

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report **3-12-1941** When handed in at Local Office **8-12-1941** Port of **Glasgow**  
 No. in Survey held at **Glydebank** Date, First Survey **31-1-41** Last Survey **4-12-1941**  
 Reg. Book. on the **"EMPIRE FLORIZEL"** (Number of Visits **100**)

Built at \_\_\_\_\_ By whom built \_\_\_\_\_ Yard No. \_\_\_\_\_ Tons { Gross  
 Engines made at **Glydebank** By whom made **John Brown & Co.** Engine No. **A. 58** When built \_\_\_\_\_  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Rule **439** Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_  
 Trade for which Vessel is intended \_\_\_\_\_

ENGINES, &c.—Description of Engines **Triple expansion**

Dia. of Cylinders **23 1/2 - 37 1/2 - 68** Length of Stroke **48"** No. of Cylinders **3** Revs. per minute \_\_\_\_\_  
 Crank shaft, dia. of journals as per Rule **13-6"** Crank pin dia. **13 3/4"** Crank webs Mid. length breadth **26 3/4"** No. of Cranks **3**  
 as fitted **13 3/4"** Mid. length thickness **8 3/4"** Thickness parallel to axis **8 3/4"**  
 Intermediate Shafts, diameter as per Rule **12-98"** as fitted **13"** Thrust shaft, diameter at collars as per Rule **13-63"**  
 as fitted **13 3/4"** Tube Shafts, diameter as per Rule **14-465"** as fitted **14 3/4"** Is the **tube** shaft fitted with a continuous liner? **Yes**  
 as fitted **14 3/4"** Is the **screw** shaft fitted with a continuous liner? **No**  
 Bronze Liners, thickness in way of bushes as per Rule **3/4"** as fitted **3/4"** Thickness between bushes as per Rule **1/16"** as fitted **1/16"** Is the after end of the liner made watertight in the 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 If so, state type \_\_\_\_\_ Length of Bearing in Stern Bush next to and supporting propeller \_\_\_\_\_  
 Propeller, dia. **18'-3"** Pitch **17'-3"** No. of Blades **4** Material **C.C.** whether Moveable **Solid** Total Developed Surface **108-5** 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. **2** Diameter **4"** Stroke **24"** 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 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, &amp;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

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

IS A DONKEY BOILER FITTED?

Can the donkey boiler be used for domestic purposes only.

If so, is a report now forwarded?

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

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

John Brown & Company Limited.  
 The foregoing is a correct description.

Glydebank Secretary.

Manufacturer.



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1941 Jan: 31 Feb: 3 5 6 19 20 21 25 26 29 Mar: 12 Apr: 30 May: 1 8 12 14 20 21 22 23 27 28 29  
 During progress of work in shops - June: 2 3 6 9 10 11 13 16 18 July: 3 4 7 9 10 16 17 18 30 31 Aug: 1 4 6 7 8 11 12 13 18 19 21 22 26  
 Dates of Survey while building During erection on board vessel - - 27 28 29 Sep: 2 3 4 5 8 9 10 11 12 15 16 18 19 22 23 25 26 Oct: 2 3 6 7 9 10 15 16 17 21 22 23  
 24 27 29 Nov: 3 7 12 13 14 19 21 26 27 Dec: 4  
 Total No. of visits 100

Dates of Examination of principal parts—Cylinders 3-7-41 *eli* Slides 13-11-41 *eli* Covers 3-9-41 *eli*  
 Pistons 25-9-41 *eli* Piston Rods 22-9-41 *eli* Connecting rods 3-9-41 *eli*  
 Crank shaft 21-3-41 *eli* Thrust shaft 4-7-41 *eli* Intermediate shafts 4-7-41 *eli*  
 Tube shaft ✓ Screw shaft 29-10-41 *eli* Propeller 29-10-41 *eli*  
 Stern tube 31-7-41 *eli* Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements

Main boiler safety valves adjusted

Crank shaft material

Intermediate shafts, material

Screw shaft, material

Is an installation fitted for burning oil fuel

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 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

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 and the Society's Rules and requirements the materials and workmanship are good.*

*The requirements of The Ministry of Shipping Specification have been carried out satisfactorily.*

*The bare engine only has been despatched to Dunlop Bummer & Co Glasgow for storage, shafting etc being retained at John Brown & Co Ltd.*

*This engine has been efficiently installed in the vessel. Please see Greenock report 22357 for recommendations*

*Charles J. Hunter*  
 21/6/43

The amount of Entry Fee ... £ : : When applied for,  
 2/5 Special ... £ 36 : 7 : 0 9 - DEC 1941  
 2/5 Donkey Boiler Fee ... £ 9 : 2 : 0  
 2/5 Spec. M. S. Travelling Expenses (if any) £ : : : When received,  
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Committee's Minute GLASGOW 9 - DEC 1941  
 Assigned *referred* GLASGOW 29 JUN 1943