

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 31 MAY 1932

30 MAY 1932

Date of writing Report 30 MAY 1932 When handed in at Local Office NEWCASTLE-ON-TYNE  
 No. in Survey held at Wallsend-on-Tyne Date, First Survey 13 Nov/31 Last Survey May 27 1932  
 Reg. Book. on the New Steel S.S. "Harpalion" (Number of Visits 60)  
 Built at Newcastle By whom built Hawthorne Leslie & Co. Ltd. Yard No. 585 When built 1932  
 Engines made at Wallsend-on-Tyne By whom made North Eastern M.E. Co. Ltd. Engine No. 2188 When made 1932  
 Boilers made at Wallsend-on-Tyne By whom made North Eastern M.E. Co. Ltd. Boiler No. 2188 When made 1932  
 Registered Horse Power 482 Owners Natural Gas Coy. Ltd. (J.C. Harrison & Co. Mgrs) Port belonging to Londra  
 Nom. Horse Power as per Rule 482 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which Vessel is intended General cargo. Ocean going.

**ENGINES, &c.**—Description of Engines Triple expansion. Revs. per minute 55  
 Dia. of Cylinders 23 1/2" x 40" x 68" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.6395 Crank pin dia. 14 1/2" Crank webs Mid. length breadth 2 1/4" shrunk Thickness parallel to axis 4 1/4" LP 9 1/2"  
 as fitted 14 1/2" Mid. length thickness 4 1/4" Thickness around eye-hole 1 1/2"  
 Intermediate Shafts, diameter as per Rule 12.99" Thrust shaft, diameter at collars as per Rule 13.639"  
 as fitted 12 1/2" as fitted 14 1/2"  
 Tube Shafts, diameter as per Rule 14.52" Screw Shaft, diameter as per Rule 15 1/2" Is the lube shaft fitted with a continuous liner yes  
 as fitted 14 1/2" as fitted 15 1/2" Is the scree shaft fitted with a continuous liner yes  
 Bronze Liners, thickness in way of bushes as per Rule 14 1/2" Thickness between bushes as per Rule 2 1/2" Is the after end of the liner made watertight in the propeller boss yes  
 as fitted 14 1/2" as fitted 2 1/2" 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 shaft no  
 Propeller, dia. 18 1/2" Pitch 19 1/2" No. of Blades 4 Material Brass Length of Bearing in Stern Bush next to and supporting propeller 5 1/2"  
 whether Movable yes Total Developed Surface 100 sq. feet  
 Feed Pumps worked from the Main Engines, No. two Diameter 1 1/2" Stroke 26" Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 1 1/2" Stroke 26" Can one be overhauled while the other is at work yes  
 Feed Pumps { No. and size 2 Weirs 2 1/2" x 21", 2 Gunter 6 x 8 x 15" Pumps connected to the { No. and size 1 @ 10 1/2" x 12 1/2" x 21" & Main bilge pumps.  
 How driven Steam Main Bilge Line How driven Steam.  
 Ballast Pumps, No. and size 1 @ 10 1/2" x 12 1/2" x 21" Lubricating Oil Pumps, including Spare Pump, No. and size two  
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 @ 3" dia 1 @ 2 1/2" Yumel well. 1 @ 2" Yumel  
 In Pump Room 2 @ 2 1/2", 1 @ 2" Yumel In Holds, &c. 1 @ 2 1/2", 1 @ 2" Yumel, 2 @ 3 1/2", 2 @ 3 1/2", 1 @ 5" Yumel  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 5" dia  
 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 both  
 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 below  
 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 hold suction How are they protected wood casings  
 What pipes pass through the deep tanks hold suction 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 yes worked from top platform

**MAIN BOILERS, &c.**—(Letter for record no) Total Heating Surface of Boilers 6846 sq ft  
 Is Forced Draft fitted yes No. and Description of Boilers 2 Main, 1 Auxiliary Working Pressure 220 lbs!  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes single ended. yes 258  
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? yes 1 amp 28  
 Is the donkey boiler intended to be used for domestic purposes only no  
**PLANS.** Are approved plans forwarded herewith for Shafting no Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes  
 Superheaters standard. General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

## SPARE GEAR.

Has the spare gear required by the Rules been supplied yes.  
 State the principal additional spare gear supplied. set of valves for each auxiliary pump. set of HP piston rings 6 Thrust pads. 2 Cut Iron propeller blades. 1 Tail shaft complete. 1 spring for each size Safety valve. 1 set wearing parts for metallic packing for HP & LP piston rods + LP slide rod. 2 valve springs + 1 Cupper spring for HP valve gear.

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

B. Campbell  
 SECRETARY

Manufacturer.



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 Foundation

W42-0128

1931 1932

Nov 13, 17, 23, Dec 1, 10, 15, 17, 22, 30 Jan 8, 11, 14, 20, 21, 29, Feb 3, 8, 9, 12, 16, 17, 19, 23,  
 24, 29, Mar 1, 2, 3, 7, 8, 9, 11, 14, 15, 16, 17, 18, 21, 22, 24, 31, Apr 1, 4, 5, 6, 7, 14, 15, 18, 19, 21, 22, 25,  
 26, 29, May 2, 4, 12, 24, 27.

Dates of Survey while building During erection on board vessel ---  
 Total No. of visits 60.

Dates of Examination of principal parts—Cylinders 4-11-32 Slides 1-3-32 Covers 3-3-32  
 Pistons 3-3-32 Piston Rods 8-3-32 Connecting rods 29-2-32  
 Crank shaft 14-7-32 Thrust shaft 14-2-32 Intermediate shafts 15-3-32  
 Tube shaft ✓ Screw shaft 14-3-32 Propeller 4-4-32  
 Stern tube 22-7-32 Engine and boiler seatings 7-3-32 Engines holding down bolts 29-1-32  
 Completion of fitting sea connections 4-3-32  
 Completion of pumping arrangements 2-5-32 Boilers fixed 29-4-32 Engines tried under steam 25-32, 25-5-32  
 Main boiler safety valves adjusted 4-5-32 Thickness of adjusting washers P.B. 1 1/2" 7/16" 1 1/2" 1 1/2" 1 1/2" S.B. 1 1/2" 1 1/2" 1 1/2" 1 1/2" 1 1/2" aux B. 1 1/2" 1 1/2"  
 Crank shaft material A.H. Steel Identification Mark 2784 WP. Thrust shaft material A.H. Steel Identification Mark 80867 WP.  
 Intermediate shafts, material A.H. Steel Identification Marks 302, 324, 304, 554, 306, 8086D, WP. Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material A.H. Steel Identification Mark 8085 & 8086, DDW, WP. Steam Pipes, material S.D. Steel Test pressure 600 lbs Date of Test 25-4-32  
 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 no If so, state name of vessel ✓

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 The machinery of this vessel has been built under Special Survey. Materials & workmanship good. Hydraulic tests satisfactory. It has been efficiently installed & fixed in the vessel & tried under steam & was found to be in good & safe working condition & eligible in my opinion to be classed & have marks **L.M.C. 5-32** Tail Shaft C.L. in the Register Book.

Certificate to be sent to Newcastle-on-Tyne

The amount of Entry Fee ... £ 5 : 0 : 0  
 Special ... £ 94 : 6 : 0  
 Donkey Boiler Fee ... £ ✓ :  
 Travelling Expenses (if any) £ ✓ :  
 When applied for, **30 MAY 1932**  
 When received, 7/6/1932

*William Butts*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 3 JUN 1932**  
 Assigned **L.M.C. 5, 32** **F.D. C.L.**

