

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office. 26 JUL 1945

Date of writing Report 17th July 1945 When handed in at Local Office 23. 7. 1945 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at Wallsend on Tyne. Date, First Survey (1945) Jan 12th Last Survey July 16th 1945

Reg. Book (Number of Visits 8) Tons Gross 7056 Net 4913

on the

Built at Dundee By whom built Caledon S.B.C. Ltd. Yard No. 411 When built 1945.

Engines LINE SHAFTING, PROPELLER SHAFT, PROPELLER & STERN TUBE By whom made N.E. MAR. ENG. CO. (1938) LTD. No. R1355/44 When made 1945.

Boilers made at ✓ By whom made WALLSEND ON TYNE. 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 Ocean going

ENGINES, &c.—Description of Engines 3 Cyls. TRIPLE EXPD. Revs. per minute 76.76

Dia. of Cylinders 24 $\frac{1}{2}$ " + 39" + 70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule ✓ Crank pin dia. SEE RPT 4. ON MAIN ENGINE. Crank webs Mid. length thickness Thickness parallel to axis shrunk Thickness around eye-hole ✓

Intermediate Shafts, diameter as per Rule 13.32" as fitted 13.58" Thrust shaft, diameter at collars as per Rule 13.98" as fitted 14.4"

Tube Shafts, diameter as per Rule ✓ Screw Shaft, diameter as per Rule 14.84" as fitted 15.4" Is the screw shaft fitted with a continuous liner Yes ✓

Bronze Liners, thickness in way of bushes as per Rule 24" = 75" as fitted 13/16" Thickness between bushes as per Rule 18" = 565" as fitted 21/32" Is the after end of the liner made watertight in the propeller boss No. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner In one Piece ✓

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 a tight fit ✓

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. No. If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. 17 $\frac{1}{2}$ " Pitch 15.60" No. of Blades 4 Material C. IRON whether Moveable No Total Developed Surface 114 $\frac{3}{4}$ 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 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 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

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

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 Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓

(If not state date of approval) (approved in Glasgow Letter 211-4-45-5 NWE.)

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

(1945) Jan. 12, 31 Mar. 5, 7, 8, 20 July 12, 16

Dates of Survey while building { During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits 8

Dates of Examination of principal parts - Cylinders ✓ Slides ✓ Covers ✓

Pistons ✓ Piston Rods ✓ Connecting rods ✓

Crank shaft ✓ Thrust shaft 7-3-45 Intermediate shafts 7-3-45

Tube shaft ✓ Screw shaft 16-7-45 in NEM works. Propeller 16-7-45 in Works.

Stern tube 12-7-45 Tested to 30 1/2 WT at NEM works. 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 ✓ Identification Mark ✓ Thrust shaft material 7 Steel Identification Mark NA 610 HT 20091-1 SET 10, N° 4 BCN 2798

Intermediate shafts, material 7 Steel Identification Marks NA 603 HT 10455/2 SET 10, N° 1 BCN 2798

Screw shaft, material 7 Steel Identification Mark NA 605 HT 5D/513 B1. Set 10, N° 2 BCN 2798

Is an installation fitted for burning oil fuel? Yes Identification Mark NA 607 HT 11184/2 SET 16, N° 2

Have the requirements of the Rules for the use of oil as fuel been complied with? Yes Identification Mark NA 849 HT 3D/397 B1. Set 10, N° 2 BCN 2798

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo? Yes If so, have the requirements of the Rules been complied with? Yes

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with? Yes

Is this machinery duplicate of a previous case? Yes If so, state name of vessel? Yes

General Remarks (State quality of workmanship, opinions as to class, &c.)

The above American Steel Shafting supplied to N.E. Mar Eng Co. by Adm. S. M. was check-tested at N.E. Mar Wks. Walland. by "POLDI" BRINELL HARDNESS machine and the results obtained viz Brinell Hardness & approx Tensile Strength in Tons/sq are given on attached sheet (in duplicate) prepared by N.E. Mar Co. Laboratory under their Ord. R1355/44 & dated 17th 1945.

The shafting was examined during machining, also the Thrust Block, Tunnel Shaft Bearings, Stern tube (tested to 30 1/2 WT.) and propeller and the materials and workmanship are good.

These have been dispatched to Caledon Shipyard, Dundee.

NOTE

The above Thrust, Intermediate, and Screw shafts have been installed in the S/S. Empire Farou, Built by Messrs Caledon S. B. & F. Co. Ltd. Dundee No. 411. See Dundee report No. 9497. G. E. Murdoch Glasgow. 10/11/45

The amount of Entry Fee ... £ : When applied for, 19

Special ... £ : When received, 19

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

Committee's Minute

Assigned