Length of stern bush 60" Diameter of propeller 15'-0"
 Pitch of propeller 14-7" No. of blades 3 state whether moveable yes Total surface 66.8 square feet
 Method of reversing cam shaft end adjustment Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Thickness of cylinder liners 2 1/4"
 Are the cylinders fitted with safety valves yes Means of lubrication forced oil feed Are the exhaust pipes and silencers water cooled or 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. of cooling water pumps 2 Is the sea suction provided with an efficient strainer which can be cleared

within the vessel yes No. of bilge pumps fitted to the main engines none Diameter of ditto 3 and 4 inches Stroke
 Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines How driven Electric
 Sizes of pumps 1 Centrif. 100 gms, 1 Recip. 50 gms, 1 Ballast 200 gms, 1 Submarine 50 gms No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps: In engine room ballast 7" cyl. 200 gms
 and in holds, etc. 2-3 1/2 in holds, 1 3/4 in tunnel well. No. of ballast pumps 1 How driven Electric Sizes of pumps 200 gms
 Is the ballast pump fitted with a direct suction from the engine room bilges yes State size 7" suction Is a separate auxiliary pump suction fitted in Engine Room and size See above
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine Room always accessible yes
 Are the stices on Engine Room bulkheads always accessible none Are all connections with the sea direct on the skin of the ship yes
 Are they valves or cocks Both Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates yes
 Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges yes
 Is the screw shaft tunnel watertight yes Is it fitted with a watertight door yes
 worked from upper deck If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

No. of main air compressors 2 No. of stages 3 Diameters 17 1/2 - 15 1/4 - 14 1/4 Stroke 26 Driven by main engine
 No. of auxiliary air compressors 1-2 No. of stages 3 Diameters 15 1/2 - 13 1/2 - 3 3/4 Stroke 11 1/4 Driven by Aux. Diesel
 No. of small auxiliary air compressors 1 No. of stages 2 Diameters 6 1/2 - 2 1/4 Stroke 6" Driven by Clean
 No. of scavenging air pumps Diameter Stroke Driven by
 Diameter of auxiliary Diesel Engine crank shafts as per Rule as approx. 6 5/8 Are the air compressors and their coolers made so as to be easy of access yes

AIR RECEIVERS:—No. of high pressure air receivers 6 Internal diameter (2 main) 15 3/4 & 17 3/4 (4 reserve) main: 14.8 & reserve: 17.8
 material S Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength 28/32
 thickness 5/8" working pressure by Rules 1000 lb. and 970 lb. No. of starting air receivers 4 Internal diameter 69"
 Total cubic capacity 1524 Material S Seamless, lap welded or riveted longitudinal joint Double mt. straps
 Range of tensile strength 28/32 thickness 1 1/2" Working pressure by rules 368 lb. 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 for access
 Is there a drain arrangement fitted at the lowest part of each receiver yes



IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded?

yes

HYDRAULIC TESTS:-

Table with columns: DESCRIPTION, DATE OF TEST, WORKING PRESSURE, TEST PRESSURE, STAMPED, REMARKS. Rows include ENGINE CYLINDERS, MAIN COMPRESSORS, AIR RECEIVERS, etc.

PLANS. Are approved plans forwarded herewith for shafting (If not, state date of approval)

yes

Receivers

yes

Separate Tanks

SPARE GEAR

See separate sheet.

The foregoing is a correct description,

J. Madagan

Manufacturer.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits.

Dates of Examination of principal parts: Cylinders, Covers, Pistons, Rods, Connecting rods, Crank shaft, Thrust shaft, Tunnel shafts, Screw shaft, Propellers, Stern tubes, Engine seatings, Engines holding down bolts, Completion of pumping arrangements, Engines tried under working conditions, Completion of fitting sea connections, Material of crank shaft, Material of tunnel shafts, Is the flash point of the oil to be used over 150° F., Is this machinery duplicate of a previous case.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under special survey, and the materials and workmanship are good. It has been built in accordance with the approved plans. After being efficiently fitted on board the vessel, it was tried under full power and found to work satisfactorily.

It is not eligible in our opinion for records of + L.M.C. 3.22.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. - 3.22. (Annual Survey)

Cic Engines 4. S.C.S.A. 16 Cy. 26 1/2", 47". 963 N.H.P. I.B. 100 H.P. C.L. North British Diesel Works, Ltd., Glasgow.

The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any).

Signature: Harry Clarke, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

28 MAR 1922

Assigned + L.M.C. 3.22

MACHINERY CERTIFICATE



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Lloyd's Register Foundation

Rpt. 5b.

Date of writing

No. in Reg. Book.

Master

Boilers made

Owners

VERTICAL

Made at

tested by hyd

No. of safety

enter the donk

strength

Lap of plating

Radius of do.

Thickness of

plates

Thickness of

Dates of Survey while building

GENERAL

Glasgow

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

Survey Travell

Commit Assigned