

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-6 JUN 1931

Date of writing Report 19 When handed in at Local Office 5 JUNE 1931 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 15 Aug 29 Last Survey 2 June 19 31

Reg. Book. on the S.S. "HELMSPEY" (Number of Visits 59)

Tons } Gross 4740
 Net 2891

Built at Sunderland By whom built J.L. Thompson & Sons, Ltd. Yard No. 569. When built 1930

Engines made at Sunderland By whom made J. Dickinson & Son Ltd Engine No. 907 when made 1930

Boilers made at Sunderland By whom made J. Dickinson & Son Ltd Boiler No. 907. when made 1930

Registered Horse Power Owners Steath Steamship Co. Ltd. Port belonging to Cardiff.

Nom. Horse Power as per Rule 424 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 - Compound. Revs. per minute 67.

Dia. of Cylinders 24" - 43" - 72" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13.55" Crank pin dia. 14" Crank webs Mid. length breadth 5" Thickness parallel to axis 8 5/8" ✓
 as fitted 13 3/4" Mid. length thickness 5" shrunk Thickness around eye-hole 6 1/8" ✓

Intermediate Shafts, diameter as per Rule 12.91" Thrust shaft, diameter at collars as per Rule 13.55" ✓
 as fitted 13" as fitted 13 3/4" ✓

Tube Shafts, diameter as per Rule ✓ Screw Shaft, diameter as per Rule 14.39" Is the { tube } shaft fitted with a continuous liner { Yes ✓
 as fitted ✓ as fitted 14 1/2" ✓ as fitted { screw }

Bronze Liners, thickness in way of bushes as per Rule 25/32" Thickness between bushes as per Rule 23/32" Is the after end of the liner made watertight in the propeller boss Yes ✓
 as fitted 25/32" ✓ as fitted 23/32" ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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 ✓

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. ✓ Length of Bearing in Stern Bush next to and supporting propeller 5'-0" ✓

Propeller, dia. 17'-9" Pitch 17'-0" No. of Blades 4 Material whether Moveable No. Total Developed Surface 97 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 25 1/2" Can one be overhauled while the other is at work Yes ✓

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 25 1/2" Can one be overhauled while the other is at work Yes ✓

Feed Pumps { No. and size Two - 7 1/2" x 5" x 6" Pumps connected to the { No. and size One, 9" x 10" x 10" ✓
 { How driven Steam Main Bilge Line { How driven Steam ✓

Ballast Pumps, No. and size One 9" x 10" x 10" 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 Boiler Room 2-3" Engine Room 2-3" ✓
 In Holds, &c. No 1 Hold. 2-3" No 2. 2-3 1/2" No 3. 2-3" No 4. 2-3" Tunnel Well 2 1/2" ✓

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 7" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 4 1/2" ✓

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 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 ✓ 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 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. E.R. platform.

MAIN BOILERS, &c.—(Letter for record (S)S) Total Heating Surface of Boilers 6999 sq. ft. ✓

Is Forced Draft fitted No. No. and Description of Boilers 3. Single Water Tube Working Pressure 180 lbs/sq. in. ✓

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes 3SB ✓

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

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers 23.5.29. Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)

Superheaters ✓ General Pumping Arrangements ✓ Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:— Propeller. 1 set coupling bolts and nuts, 2 Main Beanie bolts and nuts, 2 Connecting Rod bolts and nuts, 2 Piston Rod Bolts and Nuts, 2 Feed pump Valves, 2 Bilge pump Valves, 100 Assorted Bolts and Nuts, 2 Bars Iron 1/4" & 3/8" plati. 2 Check Valve Lids 12 Piston yokes, wing bolts, 2 Safety Valve springs, 2 Escape Valve springs, 6 Boiler Tubes, 6 Condenser Tubes, 1 Feed pump ram, 1 Eccentric Rod, 50 Fire Bars, 1 Set of Back Buidges, baffles and front deadplates.

The foregoing is a correct description,

John Dickinson & Sons, Limited.
 S. Dickinson
 Manufacturer.
 Director.



NOTE.—The records which do not apply should be deleted.

During progress of work in shops - - 1929. Aug. 15, 19, 21, 30. Sep. 6, 9, 12, 23, 27. Oct. 1, 4, 11, 14, 17, 18, 30. Nov. 1, 4, 5, 7, 8, 11, 14, 15, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29. Dec. 2, 3, 4, 5, 6, 9, 10, 11, 12, 17, 18, 20, 23, 24, 27, 30. 1930. Jan. 3, 5, 6, 7, 8, 11, 14, 15, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29. Feb. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29.

Dates of Survey while building - - - 1931. Feb. 21. June 2

Total No. of visits 59

Dates of Examination of principal parts - Cylinders 1-11-29. Slides M.P. 15-11-29, L.P. 6-12-29, H.P. 2-12-29. Covers 7-11-29.

Pistons M.P. 6 L.P. 19-11-29, H.P. 19-11-29. Piston Rods 19-11-29. Connecting rods 4-11-29.

Crank shaft 14-11-29. Thrust shaft 30-10-29. Intermediate shafts 22-11-29.

Tube shaft - Screw shaft 9-12-29. Propeller Working Spare 12-12-29.

Stern tube 5-12-29. Engine and boiler seatings 20-12-29. Engines holding down bolts 4-1-30.

Completion of fitting sea connections 27-11-29. Re-examined in Dry Dock 21-2-31.

Completion of pumping arrangements 8-1-30. Boilers fixed 3-1-30. Engines tried under steam 8-1-30.

Main boiler safety valves adjusted 8-1-30. Thickness of adjusting washers S.P. 5/32", C.P. 5/32", P.P. 5/32".

Crank shaft material *Siemens Steel* Identification Mark 2034. Thrust shaft material *Siemens Steel* Identification Mark 2014.

Intermediate shafts, material *Siemens Steel* Identification Marks 107, 2079, 2126. Tube shaft, material Identification Mark.

Screw shaft, material *Siemens Steel* Identification Mark 1986. Steam Pipes, material *Steel*. Test pressure 540 lb/sq. in. Date of Test 3-1-30.

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 carrying and burning oil fuel 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 Engines and Boilers of this vessel have been built under Special Survey, and the materials and workmanship are good. On completion the machinery was tried under a full head of steam with satisfactory results.

The Machinery of this vessel is now in a good and efficient condition and eligible in my opinion to have the Notation \oplus L.M.C. - ~~730~~ ⁶³¹ awarded in and in the Society's Register Book.

Spare gear checked and Boilers examined under steam 2-6-31.

LLOYD'S REGISTER OF SHIPPING

The amount of Entry Fee ... £ 5 : 0 :
 Special ... £ 88 : 12 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :

When applied for, 17 MAR, 1930
 When received, 22 MAR, 1930

Matthew Caldwell.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 12 JUN 1931
 Assigned + L.M.C. 6.31
 CERTIFICATE WRITTEN C.L.

