

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 17<sup>th</sup> July 1945 When handed in at Local Office 23 1945 Port of NEWCASTLE-ON-TYNE  
 No. in Survey held at Wallsend on Tyne Date, First Survey (1945) Jan 12<sup>th</sup> Last Survey July 16<sup>th</sup> 1945  
 Reg. Book \_\_\_\_\_ (Number of Visits 8)  
 on the \_\_\_\_\_ Tons {Gross 7056  
 {Net 4913  
 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. ENGRS (1938) LTD No. R1355/44 When made 1945  
WALLSEND ON TYNE  
 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 Ocean going

ENGINES, &c.—Description of Engines 3 Cyl. TRIPLE EXPD. Revs. per minute 76.76  
 Dia. of Cylinders 24 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. \_\_\_\_\_ Crank webs \_\_\_\_\_ Thickness parallel to axis \_\_\_\_\_  
 as fitted \_\_\_\_\_ Mid. length thickness \_\_\_\_\_ shrunk \_\_\_\_\_  
 Intermediate Shafts, diameter \_\_\_\_\_ as per Rule 13.32" Thrust shaft, diameter at collars \_\_\_\_\_ as per Rule 13.98"  
 as fitted 13.58" as fitted 14.4"  
 Tube Shafts, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ Screw Shaft, diameter \_\_\_\_\_ as per Rule 14.84" Is the \_\_\_\_\_ shaft fitted with a continuous liner { Yes ✓  
 as fitted \_\_\_\_\_ as fitted 15.4" as fitted \_\_\_\_\_  
 Bronze Liners, thickness in way of bushes \_\_\_\_\_ as per Rule 3/32" = .75" Thickness between bushes \_\_\_\_\_ as per Rule 18" = .565" Is the after end of the liner made watertight in the  
 as fitted 13/16" as fitted 21/32" 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 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 1/2" Pitch mean 15.60" No. of Blades 4 Material C. IRON whether Moveable No Total Developed Surface 114 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 \_\_\_\_\_ { 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 Holds, &c. \_\_\_\_\_  
 In Pump Room \_\_\_\_\_  
 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 B type standard Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval) (approved in Glasgow Letter 211-4-45 to 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 \_\_\_\_\_



Dates of Survey while building:
 

- During progress of work in shops - - (1945) Jan 12, 31 Mar 5, 7, 8, 20 July 12, 16
- 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 lb/WT 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  
 Intermediate shafts, material 7 Steel Identification Marks Nos 405: NA 607 HT 5D/513 B1. Set 10. N° 2 BGN 2798. Identification Mark  
 Screw shaft, material 7 Steel Identification Mark HT 10455/2 NA 603 HT 11184/2 Set 16. N° 2. Identification Mark  
 Is an installation fitted for burning oil fuel? NA 605 HT 10455/2 Set 10. N° 1 BGN 2798. AW 16-7-45 RW Nos 6+7: NA 757 HT 11184/2 Set 16. N° 2. Test pressure Date of Test Nos 8+9: NA 605 HT 3D/397 B1. Set 10. N° 2. BGN 2798 To the flash point of the oil to be used over 150° F. and. AW. 7-3-45 RW  
 Have the requirements of the Rules for the use of oil as fuel been complied with? and. AW. 7-3-45 RW  
 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? If so, state name of vessel.  
 General Remarks (State quality of workmanship, opinions as to class, &c.)

The above American Steel Shafting supplied to N.E. Man Eng Co. by Adm. S. M. was check-tested at N.E. Man Wks. Walloway, by "POLDI" BRINELL HARDNESS machine and the results obtained viz Brinell Hardness + approx Tensile Strength in Tons/in<sup>2</sup> are given on attached sheet (in duplicate) prepared by N.E. Man Co. Laboratory under their Ord. R1355/44 + dated 1<sup>st</sup> Feb 1945.  
 The shafting was examined during machining, also the Thrust Block, Tunnel Shaft Bearings, Stern tube (tested to 30 lb/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 Favour, Built by Messrs Caledon S. B. & F. Co. Ltd. Dundee No. 411. See Dundee report No. 9497. G. E. Murdoch Glasgow. 10/11/45

Committee's Minute  
 Assigned SEE ACCOMPANYING MACHINERY REPORT.

The amount of Entry Fee	£	✓	When applied for,
Special	£	✓	19
Donkey Boiler Fee	£	✓	When received,
Travelling Expenses (if any)	£	✓	19

A Watt.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Certificate to be sent to...  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

