

REPORT ON MACHINERY.

No. 40524

Received at London Office

of writing Report 30. 10. 1920 When handed in at Local Office 30. 10. 1920 Port of Glasgow
 in Survey held at Glasgow Date, First Survey 23. 1. 1919 Last Survey 25. 10. 1920
 on the M. "Heddelean" (Number of Visits 42)

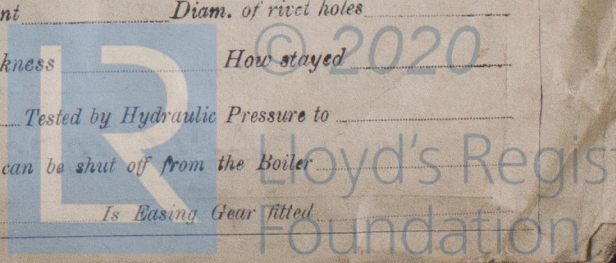
Built at Workington By whom built R. Williamson & Son. 231. Tons Gross 1920
 Lines made at Glasgow By whom made McKie & Bayler Imp 939 when made 1920
 Makers made at Borthwick By whom made Cammell Laird No 2073 when made 1920
 Registered Horse Power Owners Adam Potts Port belonging to Aberdeen
 Horse Power as per Section 28 102 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

Engines, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 of Cylinders 14x24x39 Length of Stroke 27 Revs. per minute 100 Dia. of Screw shaft as per rule 8.29 Material of screw shaft as fitted 8.78 screw shaft
 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
 Is 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
 are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 34 1/2
 of Tunnel shaft as per rule 7.52 Dia. of Crank shaft journals as per rule 7.52 Dia. of Crank pin 7 5/8 Size of Crank webs 13 1/4 x 4 1/4 Dia. of thrust shaft under
 as fitted 7 7/8 Dia. of screw 10-6 Pitch of Screw 10-6 No. of Blades 4 State whether moveable No Total surface 38 sq. ft.
 of Feed pumps 1 Diameter of ditto 3 1/4 Stroke 12 Can one be overhauled while the other is at work Yes
 of Bilge pumps 1 Diameter of ditto 3 1/4 Stroke 12 Can one be overhauled while the other is at work Yes
 of Donkey Engines 1 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 2-2 1/2 dia Ballast 7x8x8 In Holds, &c. 2-2 1/2 dia

Bilge Injections No sizes 3 1/2 Connected to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size No 2 1/2 dia
 Are 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
 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
 pipes are carried through the bunkers Tank & bilge suction How are they protected Hood Cast iron
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

ERS, &c.—(Letter for record) Manufacturers of Steel
 Heating Surface of Boilers 1800 sq. ft Is Forced Draft fitted No. and Description of Boilers One multitubular
 Working Pressure 180 Tested by hydraulic pressure to Date of test 15/9/20 No. of Certificate 2140
 Can boiler be worked separately No Area of fire grate in each boiler No. and Description of Safety Valves to
 2-2 1/2 dia spring Area of each valve 59 sq. in. Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 distance between boilers or uptakes and bunkers or woodwork 7-3 Mean dia. of boilers Length Material of shell plates
 Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
 Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Ages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 plate Compensating ring No. and Description of Furnaces in each boiler Outside diameter
 of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom Thickness of plates bottom Working pressure of shell by rules Back Top Bottom
 pressure of furnace by the rules Combustion chamber plates: Material Thickness of Sides Back Top Bottom
 stays to ditto: Sides Back Top If stays are fitted with riveted heads Working pressure by rules End plates in steam space
 of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays
 Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom
 smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
 Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 cross wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 pressure by rules Steam dome: description of joint to shell % of strength of joint
 Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 rivets Working pressure of shell by rules Crown plates Thickness How stayed
 REHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
 Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W71-0024



IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

Glasgow 11th Nov 1920
Hewitt

SPARE GEAR. State the articles supplied:—

2 connecting rod bottom end bolts & nuts; two connecting rod end bolts & nuts; 2 main bearing bolts; 1 set coupling bolts; 1 set feed pump valves; 1 set bilge pump valves; quantities of assorted bolts & nuts; iron of various sizes.

The foregoing is a correct description,

McC K. T. Benter

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919: Jan 23 Feb 10.24. Mar 19.25 May 21.23.26.28 Jun 4.9.12.17.23.26 July 16 Aug 4.12.18.20.22.27
During erection on board vessel - - - Sep 11.17.23 Oct 6 Dec 1 (1920) Jan 28 Feb 4.9. Mar 9.11.17.18. Apr 7.12 Sep 30 Oct 14.19.20.21.25
Total No. of visits 42

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 18/8/19 Slides 25/8/19 Covers 25/8/19 Pistons 18/8/19 Rods 11/8/19
Connecting rods 28/8/19 Crank shaft 19/6/19 Thrust shaft 19/6/19 Tunnel shafts 11/3/20 Screw shaft 11/3/20 Propeller 11/3/20
Stern tube 9/2/20 Steam pipes tested 20/10/20 Engine and boiler seatings Barrow Engines holding down bolts 14
Completion of pumping arrangements 25-10-20 Boilers fixed 14-10-20 Engines tried under steam 26-10-20
Completion of fitting sea connections Barrow Stern tube Barrow Screw shaft and propeller Barrow
Main boiler safety valves adjusted 21-10-20 Thickness of adjusting washers P. 5/16 S. 1/4
Material of Crank shaft S Identification Mark on Do. 19/6/19 S Material of Thrust shaft S Identification Mark on Do. 11/3/20
Material of Tunnel shafts S Identification Marks on Do. S Material of Screw shafts S Identification Marks on Do. 11/3/20
Material of Steam Pipes Solid Barrow Metal Steel Test pressure 540 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 Yes. If so, state name of vessel S.S. "Dynamo."

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been tried under special survey. The workmanship and materials are sound and good.
The boilers & engines have been fitted on board in a satisfactory manner, tried under working conditions & found efficient and are eligible in our opinion to be classed with record of L.M.C. 10-20.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 10.20

Reel 5/11/20 ARK

Wk: Furnished as standard boiler

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 9 : 6 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 3 : 1/2 :
When applied for, 29 NOV 1920
When received, 9/11/20

Committee's Minute

Assigned + LMC 10, 20

subject to

John W. Heggs, J. W. H. H.
Engineer Surveyor to Lloyd's Register

TUE NOV. 9 1920

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+ L.M.C. 10.20

Lloyd's Register
Foundation