

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

1 AUG 1932

Date of writing Report

When handed in at Local Office

27.7.1932 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Wallsend-on-Tyne.

Date, First Survey

30 Dec/31

Last Survey

26 July 1932

(Number of Volls 66)

on the

New Steel

S.S. Harlesden.

Built at

Hebburn

By whom built

Hawthorne Leslie &amp; Co. Ltd.

Yard No. 586

When built 1932

Engines made at

Wallsend

By whom made

North Eastern Marine &amp; Cold

Engine No. 2488

When made 1932

Boilers made at

Wallsend

By whom made

North Eastern Marine &amp; Cold

Boiler No. 2488

When made 1932

Registered Horse Power

488

Owners

National S.S. Co. Ltd.

Port belonging to

London

Nom. Horse Power as per Rule

488

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes.

Trade for which Vessel is intended

general cargo, ocean going.

## ENGINES, &amp;c.—Description of Engines

Triple expansion, poppet valves on HP cylinder. 55  
 Dia. of Cylinders 22 1/2 x 40 x 6 1/2 Length of Stroke 14 1/2 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13 1/4 Crank pin dia. 14 1/2 Crank webs Mid. length breadth 4 1/2 Mid. length thickness 4 1/2 Thickness parallel to axis 4 1/2  
 Intermediate Shafts, diameter as per Rule 12.99 as fitted 13 1/2 Thrust shaft, diameter at collars as per Rule 13.64 as fitted 14 1/2  
 Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 14.53 as fitted 15 1/2 Is the tube shaft fitted with a continuous liner? Yes  
 Bronze Liners, thickness in way of bushes as per Rule 1 1/2 as fitted 2 1/4 Thickness between bushes as per Rule 2 1/2 as fitted 3 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? 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  
 Propeller, dia. 18 1/2 Pitch 19 1/2 No. of Blades 4 Material Bronze C.I. whether Moveable? Yes Length of Bearing in Stern Bush next to and supporting propeller 5 3/4  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4 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 4 1/2 Stroke 26 Can one be overhauled while the other is at work? Yes  
 Feed Pumps No. and size 2 Weirs 1 x 9 1/2 x 21; gear service 6 x 8 x 15 Pumps connected to the Main Bilge Line No. and size 1 @ 10 1/2 x 12 1/2 x 21 + main engine pumps 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 None  
 Are two independent means arranged for circulating water through the Oil Cooler? Yes  
 Bilge Pumps;—In Engine and Boiler Room 3 @ 3" dia 1 @ 2 1/2" tunnel well 1 @ 2 1/2" tunnel  
 In Pump Room 2 @ 2 1/2" dia 2 @ 2" In Holds, &c. 1 @ 2" dia 2 @ 3" dia 2 @ 3 1/2" dia 2 @ 2 1/2" dia  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 5" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 8" 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? 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, &amp;c.—(Letter for record)

Total Heating Surface of Boilers

6846 sq. ft.

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 main 1 aux. S.E.

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?

Yes

Is the donkey boiler intended to be used for domestic purposes only?

Yes

## 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.

one set of valves for each auxiliary pump.  
 set of HP piston rings, 6 thrust pads, 2 out in propeller blades. 1 tail shaft  
 1 spring for each pin fitted & safety valves. 1 set wearing parts of metallic  
 packing for HP & LP piston rods & LP slide rods. 2 valve springs & 1 tappet  
 spring for HP valve gear.

The foregoing is a correct description,

Manufacturer.

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Lloyd's Register

W405-0263



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1931 1932

Dates of Survey while building  
During progress of work in shops - -  
15.20.21.22.25.27.29. May 3.4.5.6.9.12.13.17.18.19.20.23.24.25.26.30.31. June 1.2.6.8.10.14.  
During erection on board vessel - -  
16.27.28. July 1.5.7.8.21.26.  
Total No. of visits 66.

Dates of Examination of principal parts—Cylinders 6-5-31. Slides 4-5-32 Covers 4-5-32.  
Pistons 4-5-32 Piston Rods 20-4-32 Connecting rods 20-4-32  
Crank shaft 12-5-32 Thrust shaft 4-5-32 Intermediate shafts 12-5-32  
Tube shaft ✓ Screw shaft 12-5-32 Propeller 31-5-32.  
Stern tube 5-5-32 Engine and boiler seatings 2-6-32 Engines holding down bolts 24-6-32  
Completion of fitting sea connections 7-4-32  
Completion of pumping arrangements 8-4-32 Boilers fixed 24-6-32 Engines tried under steam 5-4-32 + 26-4-32.  
Main boiler safety valves adjusted 5-7-32 Thickness of adjusting washers 9 3/8 5/16 1 1/2 13 5/8 5/16. Aux B. P + 8 1/2 1/32.  
Crank shaft material O.H. Steel Identification Mark 2488 W.B. Thrust shaft material O.H. Steel Identification Mark 8096D. W.B.  
Intermediate shafts, material O.H. Steel Identification Marks 8096D. W.B. Tube shaft, material ✓ Identification Mark ✓  
Screw shaft, material O.H. Steel Identification Mark 8096D W.B. Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test 20-5-32 to 16-6-32  
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 yes. If so, state name of vessel Harpalion.

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. The whole of the machinery has been efficiently installed & fixed in place & tried under steam & is in good & safe working condition & eligible in my opinion to be classed & have records. ✕ L.M.C. Y-32. Tail shaft C.L. in the Register Book.

The amount of Entry Fee ... £ 5 :-  
Special ... £ 94 : 6 :-  
Donkey Boiler Fee ... £ : ✓ :  
Travelling Expenses (if any) £ : ✓ :  
When applied for, 26-7-1932  
When received, 30-7-1932

William D. Bates  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WED. AUG 3 1932

Assigned

+ L.M.C. 7.32

CERTIFICATE WRITTEN

F.D.  
C.L.



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Foundation