

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office **3 MAY 1945**

Date of writing Report **25th APRIL 1945** When handed in at Local Office **28th APRIL 1945** Port of **GREENOCK**

No. in Survey held at **PORT GLASGOW** Date, First Survey **25th MAY 1944** Last Survey **23rd APR 1945**
 Reg. Book (Number of Visits **32**)

on the **Smg. Sc. H.M.T. BIGGAL** Tons { Gross **472.48**
 Net **157.24**

Built at **PORT GLASGOW** By whom built **FERGUSON BROS (P'CLAS) LTD** Yard No. **369** When built **1945**

Engines made at **do** By whom made **do** Engine No. **369** When made **1945**

Boilers made at **PAISLEY** By whom made **A.F. CRAIG & CO LTD** Boiler No. **623/42** When made **1944**

Registered Horse Power Owners **THE ADMIRALTY** Port belonging to

Nom. Horse Power as per Rule **154** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Trade for which vessel is intended **ADMIRALTY SERVICE**

ENGINES, &c.—Description of Engines **Triple Expansion** Revs. per minute **159**

Dia. of Cylinders **13 1/2" - 23" - 38"** Length of Stroke **27"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals **7.51"** as per Rule **7.51"** Crank pin dia. **7.875"** as fitted **7.875"** Mid. length breadth **12 3/4"** Thickness parallel to axis **4 13/16"** as per Rule **7.51"** Crank webs **4 1/16"** as fitted **4 1/16"** shrunk Thickness around eye-hole **3 1/16"** as per Rule **7.51"**

Intermediate Shafts, diameter **7.15"** as per Rule **7.15"** Thrust shaft, diameter at collars **7.875"** as fitted **7.875"**

Tube Shafts, diameter **7.25"** as per Rule **7.25"** Screw Shaft, diameter **8.25"** as per Rule **8.25"** Is the { **lube** } shaft fitted with a continuous liner { **No** }

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 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 **Yes**

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 **Yes**

If two liners are fitted, is the shaft lapped or protected between the liners **Yes** Is an approved Oil Gland or other appliance fitted at the after end of the tube **Yes**

at **Yes** If so, state type **Newark** Length of Bearing in Stern Bush next to and supporting propeller **3'-0 1/2"**

Propeller, dia. **8'-9"** Pitch **9'-4"** No. of Blades **3** Material **C.I.** whether Moveable **No** Total Developed Surface **30** sq. feet

Feed Pumps worked from the Main Engines, No. **2** Diameter **2 1/4"** Stroke **15"** Can one be overhauled while the other is at work **Yes**

Bilge Pumps worked from the Main Engines, No. **2** Diameter **2 1/4"** Stroke **15"** Can one be overhauled while the other is at work **Yes**

Feed { No. and size **One 4" dia 12" stroke** Pumps connected to the { No. and size **One 6 1/2"** Two **2 1/4" x 15"** }
 Pumps { How driven **Steam cyl 6"** Main Bilge Line { How driven **Steam** Main engine }

Ballast Pumps, No. and size **None** Lubricating Oil Pumps, including Spare Pump, No. and size **Yes**

Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room **Four at 2"**

In Pump Room **Yes** In Holds, &c. **Eight @ 2"**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **One 5"** Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size **One @ 3 1/2"** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **Yes**

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 **Yes**

Are all Sea Connections fitted direct on the skin of the ship **Yes** Are they fitted with Valves or Cocks **Valves**

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 **except line discharge**

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 **None** How are they protected **Yes**

What pipes pass through the deep tanks **Yes** Have they been tested as per Rule **Yes**

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**

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 **Yes** Is the Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **No** worked from **Access from 00**

MAIN BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **2650** ft²

Which Boilers are fitted with Forced Draft **Yes** Which Boilers are fitted with Superheaters **Yes**

No. and Description of Boilers **One single ended** Working Pressure **200 lb**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes** **25 Apr N° 69100.**

IS A DONKEY BOILER FITTED? **No** If so, is a report now forwarded? **Yes**

Can the donkey boiler be used for other than domestic purposes **Yes**

PLANS. Are approved plans forwarded herewith for Shafting **30-9-42** Main Boilers **Yes** Auxiliary Boilers **Yes** Donkey Boilers **Yes**
 (If not state date of approval)

Superheaters **Yes** General Pumping Arrangements **25-7-39** Oil fuel Burning Piping Arrangements **Yes**

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.

FERGUSON BROTHERS (PORT-GLASGOW) LTD.

Peter Symon MANAGING DIRECTOR

Manufacturer.



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Dates of Survey while building
During progress of work in shops - - (1944) MAY 25 JULY 11 18 24 AUG 15 21 29 OCT 5 10 14 NOV 7 9 14 30 DEC 4 12 19
(1945) JAN 5 9 23 FEB 8 13 24 MAR 2 6 15 20 21 28 APR 13 17 23
During erection on board vessel - - -
Total No. of visits 32

Dates of Examination of principal parts—Cylinders 21-5-44 Slides 21-5-44 Covers 21-5-44
Pistons 21-5-44 Piston Rods 29-5-44 Connecting rods 29-5-44
Crank shaft 29-8-44 Thrust shaft 14-11-44 Intermediate shafts 14-11-44
Tube shaft ✓ Screw shaft 14-11-44 Propeller 7-11-44
Stern tube 7-11-44 Engine and boiler seatings 30-11-44 Engines holding down bolts 13-2-45
Completion of fitting sea connections 30-11-44
Completion of pumping arrangements 13-4-45 Boilers fixed 13-2-45 Engines tried under steam 17-4-45
Main boiler safety valves adjusted 20-3-45 Thickness of adjusting washers 1 1/16" S 7/8"
Crank shaft material SMS Identification Mark 29 7934 Thrust shaft material SMS Identification Mark 29 5610
Intermediate shafts, material SMS Identification Marks 29 8611/2 Tube shaft, material ✓ Identification Mark ✓
Screw shaft, material SMS Identification Mark 29 8609 Steam Pipes, material SOS ✓ Test pressure 600 lb Date of Test 2-3-45
Is an installation fitted for burning oil fuel No ✓ 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 "UNST" GRK. sp N° 21949
General Remarks (State quality of workmanship, opinions as to class, &c. Admiralty specification superseded.

The machinery of this vessel has been built under special survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. It has been efficiently installed in the vessel & tried out under full working conditions with satisfactory results, four hours at full power. It is eligible in my opinion to be classed in the Society's Register Book with record + LMC 4-45 & Notation Screw shaft O.G. 1 SA 200 lb/° F.D.

The amount of Entry Fee ... £ 39 : 0 :
Specification (Adm) 38 : 0 :
Special ... : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 28 APRIL 1945
TO BE RENDARED
TO ADMIRALTY
FROM LONDON OFFICE
When received,
19

ADMIRALTY
A/c numbered from
London 24.6.45

Charles J. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.

Date GLASGOW 1 MAY 1945

(The Committee's Minute
Minute -i- Amc 4.45

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