

Hull Rpt No 32523

Rpt. 4.

REPORT ON MACHINERY.

No. 10453

Received at London Office

Date of writing Report 31. 7. 1919 When handed in at Local Office 14. 8. 1919 Port of MIDDLESBROUGH TUE. 25 MAR 1921
 No. in Survey held at Middlesbrough Date, First Survey 27. July 1917 Last Survey 28. July 1919
 Reg. Book. on the S. T. WILLIAM CHATWOOD. (Number of Visits 25) Tons } Gross 323
 Net 131

Master Built at Goole By whom built Messrs The Goole SB Co Ltd When built
 Engines made at Middlesbrough By whom made Richardsons, Westgate & Co Ltd when made 1919.
 Boilers made at Grimby By whom made J. T. Kitching & Co Ltd when made
 Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion Vertical No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 13 23 & 37 Length of Stroke 26" Revs. per minute 114 Dia. of Screw shaft as per rule 1.88 Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes

If the liner is in more than one length are the joints burned 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 Length of stern bush 3'-0"

Dia. of Tunnel shaft as per rule 1.04 Dia. of Crank shaft journals as per rule 1.39 Dia. of Crank pin 1 1/2 Size of Crank web 1 1/2 x 1 1/2 Dia. of thrust shaft under collars 1 1/2 Dia. of screw 9-1/2 Pitch of Screw 11'-0" No. of Blades 14 State whether moveable Total surface 33 sq ft

No. of Feed pumps 1 Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 6" x 4 1/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" dia In Holds, &c. One 2" dia in each compartment.

All motions also connected to engine

No. of Bilge Injections out sizes 3 1/2" Connected to condenser, or circulating pump Yes Is a separate Donkey Suction fitted in Engine room Yes

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

Are all connections with the sea direct on the skin of the ship Yes Are they 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 Discharge Pipes above or below the deep water line None

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 are carried through the bunkers Food motions How are they protected Flang casing

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel See separate report.

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler

Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre

Length as per rule Distance apart Number and pitch of stays in each Working pressure by rules Steam dome: description of joint to shell % of strength of joint

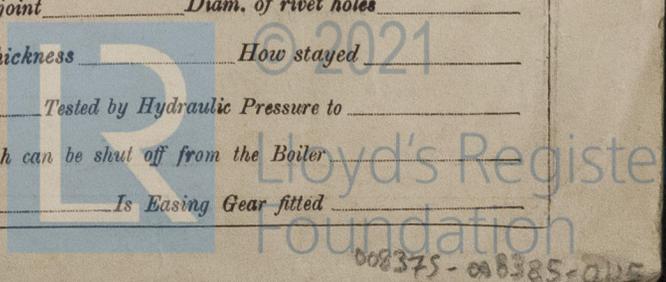
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

UPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



008375-008385-0115

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Two top end bolts & nuts, two main bearing bolts & nuts, one set coupling bolts & nuts, set feed & bilge pump valves six junk ring studs & nuts, one main & one donkey check valve two valves for donkey pump, one S.V. spring, 3 condenser tubes, one set of valves a quantity of assorted bolts & nuts of various sizes.

The foregoing is a correct description,

CHARLES WESTON & Co. Ltd

Hull-Brown.

Manufacturer.

Dates of Survey while building: During progress of work in shops - July 27, Aug 28, Nov 19, Dec 5, 1918, Jan 7, 1919, Feb 22, Mar 18, Apr 10, Sep 16, 1919, May 14, 16, 19, 20, 22, 29, June 13. During erection on board vessel - Dec 2, 12, 17, 1918, Jan 11, 20, Feb 14, Mar 16, Sep 16, Oct 10, 25, 1919. Total No. of visits: 25 + 13 = 38.

Dates of Examination of principal parts - Cylinders 14.5.19, Slides 16.5.19, Covers 16.5.19, Pistons 16.5.19, Rods 8.8.17, Connecting rods 19.5.19, Crank shaft 14.5.19, Thrust shaft 20.5.19, Tunnel shafts, Screw shaft 20.5.19, Propeller 19.5.19, Stern tube 19.5.19, Steam pipes tested 16/5/20, Engine and boiler seatings 26/4/20, Engines holding down bolts 26/4/20, Completion of pumping arrangements 4/3/21, Boilers fixed 4/3/21, Engines tried under steam 4/3/21, Completion of fitting sea connections 3/12/20, Stern tube 3/12/20, Screw shaft and propeller 3/12/20, Main boiler safety valves adjusted 30/4/20, Thickness of adjusting washers AB F3, Material of Crank shaft S, Identification Mark on Do. 5957-26-9, Material of Thrust shaft S, Identification Mark on Do. 191-205-19, Material of Tunnel shafts, Identification Marks on Do., Material of Screw shafts S, Identification Marks on Do. 191-205-19, Material of Steam Pipes Copper, Test pressure 400 lbs, 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 Section 49 of the Rules been complied with, Is this machinery duplicate of a previous case for, If so, state name of vessel Murray class.

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been built under special Survey, and the material & workmanship are good. It is stated that these engines will be dispatched to Hull. On completion the machinery was examined while running full power trials in the Dumber & found satisfactory. The machinery throughout is now in a good & efficient condition & eligible in our opinion to have the record 3-21 marked in Red in the Society's Register Book.

Date of build of Machinery 3.21.14.20. The amount of Entry Fee ... £ 2 : - : 12/3/21 When applied for, 1/2 Special ... £ 13 : 1 : Donkey Boiler Fee ... £ 6-10-0 When received, Travelling Expenses (if any) £ : * : 5/9/19 2/4/21. Committee's Minute FRI. 1 APR. 1921. Assigned + LMC 3.21.21.



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