

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office Aug 22 1938

Date of writing Report 25th June, 1938 When handed in at Local Office 25th June, 1938 Port of GREENOCK.

No. in Survey held at Port Glasgow Date, First Survey 29th April, 1938 Last Survey 30th May 1938  
 Reg. Book. S. S. "SCIENTIST" (Number of Visits 5)

Built at Port Glasgow By whom built Lithgows Ltd. Yard No. 911 Tons Gross 6198.69  
 Engines made at Glasgow By whom made D. Rowan & Co. Ltd. Engine No. 1023 When made 1938  
 Boilers made at Do. By whom made Do. Boiler No. 1023 When made 1938

Registered Horse Power \_\_\_\_\_ Owners J. & J. Harrison & Co. Port belonging to Liverpool

Nom. Horse Power as per Rule \_\_\_\_\_ Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

Trade for which Vessel is intended \_\_\_\_\_

## ENGINES, &c.—Description of Engines

Dia. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ No. of Cylinders \_\_\_\_\_ Revs. per minute \_\_\_\_\_  
 No. of Cranks \_\_\_\_\_

Crank shaft, dia. of journals as per Rule \_\_\_\_\_ Crank pin dia. \_\_\_\_\_ Crank webs Mid. length breadth \_\_\_\_\_ Thickness parallel to axis \_\_\_\_\_  
as fitted \_\_\_\_\_ Mid. length thickness \_\_\_\_\_ shrunk \_\_\_\_\_ Thickness around eye-hole \_\_\_\_\_

Intermediate Shafts, diameter as per Rule \_\_\_\_\_ Thrust shaft, diameter at collars as per Rule \_\_\_\_\_  
as fitted \_\_\_\_\_ as fitted \_\_\_\_\_

Tube Shafts, diameter as per Rule \_\_\_\_\_ Screw Shaft, diameter as per Rule \_\_\_\_\_ Is the tube shaft fitted with a continuous liner }  
as fitted \_\_\_\_\_ as fitted \_\_\_\_\_ screw }

Bronze Liners, thickness in way of bushes as per Rule \_\_\_\_\_ Thickness between bushes as per Rule \_\_\_\_\_ Is the after end of the liner made watertight in the  
as fitted \_\_\_\_\_ as fitted \_\_\_\_\_ propeller boss \_\_\_\_\_  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner \_\_\_\_\_  
 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 \_\_\_\_\_  
 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 If so, state type \_\_\_\_\_ Length of Bearing in Stern Bush next to and supporting propeller Jls. Rpt.

Propeller, dia. Jls. Rpt. No. of Blades 4 Material Bronze whether Movable Yes Total Developed Surface Jls. Rpt. sq. feet

Feed Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

Bilge Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

Feed Pumps { No. and size \_\_\_\_\_ Pumps connected to the { No. and size \_\_\_\_\_  
 { How driven \_\_\_\_\_ { Main Bilge Line { How driven \_\_\_\_\_

Ballast Pumps, No. and size \_\_\_\_\_ 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 Pump Room \_\_\_\_\_ In Holds, &c. Nos 1, 2, 3, 4 & 5 holds each 2 @ 3 1/2"  
Nº 6 hold & tunnel well each 1 @ 3"

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 mud-boxes, 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 Yes Are they fitted with Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the Overboard Discharges above or below the deep water line Both

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

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 \_\_\_\_\_) Total Heating Surface of Boilers \_\_\_\_\_

Is Forced Draft fitted \_\_\_\_\_ No. and Description of Boilers \_\_\_\_\_ Working Pressure \_\_\_\_\_

IS A REPORT ON MAIN BOILERS NOW FORWARDED? \_\_\_\_\_

IS A DONKEY BOILER FITTED? \_\_\_\_\_ 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 \_\_\_\_\_ Main Boilers \_\_\_\_\_ Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval) \_\_\_\_\_

Superheaters \_\_\_\_\_ General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements \_\_\_\_\_

## SPARE GEAR.

Has the spare gear required by the Rules been supplied \_\_\_\_\_  
 State the principal additional spare gear supplied \_\_\_\_\_

The foregoing is a correct description,

Manufacturer.



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W 77-0010

Dates of Survey while building  
 During progress of work in shops - - (1938) April 29, May 5-9, 25-30  
 During erection on board vessel - - -  
 Total No. of visits 5

Dates of Examination of principal parts—Cylinders Slides Covers  
 Pistons Piston Rods Connecting rods  
 Crank shaft Thrust shaft J.G.S. Ppt. Intermediate shafts  
 Tube shaft Screw shaft Propeller  
 Stern tube Engine and boiler seatings 9-5-38 Engines holding down bolts  
 Completion of fitting sea connections 30-5-38  
 Completion of pumping arrangements Boilers fixed Engines tried under steam  
 Main boiler safety valves adjusted Thickness of adjusting washers  
 Crank shaft material Identification Mark Thrust shaft material Identification Mark  
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark  
 Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test  
 Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.  
 Have the requirements of the Rules for the use of oil as fuel been complied with  
 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 Fitting of stem tube, tail shaft, propeller & sea connections also engine & boiler seats examined & found satisfactory. The vessel was towed to Glasgow & machinery fitted.

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

The amount of Entry Fee	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

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

Committee's Minute GLASGOW 30 AUG 1938

Assigned Su Gls 60115

24/6/38

