

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 26. 10. 1944 When handed in at Local Office 19 Port of Nottingham
 No. in Survey held at Derby Date, First Survey 22. 9. 43. Last Survey 6. 9. 1944
 Reg. Book on the *Harlowton 3041 (1886)* (Number of Visits 26)
 Built at *Derby* By whom built *Harlowton Works* Yard No. 1297 Tons {Gross 4457
 Engines made at *Derby* By whom made *Geo. Fletcher & Co. Ltd.* Engine No. 2124 When built 1945
 Boilers made at - By whom made - Boiler No. - When made -
 Registered Horse Power - Owners - Port belonging to -
 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 *Inserted, Triple Expansion* Revs. per minute 185
 Dia. of Cylinders *18 1/2" x 31" x 38 1/2" x 38 1/2"* Length of Stroke 30" No. of Cylinders 4 No. of Cranks 4
 Crank shaft, dia. of journals as per Rule *Appd.* Crank pin dia. 10 1/2" Mid. length breadth 16 3/4" Thickness parallel to axis 6 1/2"
 as fitted 10 1/2" Crank webs Mid. length thickness 6 1/2" shrunk Thickness around eye-hole 4 7/8"
 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
 at - 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 - 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. -
 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 - Are they fitted with Valves or Cocks -
 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 -
 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 -) Total Heating Surface of Boilers -
 Which Boilers are fitted with Forced Draft - Which Boilers are fitted with Superheaters -
 No. and Description of Boilers - Working Pressure 225 lb./sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? No.
 IS A DONKEY BOILER FITTED? - If so, is a report now forwarded? -
 Can the donkey boiler be used for domestic purposes only -
 PLANS. Are approved plans forwarded herewith for Shafting 4. 2. 41. Main Boilers - Auxiliary Boilers - Donkey Boilers -
 (If not state date of approval)
 Superheaters - General Pumping Arrangements - Oil fuel Burning Piping Arrangements -

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*
 State the principal additional spare gear supplied *To Admiralty Requirements.*

The foregoing is a correct description.

AND ON BEHALF OF
GEORGE FLETCHER & CO. LTD.

Manufacturer.

M. Matthew
 WORKING MANAGER



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002568-002576-0155

Dates of Survey while building

During progress of work in shops - - - 22. 9. 43 to 6. 9. 44.

During erection on board vessel - - - - -

Total No. of visits 26.

Dates of Examination of principal parts—Cylinders 25.10/43 - 15.1/44 Slides 25.10/43 - 15.1/44 Covers 25.10/43 - 15.1/44

Pistons 13.10/43 - 15.1/44 Piston Rods 22.9/43 - 19.4/44 Connecting rods 22.9/43 - 19.4/44

Crank shaft 29.9/43 - 25.10/43 Thrust shaft - Intermediate shafts -

Tube shaft - Screw shaft - Propeller -

Stern tube - 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 O.H. Steel. Identification Mark 28.9.43: GHM. 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 Yes. If so, state name of vessel No. J. 453. "LOCH DUNVEGAN"

General Remarks (State quality of workmanship, opinions as to class, &c. This engine has been built under Special Survey in accordance with the approved plans, the Secretary's letters and the Society's Rules.

The materials and workmanship are good.

The engine has now been despatched to the works of Messrs Harland and Wolff Ltd., Glasgow, for installation on board the vessel No. J. 1866.

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	£	19 - 7 - 6	When applied for,
Special Survey Fee	£	22 - 12 - 6	30. 10 1944
Supervision of Erection	£	22 - 10 -	When received,
Donkey Boiler Fee	£		19
Travelling Expenses (if any)	£		

ADMIRALTY
A/c rendered from
London 12. 11. 44

A. W. Jones.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 JUN 1945

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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