

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 28 OCT. 1932 When handed in at Local Office 28 OCT. 1932 Port of Sunderland.  
 No. in Survey held at Sunderland. Date, First Survey July 7 Last Survey Oct 26 1932  
 Reg. Book. 79160 on the STEEL SC. "WANDLE" (Number of Visits 40)  
 Built at Burntisland By whom built Burntisland S.B. Co. Ltd. Yard No. 173 Tons Gross Net  
 Engines made at Sunderland By whom made H.E. Marine Eng. Co. Ltd. Engine No. 2792 when made 1932  
 Boilers made at Sunderland By whom made H.E. Marine Eng. Co. Ltd. Boiler No. 2792 when made 1932  
 Registered Horse Power 164 Owners Wandsworth & District Gas Co. Port belonging to London.  
 Nom. Horse Power as per Rule 164 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.  
 Trade for which Vessel is intended Coal Trade.

ENGINES, &c.—Description of Engines Triple Expansion. Revs. per minute 81  
 Dia. of Cylinders 16 1/2" x 27 1/2" x 46" Length of Stroke 33" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 9.164" Crank pin dia. 9.5" Crank webs Mid. length breadth 15.25" Thickness parallel to axis 5.75"  
as fitted 9.5" Mid. length thickness 5.75" Thickness around eye-hole 5"  
 Intermediate Shafts, diameter as per Rule 9.164" Thrust shaft, diameter at collars as per Rule 9.164"  
as fitted None. as fitted 9.75"  
 Tube Shafts, diameter as per Rule 9.853" Is the tube shaft fitted with a continuous liner Yes.  
as fitted 10.125" as fitted 10.125"  
 Bronze Liners, thickness in way of bushes as per Rule 0.597" Thickness between bushes as per Rule 0.448"  
as fitted 0.625" as fitted 0.5625" 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 3'-7 1/2"  
 Propeller, dia. 13'-6" Pitch 14'-0" No. of Blades 4 Material Bronze whether Moveable No. Total Developed Surface 57 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work Yes.  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work Yes.  
 Feed Pumps { No. and size 1- 5" x 3 1/2" x 6" Duplex Pumps connected to the { No. and size 1- 9" x 11" x 12" Duplex.  
 { How driven Steam. Main Bilge Line { How driven Steam.  
 Ballast Pumps, No. and size 1- 9" x 11" x 12" Duplex. Lubricating Oil Pumps, including Spare Pump, No. and size —  
 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 2 1/2"  
 In Holds, &c. Fore Hold. 1 at 3 1/2" Aft Hold. 2 at 3" Suctions in well in each case. Yes.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 at 5" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 at 3 1/2" Are all the Bilge Suction Pipes in holds and bilges 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, thus 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 Fore hold bilge pipes. How are they protected Wood casing.  
 What pipes pass through the deep tanks None. 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 None. Is it fitted with a watertight door Yes. worked from Yes.

MAIN BOILERS, &c.—(Letter for record (S.)) Total Heating Surface of Boilers 2850 sq. ft.  
 Is Forced Draft fitted No. No. and Description of Boilers 1 S.B. Working Pressure 200 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 Yes. Main Boilers Yes. Auxiliary Boilers — Donkey Boilers —  
 (If not state date of approval)  
 Superheaters — General Pumping Arrangements Returned. Oil fuel Burning Piping Arrangements —

SPARE GEAR. State the articles supplied:— 2 each top & bottom end bolts & nuts — 2 main bearing bolts  
& nuts — 6 coupling bolts & nuts — 2 each feed & bilge pump valves — 1 C.I. propeller —  
2 cwt. assorted plate — 1 cwt. assorted bar — 50 assorted bolts & nuts.

The foregoing is a correct description,

Manufacturer.

FOR THE NORTH EASTERN MARINE ENGINEERING

Archd. B. Berg  
 1955, GENERAL MANAGER  
 Foundation

0042 30-0042 37-0128



Dates of Survey while building  
 During progress of work in shops - - 1932. Oct. 7, 11, 18, 22, 26, 28, Aug. 3, 10, 17, 19, 22, 26, 29, 30, 31, Sep. 1, 6, 9, 13, 15, 20, 21, 22, 23, 26, 30.  
 During erection on board vessel - - - 30. Oct. 5, 7, 10, 11, 12, 13, 14, 17, 18, 21, 24, 25, 26.  
 Total No. of visits 40

Dates of Examination of principal parts—Cylinders <sup>HP</sup> 26-8-32 <sup>LP</sup> 19-8-32 Slides 30-8-32 Covers 6-9-32  
 Pistons 6-9-32 Piston Rods 19-8-32 Connecting rods 10-8-32  
 Crank shaft 29-8-32 Thrust shaft 29-8-32 Intermediate shafts ✓  
 Tube shaft ✓ Screw shaft 28-9-32 Propeller Working 28-9-32 Spare 30-9-32  
 Stern tube 28-9-32 Engine and boiler seatings 21-9-32 (by Leith Linneyms) Engines holding down bolts 14-10-32  
 Completion of fitting sea connections 26-9-32 (by Leith Linneyms)  
 Completion of pumping arrangements 21-10-32 Boilers fixed 14-10-32 Engines tried under steam 21-10-32  
 Main boiler safety valves adjusted 21-10-32 Thickness of adjusting washers Port. 1 3/32" Staid. 7/16"  
 Crank shaft material Steel Identification Mark 601 T.D.S. Thrust shaft material Steel Identification Mark 601 T.D.S.  
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark 601 T.D.S. Steam Pipes, material Steel Test pressure 600 lbs. Date of Test 13-10-32  
 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 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 engine & 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, is in good and efficient condition, and eligible, in my opinion, to have the notations L.M.C. 10-32, and T.S. (C.L.)

BUNDERLAND

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

The amount of Entry Fee ... £ 3 : 0 :  
 Special ... £ 4 : 0 :  
 Donkey Boiler Fee ... £ - : - :  
 Travelling Expenses (if any) £ - : - :  
 When applied for, 28 OCT 1932  
 When received, 11/11 1932

L. J. Smith  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned  
 + L.M.C. 10.32  
 CERTIFICATE WRITTEN