

REPORT ON MACHINERY.

No. 29741

Received at London Office

FEB. 15 1911

Date of writing Report Feb. 4th 1911 When handed in at Local Office 10/21 10 11. Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 5th Sept. Last Survey Feb. 3rd 1911
Reg. Book. 31 on the s/s "ENDCLIFFE" (Number of Visits 30)
Master W. Walker Built at Maryport By whom built W. Walker Tons { Gross 371
Engines made at Glasgow By whom made J. Ritchie when made 1911 Net 99
Boilers made at Glasgow By whom made A. & W. Dalgluish when made 1910 When built 1911
Registered Horse Power 70 Owners J. W. Ward Ltd. Port belonging to Liverpool
Nom. Horse Power as per Section 28 70 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders two No. of Cranks two
Dia. of Cylinders 17"-36" Length of Stroke 24" Revs. per minute 108 Dia. of Screw shaft 7.63" 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 — 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 — Length of stern bush 2'-10"
Dia. of Tunnel shaft as per rule none Dia. of Crank shaft journals as per rule 7.31" Dia. of Crank pin 7.34" Size of Crank webs 14 1/2 x 6 Dia. of thrust shaft under
collars 7 3/4" Dia. of screw 9'-0" Pitch of Screw 10'-6" No. of Blades 4 State whether moveable no Total surface 32 ft
No. of Feed pumps one Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work —
No. of Bilge pumps one Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work —
No. of Donkey Engines two Sizes of Pumps 3 1/2 x 5 + 5 3/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 10 2" In Hold, &c. 10 2"
No. of Bilge Injections one sizes 4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 10 2"
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 none
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 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 are carried through the bunkers none How are they protected —
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
Dates of examination of completion of fitting of Sea Connections — of Stern Tube — Screw shaft and Propeller See Barrow Report No 1496
Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door — worked from —

OILERS, &c.—(Letter for record) Manufacturers of Steel

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 of plates or width of butt straps
Per centages of strength of longitudinal joint rivets 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 top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom bottom
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 Diameter 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
Diameter 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 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed —
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear —

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long, seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 Connecting rod top end bolts & nuts, 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts, 1 set of piston springs, Quantity of assorted bolts & nuts and iron of various sizes.

The foregoing is a correct description,

Manufacturer.



George Brown

Dates of Survey while building { During progress of work in shops - 1910. Sep. 5. 13. 29. Oct. 1. 4. 7. 12. 17. 24. 31. Nov. 7. 9. 14. 16. 21. 30. Dec. 5. 12. 19. 21. 28. 1911. Jan. 5. 6. 11. 16. 18. 20. 22. 24. 30. Feb. 3 }
 Total No. of visits 30 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 12-10-10 Slides 12-10-10 Covers 7-10-10 Pistons 29-9-10 Rods 24-10-10
 Connecting rods 24-10-10 Crank shaft 29-9-10 Thrust shaft 29-9-10 Tunnel shafts Home Screw shaft 29-9-10 Propeller 29-9-10
 Stern tube 29-9-10 Steam pipes tested 18-1-11 Engine and boiler seatings 5-1-11 Engines holding down bolts 20-1-11
 Completion of pumping arrangements 23-1-11 Boilers fixed 20-1-11 Engines tried under steam 30-1-11 + 3-2-11
 Main boiler safety valves adjusted 24-1-11 Thickness of adjusting washers Port 3/8" Star 3/8"
 Material of Crank shaft Steel Identification Mark on Do. 2578 Material of Thrust shaft Steel Identification Mark on Do. 37
 Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 37
 Material of Steam Pipes Copper Test pressure 300 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.) The materials & workmanship are good. The machinery of this vessel has been built under special survey and is eligible in my opinion for classification and the Record + L.M.C. 2-11

It is hereby certified that this vessel is eligible for THE RECORD + LMC 2-11

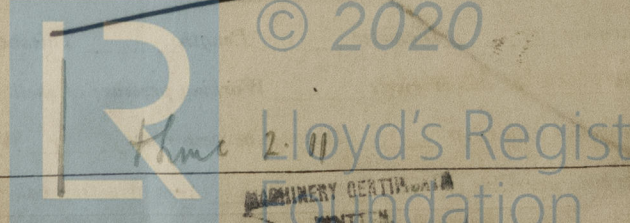
J.H.M.
 16/2/11

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, 10/2/11
 Special .. £ 7 : 0 : 0
 Donkey Boiler Fee .. £
 Travelling Expenses (if any) £
 When received, 11.3.11

Committee's Minute Glasgow 14 FEB. 1911

Assigned + LMC 2, 11 subject to classification of hull.

H.P. Forster
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Glasgow.

Certificate (if required) to be sent to

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