

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

2 NOV 1927

Date of writing Report 10 When handed in at Local Office 31.10.1927 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 9.5.27 Last Survey 24.10.1927
 Reg. Book. on the *S Astra* (Number of Visits 36)
 Tons { Gross 5640 Net 3322
 Built at *Monfalcone Italy* By whom built *Carriere Navale Triestino* Yard No. 186 When built 1927
 Engines made at *Glasgow* By whom made *David Rowan & Co Ltd* Engine No. 866 when made 1927
 Boilers made at *Glasgow* By whom made *David Rowan & Co Ltd* Boiler No. 866 when made 1927
 Registered Horse Power Owners *S.S.P.S.* Port belonging to
 Nom. Horse Power as per Rule 651 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which Vessel is intended *S.S.P.S.*

ENGINES, &c.—Description of Engines *Triple expansion* Revs. per minute
 Dia. of Cylinders *27 1/2 - 46 - 77* Length of Stroke *54* No. of Cylinders *3* No. of Cranks *3*
 Crank shaft, dia. of journals as per Rule *15.183* as fitted *15 1/2* Crank pin dia. *15 1/2* Crank webs Mid. length breadth *22 1/2* Thickness parallel to axis *9 3/4*
 Intermediate Shafts, diameter as per Rule *14.46* as fitted *14 1/2* Thrust shaft, diameter at collars as per Rule *15.18* as fitted *15 1/2*
 Tube Shafts, diameter as per Rule *15.96* as fitted *16* Is the *tube* shaft fitted with a continuous liner *yes*
 Screw Shaft, diameter as per Rule *7.87* as fitted *13 1/16* Thickness between bushes as per Rule *59* as fitted *3/4* 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
 If two 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 shaft *no*
 Length of Bearing in Stern Bush next to and supporting propeller *5'4"*
 Propeller, dia. *18'0"* Pitch *18'0"* No. of Blades *4* Material *Bronze* whether Moveable *yes* Total Developed Surface *99* sq. feet
 Feed Pumps worked from the Main Engines, No. *none* Diameter — Stroke — Can one be overhauled while the other is at work —
 Bilge Pumps worked from the Main Engines, No. *none* Diameter — Stroke — Can one be overhauled while the other is at work —
 Feed Pumps No. and size *2 @ 12 1/2 x 9 x 12* How driven *Steam* Pumps connected to the Main Bilge Line No. and size *10 @ 6 1/2 x 8 duplex, also Ballast pump* How driven *Steam*
 Ballast Pumps, No. and size *1 @ 10 x 12 x 12* Lubricating Oil Pumps, including Spare Pump, No. and size *—*

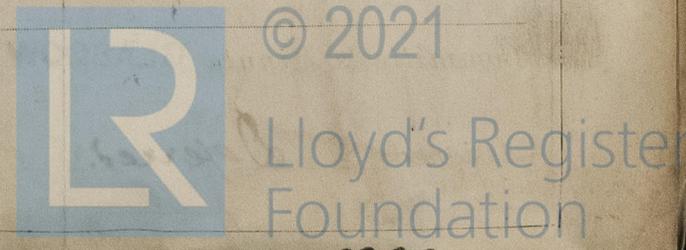
Are two independent means arranged for circulating water through the Oil Cooler — Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, — In Engine and Boiler Room
 In Holds, &c.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes
 Are the Bilge Suctions in the Machinery Space led from easily accessible man-holes, placed above the level of the working floor, with straight tail pipes to the bilges
 Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates Are the Overboard Discharges above or below the deep water line
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow-Off Cocks fitted with a spigot and brass covering plate
 What Pipes pass through the bunkers How are they protected
 What pipes pass through the deep tanks Have they been tested as per Rule
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
 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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *9615* sq. ft.
 Is Forced Draft fitted *yes* No. and Description of Boilers *three single ended* Working Pressure *200*
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *yes*
 IS A DONKEY BOILER FITTED? *no* If so, is a report now forwarded? —

PLANS. Are approved plans forwarded herewith for Shafting *no* Main Boilers *yes* Auxiliary Boilers — Donkey Boilers —
 Superheaters — General Pumping Arrangements *No. 6 pipes in Don & Tri.* Oil fuel Burning Piping Arrangements *No. 6 pipes in Don & Tri.*

SPARE GEAR. State the articles supplied:— *As per Rules and in addition:— one screw shaft, two bronze propeller blades, one 3/8 crankshaft, one piston rod, one top end bush, one bottom end bush, one complete set of rings for main engine pistons, one thrust shoe, one eccentric strap, one set of piston rings for each donkey (steam and water), one set of valves for each donkey.*

The foregoing is a correct description,
 For David Rowan & Co. Ltd
 Archd. W. Grierson
 Manufacturer.



39174

1927 May 9-11 Jun 2-20-21-24-27 July 7 Aug 5-8-9-11-16-19-23-25 Sep 2-7-8-9-12-15-16-19-29-30 Oct

Dates of Survey while building

During progress of work in shops - - 3-5-7-11-12-14-17-18-24-25

During erection on board vessel - - -

Total No. of visits 36

Dates of Examination of principal parts - Cylinders 11-10-27 Slides 11-10-27 Covers 9-9-27
Pistons 19-9-27 Piston Rods 29-9-27 Connecting rods 7-9-27
Crank shaft 2-9-27 Thrust shaft 30-9-27 Intermediate shafts 8-9-27
Tube shaft - Screw shaft 12-9-27 Propeller 12-9-27
Stern tube 7-9-27 Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections
Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers
Crank shaft material J. Steel Identification Mark LLOYD'S No 866 J.M. 2-9-27 Thrust shaft material J. Steel Identification Mark LLOYD'S No 2017 L.C.O. 2-9-27
Intermediate shaft material Identification Marks LLOYD'S No 2018 L.C.O. 8-9-27 Tube shaft, material - Identification Mark
Screw shafts material J. Steel Identification Mark LLOYD'S No 2074 L.C.O. 12-9-27 Steam Pipes, material Steel Test pressure 600 Date of Test 3-10-27

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F.
Have the requirements of the Rules for carrying and burning oil fuel 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.)

The materials and workmanship are good.
The machinery has been constructed under special survey in accordance with the Rules. It is about to be dispatched to Trieste to be fitted in the vessel.

GLASGOW 25/10/27

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

The amount of Entry Fee ... £ 6 : -
Special fee ... £ 86 : 1
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 27/10/27
When received, 1/11/27

S. Danis, Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 13 MAR 1928

Committee's Minute GLASGOW 1 - NOV 1927

Assigned Defered.

