

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 8 FEB 1933

Date of writing Report 3<sup>RD</sup> FEBRUARY 1933 When handed in at Local Office 3<sup>RD</sup> FEBRUARY 1933 Port of Greenock

No. in Survey held at Port Glasgow Date, First Survey and Last Survey 13<sup>TH</sup> December 1932.

Reg. Book. on the SS HARDINGHAM (Number of Visits 1)

Built at Port Glasgow By whom built Lithgows & Co Yard No. 858 Tons { Gross 5414.71  
Net 3208.26 When built 1933

Engines made at Glasgow By whom made D. Rowan & Co. Ltd Engine No. When made 1933

Boilers made at " By whom made " Boiler No. When made 1933

Registered Horse Power Owners Willis Steamship Company Ltd Port belonging to London

Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Foreign

## ENGINES, &c.—Description of Engines

Dia. of Cylinders Length of Stroke No. of Cylinders Revs. per minute

Crank shaft, dia. of journals as per Rule Length of Stroke No. of Cranks

Intermediate Shafts, diameter as per Rule as fitted Crank pin dia. Crank webs Mid. length breadth Mid. length thickness Thickness parallel to axis Thickness around eye-hole

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Thrust shaft, diameter at collars as per Rule as fitted

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted 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 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 Yes If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface 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 How driven Pumps connected to the Main Bilge Line { No. and size 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.

## Main Water Circulating Pump Direct Bilge Suctions, No. and size

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 Yes Are the Overboard Discharges 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 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

Superheaters General Pumping Arrangements 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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W405-0091

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - -

Total No. of visits

(1932) Dec. 12.

Dates of Examination of principal parts—Cylinders Slides Covers

Pistons Piston Rods Connecting rods

Crank shaft Thrust shaft Intermediate shafts

Tube shaft Screw shaft Propeller

Stern tube Engine and boiler seatings 13-12-32 Engines holding down bolts

Completion of fitting sea connections 13-12-32

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. The propeller, stem tube, & sea connections have been satisfactorily fitted on board. The vessel has left for Glasgow for installation of machinery by Messrs D. Rowan & Co. Ltd. Glasgow Surveyors notified.

7 cent ... N laws of Harbor ...  
 4807  
 3/2/33

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 ... £	:	:	When applied for,
Special ... £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

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

Committee's Minute **GLASGOW 7 FEB 1933**

Assigned See accompanying Machinery Report (No. 53243).

