

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

13 SEP 1930

Date of writing Report 12.9.1930 When handed in at Local Office 12.9.1930 Port of SUNDERLAND.

No. in Survey held at SUNDERLAND. Date, First Survey 5/4/30 Last Survey 10/9/30 19
 Reg. Book. 90822 on the S.S. "HARPENDEN" (Number of Visits 39)

Gross 4,678
 Tons Net 2,774
 When built 1930

Built at SUNDERLAND. By whom built BARTRAM & SONS. LD. Yard No. 270

Engines made at SUNDERLAND. By whom made N.E. MARINE ENG. CO. LD. Engine No. 2748 when made 1930

Boilers made at SUNDERLAND. By whom made N.E. MARINE ENG. CO. LD. Boiler No. 2748 when made 1930

Registered Horse Power Owners J. C. HARRISON LD. Port belonging to LONDON.

Nom. Horse Power as per Rule 408 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

Trade for which Vessel is intended GENERAL CARGO.

ENGINES, &c.—Description of Engines TRIPLE EXPANSION STEAM. Revs. per minute 66.

Dia. of Cylinders 25" 41" 68" Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 12.9 Crank pin dia. 13 1/8" Crank webs Mid. length breadth 8 1/4" Thickness parallel to axis 8 1/4"
 as fitted 12 1/4" Mid. length thickness 6 1/4" Thickness around eye-hole 6 1/4"

Intermediate Shafts, diameter as per Rule 12.28 Thrust shaft, diameter at collars as per Rule 12.9
 as fitted 12.5 as fitted 13 1/8"

Tube Shafts, diameter as per Rule 13.78 Is the tube shaft fitted with a continuous liner Yes
 as fitted 14 1/4" as fitted 14 1/4"

Bronze Liners, thickness in way of bushes as per Rule 0.719 Thickness between bushes as per Rule 0.539
 as fitted 3/4" as fitted 2 3/4" 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 shaft No.

Length of Bearing in Stern Bush next to and supporting propeller 4 1/9"

Propeller, dia. 16'-0" Pitch 17'-3" No. of Blades 4 Material BRONZE whether Movable No. Total Developed Surface 98 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 2 @ 7 1/2" x 9 1/2" x 21" Pumps connected to the { No. and size 1 - 10 1/2" x 12 1/2" x 21"
 { 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 1 - 10 1/2" x 12 1/2" x 21"

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 at 3" 1 at 3" Dry Tank.

In Holds, &c. 2 @ 3" 7me hold - 2 @ 3 1/2" 7me main hold - 2 @ 3" aft main hold - 2 @ 3" aft hold.

1 @ 2 1/2" Tunnel Well.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4 1/2" 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 MAIN BELOW ABOVE

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 Yes How are they protected Yes

What pipes pass through the deep tanks Yes 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 GRATING

MAIN BOILERS, &c.—(Letter for record (r).) Total Heating Surface of Boilers 5704 sq. ft.

Is Forced Draft fitted No. No. and Description of Boilers 2 Cyl. MARINE TYPE Working Pressure 180 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers —
 (If not state date of approval)

Superheaters — General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements —

SPARE GEAR. State the articles supplied:—1 C.I. Propeller - 1 Propeller shaft - 2 each Top end, Bottom end & Main Bearing Bolt & nuts - 6 Coupling Bolt & nuts - 2 each Feed & Bilge pump valves - 6 Boiler tubes - 10 Condenser tubes - 1 set Air Pump valves - 1 set Ballast Pump valves - 2 cut. iron plate - 1 cut. iron bar - 50 assorted Bolt & nuts.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

John Neill

GENERAL MANAGER

Manufacturer.



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Lloyd's Register
Foundation

005387-00539-0223

30/ Apr. 15. May. 30. June 8, 16, 20, 23, 27. July. 1, 2, 4, 7, 9, 11, 14, 16, 17, 18, 21, 22, 23, 24
During progress of work in shops - - 25, 28, 29, 30. Aug. 1, 6, 7, 8, 11, 19, 20, 21, 25, 26, 28: Sept. 1, 3, 10:
Dates of Survey while building During erection on board vessel - -
Total No. of visits 39

Dates of Examination of principal parts—Cylinders 16-7-30. Slides 23-6-30. Covers 9-7-30.
Pistons 9-7-30. Piston Rods 1-7-30. Connecting rods 2-7-30.
Crank shaft 11-7-30. Thrust shaft 11-7-30. Intermediate shafts 28-7-30.
Tube shaft 22-7-30. W. 2-7-30.
Screw shaft 5. 24-7-30. Propeller 5. 7-7-30.
Stern tube 9-7-30. Engine and boiler seatings 19-8-30. Engines holding down bolts 19-8-30.
Completion of fitting sea connections 16-7-30.
Completion of pumping arrangements 26-8-30. Boilers fixed 19-8-30. Engines tried under steam 26-8-30.
Main boiler safety valves adjusted 26-8-30. Thickness of adjusting washers P. 5 1/2" S. 5 1/2" Aux. 5 1/2".
Crank shaft material STEEL Identification Mark 3591 T.D.S. Thrust shaft material STEEL Identification Mark 3591 T.D.S.
Intermediate shafts, material STEEL Identification Marks 3591 T.D.S. Tube shaft, material STEEL Identification Mark 3591 T.D.S.
Screw shafts material STEEL Identification Mark 3591 T.D.S. Steam Pipes, material STEEL Test pressure 540 lbs. Date of Test 20-8-30
Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of the Rules for carrying and burning oil fuel been complied with Yes
Is this machinery duplicate of a previous case Yes If so, state name of vessel "HARPATHIAN." "HARMATTAN."

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines and Boilers of this vessel have been built under Special Survey and the materials & workmanship are good. On completion the machinery was fitted in the vessel and tried under steam with satisfactory results.
The machinery of this vessel as now seen, is in a good and efficient condition, and eligible, in my opinion, to have the notation L.M.C. 9.30. marked in red in the Society's Register Book.
Vessel placed in Dry Dock. propeller, stem hatch and outside fastenings of sea connections examined.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.30 C-L
2SB 2 1 Aux SB. G.S. 180 H.S. 7277.

15/9/30.

SUNDERLAND

The amount of Entry Fee ... £ 5 : 0 : 0 When applied for, 1 SEP 1930
Special ... £ 86 : 4 : 0
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : :
When received, 12 SEP 1930

J. B. Scott.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned
+ L.M.C. 9.30 C.L.
CERTIFICATE WRITTEN.