Rpt. 4.

No. 84420

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 4 JUL 1929

Date of writing Report ..... 19 ..... When handed in at Local Office 25.6.1929 Port of Newcastle-on-Tyne

No. in Reg. Book. ..... Survey held at Wallsend-on-Tyne. Date, First Survey 3rd Jany Last Survey June 24th 1929.

on the New Steel S.S. "Fowberry Tower" (Number of Visits 53.)

Tons { Gross 4484 / Net 2756

Built at Newcastle By whom built Hawthorne Leslie & Coy Ld. Yard No. 559. When built 1929

Engines made at Wallsend By whom made North Eastern Marine E. Co. Ld Engine No. 2404 when made 1929

Boilers made at Wallsend By whom made North Eastern Marine E. Co. Ld Boiler No. 2404 when made 1929

Registered Horse Power ..... Owners Wm Milburn & Coy Ld. Port belonging to Newcastle

Nom. Horse Power as per Rule 486 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

Dia. of Cylinders 25½" × 42" × 40" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3 Revs. per minute

Crank shaft, dia. of journals as per Rule 13.3/9" as fitted 13¾" Crank pin dia. 13¾" Crank webs Mid. length breadth 1-11¼" Mid. length thickness 8⅜" shrunk Thickness parallel to axis 8⅜" Thickness around eye-hole 4⅜"

Intermediate Shafts, diameter as per Rule 12.35" as fitted 13"

Thrust shaft, diameter at collars as per Rule 13.3/9" as fitted 13¾

Tube Shafts, diameter as per Rule ✓ as fitted ✓ **Screw Shaft,** diameter as per Rule 14.235 as fitted 14¾" Is the tube / screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule .735" as fitted ¾" Thickness between bushes as per Rule .55 as fitted 9/16" 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 ✓

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'-6"

Propeller, dia. 18'-0" Pitch 18'-0" No. of Blades 4 Material Bronze. whether Moveable no Total Developed Surface 102 sq. feet

Feed Pumps worked from the **Main Engines,** No. 2 Diameter 4" Stroke 26" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the **Main Engines,** No. 2. Diameter 4½" Stroke 26" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 2 @ 4" × 9½" × 21, 1 @ 6 × 4 × 6 / How driven Steam } **Pumps** connected to the **Main Bilge Line** { No. and size 1 @ 9 × 11 × 10, 2 @ 4½ × 26 / How driven Steam by Main Engines.

Ballast Pumps, No. and size 1 @ 9" × 11" × 10" **Lubricating Oil Pumps,** including Spare Pump, No. and size None

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 4 @ 2½" dia 1 @ 2½" dia tunnel well.

In Holds, &c. No 1 2 @ 3", No 2 2 @ 3½", No 3 2 @ 3", No 4 2 @ 3".

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" dia **Independent Power Pump Direct Suctions** to the Engine Room Bilges, No. and size 1 @ 4" 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 yes.

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 Bilge suctions (fwd holds) How are they protected Wood casings.

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 platform

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 4350 ft

Is Forced Draft fitted no No. and Description of Boilers 3 Single ended (3 S.E.) Working Pressure 180 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes 3 S.B

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

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

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

SPARE GEAR. State the articles supplied:— Two each bolts & nuts for top & bottom ends & main bearings, one set feed & bilge pump valves, one set coupling bolts, assorted bolts nuts & pins, one propeller shaft, one Cast iron propeller, 1 HP piston spring, 1 set air pp valves, 2 main & 1 donkey feed check valve lids. Spare gear for air pp. 1 set thrust parts for Mitchell thrust, 1 set aux feed pp & ballast pp valves.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

Campbell Allen

SECRETARY.

Manufacturer.

W38-0073

Dates of Survey while building — During progress of work in shops: 1929 Jan. 3.11.21.28.30.31. Feb.1.6.7.8.15.18.19.26. Mar.4.6.8.11.12.13.14.21. Apr. 3.5.8.9.10.12.15.16.17.18.19.22.24.26.29.30. May 8.10.13.14.15.17.24. 27.28.30.31. June 3.4.7.24.

During erection on board vessel - - -

Total No. of visits 53.

Dates of Examination of principal parts—Cylinders 8-5-29 Slides 30-4-29. Covers 26-4-29

Pistons 15-4-29 Piston Rods 15-4-29 Connecting rods 8-5-29

Crank shaft 29-4-29. Thrust shaft 13-3-29 Intermediate shafts 22-4-29.

Tube shaft ✓ Screw shaft 22-4-29 Propeller 24-5-29

Stern tube 24-5-29, 13-5-29 Engine and boiler seatings 15-5-29 Engines holding down bolts 3-6-29

Completion of fitting sea connections 15-5-29.

Completion of pumping arrangements 4-6-29 Boilers fixed 3-6-29 Engines tried under steam 4-6-29.

Main boiler safety valves adjusted 4-6-29 Thickness of adjusting washers S.B. P 9/16" 5 1/8", C.B. P 5/8" 5 1/8", P.B. P 9/16" 5 1/8".

Crank shaft material O.H. Steel Identification Mark 2 for W.B. Thrust shaft material O.H. Steel Identification Mark 28 H 1 W.B.

Intermediate shafts, material O.H. Steel Identification Marks 28 H 1 W.B. Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material O.H. Steel Identification Mark 28 H 1 W.B. Steam Pipes, material S.D. Steel Test pressure 540 lbs. Date of Test 3-6-29

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 Yes. If so, state name of vessel Benwell Tower

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 the Vessel & tried under steam & found to be in good & safe working condition & eligible in every respect to be classed & have records. ✠ L.M.C. 6-29. Tail Shaft C.L. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 6.29 C.L.

4/7/29

Certificate to be sent to NEWCASTLE-ON-TYNE

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

The amount of Entry Fee ...	£ 5	: 0	0 :	When applied for, 19 JUN 1929
Special M	£ 88	: 18	0 :	
Donkey Boiler Fee ...	£	✓	:	When received, 19 JUN 1929
Travelling Expenses (if any)	£	✓	:	

William Butler.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 9 JUL 1929

Assigned + Lmc 6.29 CL

CERTIFICATE WRITTEN.