

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office JUL 26 1940
NEWCASTLE-ON-TYNE

When handed in at Local Office 25/7/40 Port of **Wallsend**
Date, First Survey 6 Feb 1940 Last Survey 15 July 1940
(Number of Visits 41)
Gross 4462 Tons
Net 2663 Tons
Survey held at **Wallsend**
Reg. Book. 2209 on the S/S **Swickenham**
Built at **Dumfries** By whom built **Caledon S.S. & Co Ltd** Yard No. **385** When built **1940**
Engines made at **Wallsend** By whom made **N.E. Marine Eng Co Ltd** Engine No. **2949** When made **1940**
Boilers made at **Wallsend** By whom made **"** Boiler No. **2949** When made **1940**
Registered Horse Power **393** Owners **Britain S.S. Co Ltd** Port belonging to **Dumfries**
Nom. Horse Power as per Rule **393** Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted **yes**
Trade for which Vessel is intended **coastal going**

Engines, &c.—Description of Engines **Triple Expansion Reciprocating** Revs. per minute **62**
Dia. of Cylinders **23 - 38 - 65** Length of Stroke **42** No. of Cylinders **3** No. of Cranks **3**
Crank shaft, dia. of journals as per Rule **12.81** as fitted **13** Crank pin dia. **13** Crank webs Mid. length breadth **1'-10"** Thickness parallel to axis **8 3/8" MP**
Intermediate Shafts, diameter as per Rule **12.2** as fitted **12 1/2"** Thrust shaft, diameter at collar as per Rule **12.81** as fitted **13"**
Tube Shafts, diameter as per Rule **13.7** as fitted **14 1/2"** Is the **screw** shaft fitted with a continuous liner **yes**
Screw Shaft, diameter as per Rule **13.7** as fitted **14 1/2"**
Bronze Liners, thickness in way of bushes as per Rule **72** as fitted **75** Thickness between bushes as per Rule **53** as fitted **7 1/2"** 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 ☒ If so, state type ☒ Length of Bearing in Stern Bush next to and supporting propeller **5'-5"**
Propeller, dia. **18'-0"** Pitch **16'-9" Max** No. of Blades **4** Material **BRONZE** whether Moveable **NO** Total Developed Surface **121 1/2** 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. **2** Diameter **3 1/2"** Stroke **21"** Can one be overhauled while the other is at work **yes**
Feed Pumps No. and size **2 @ 6" x 8 1/2" x 18"** **1 @ 8" x 6" x 8"** Pumps connected to the Main Bilge Line No. and size **1 @ 10" x 12" x 12"** **1 @ 8" x 6" x 8"** **2 @ 3 1/2"**
How driven **Steam** How driven **Steam** **M. Eng.**
Ballast Pumps, No. and size **1 @ 10" x 12" x 12"** 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 **S**) Total Heating Surface of Boilers **5790 sq. ft.**
Is Forced Draft fitted **yes (Main)** No. and Description of Boilers **2SB & 1 Aux SB** Working Pressure **220 lbs.**
IS A REPORT ON MAIN BOILERS NOW FORWARDED? **yes**
IS A DONKEY BOILER FITTED? **NO** 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 **25-10-39** Main Boilers **9-6-39** Auxiliary Boilers **9-6-39** Donkey Boilers ☒
(If not state date of approval)
Superheaters **28-11-39** General Pumping Arrangements **7-2-40** 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 **1 Spare Screw Shaft (to be supplied for Contracts 2949 & 2950)**
1 set of packing rings HP piston **1 Set of wearing parts for piston rod packing.** **1 Set of wearing parts for LP Valve rod.**
2 half bottom end bearing brasses, bolts & nuts
4 half Crosshead brasses, bolts & nuts **2 main bearing bolts & nuts**
Sparks as required for HP & MP poppet valves, air & bilge pump
valves, thrust blocks pads, safety valve springs, superheaters
furnaces & auxiliaries

The foregoing is a correct description,
THE NORTH EASTERN MARINE ENGINEERING CO. (1939) LTD.

John Neill
DIRECTOR & GENERAL MANAGER.

Manufacturer.



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Lloyd's Register
Foundation

1940
During progress of work in shops -- Feb. 6. Mar. 18. Apr. 3. 8. 16. 17. 19. 22. 23. 24. 25. 26. 30. May 1. 2. 3. 6. 7. 8. 10. 16. 17. 27. 29. 30. 31. June 4. 7. 13. 17. 25. 26. 27. July 1. 2. 3. 4. 5. 9. 15.
Dates of Survey while building
During erection on board vessel --
Total No. of visits 41.

Dates of Examination of principal parts—Cylinders 16.5.40 Slides 16.5.40 Covers 16.5.40
Pistons 16.5.40 Piston Rods 16.5.40 Connecting rods 16.5.40
Crank shaft 18.3.40 Thrust shaft 18.3.40 Intermediate shafts
Tube shaft ✓ Screw shaft 19.4.40 : 9.7.40 Propeller 7.6.40
Stern tube 9.7.40 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 Steel Identification Mark 2949 RM 18.5.40 Thrust shaft material Steel Identification Mark 2949 RM 18.5.40
Intermediate shafts, material Steel Identification Marks 2949 RM 15.7.40 Tube shaft, material ✓ Identification Mark various 29.5.40
Screw shaft, material Steel Identification Mark 2795 HAI 9.7.40 Steam Pipes, material Steel Test pressure 660 lbs Date of Test 4.6.40
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 NO 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 "Tottenham"

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been made under special survey in accordance with the approved plans & the Requirements of the Rules.

The materials & workmanship are good
The machinery has been forwarded to Dundee where it will be installed & on completion of the Survey, will be eligible in my opinion to have the Records
+ RME (with date) Rht 23B (Spt) & 1 Aux SB F.T. CL

Committee's Minute
Assigned See Dundee Report No 9194

The amount of Entry Fee ... £ 5 : 0 : 0
4/5 Special ... £ 67 : 5 : 0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for 25 JUL 1940
When received, 24 July 1940 Rht 29/4

Committee's Minute GLASGOW 12 NOV 1940

Assigned See Dundee Report No 9194

R. Moffatt
Engineer Surveyor to Lloyd's Register of Shipping.



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