

REPORT ON MACHINERY.

No. 41745.

Received at London Office

Date of writing Report 21. 2. 1922 When handed in at Local Office 21. 2. 1922 Port of Glasgow
 No. in Survey held at Coatbridge Date, First Survey 27th May 1921 Last Survey 18th Feb 1922
 Reg. Book. on the machinery for S.S. "LADY ANSTRUTHER" (Number of Visits 27)
 Master Built at Dublin By whom built Dublin Shipbuilders Ltd Tons { Gross 535
 Engines made at Coatbridge By whom made Wm Beardmore & Co. Ltd. G.P. 545 when made 1922
 Boilers made at Glasgow By whom made D. Rowan & Co. Ltd. G.P. 303 when made 1921
 Registered Horse Power Owners Hobbs & Co. (Glasgow) Port belonging to Glasgow
 Nom. Horse Power as per Section 28 114 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 14 1/2" 24" 40" Length of Stroke 24" Revs. per minute 95 Dia. of Screw shaft as per rule 8.28 Material of screw shaft M.S.
 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 Yes Length of stern bush 3'-1"
 Dia. of Tunnel shaft as per rule 7.3 Dia. of Crank shaft journals as per rule 7.66 Dia. of Crank pin 7 3/4" Size of Crank webs 15 1/2 x 4 3/4" Dia. of thrust shaft under collars 7 3/4" Dia. of screw 10.8" Pitch of Screw 11.6" No. of Blades 4 State whether moveable No Total surface 39 sq. ft.
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6" x 4" x 6" 6" x 7" x 8" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3-2 1/4" Eng. Rm. off. Stokehold. P + S In Holds, &c. 2-2 1/4" Port + Starboard.
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump C. pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/4"
 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 Valves & Cocks
 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 Hold Bilge Suctions How are they protected Strong wood casings
 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 No tunnel Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record) Manufacturers of Steel
 Total Heating Surface of Boilers 2100 sq. ft. Is Forced Draft fitted No No. and Description of Boilers 1 Single ended multitubular
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 7-6-21 No. of Certificate 15844
 Can each boiler be worked separately Yes Area of fire grate in each boiler 57 3/4 sq. ft. No. and Description of Safety Valves to each boiler See spring loaded Area of each valve 7.06 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers as uprights and timbers woodwork 18" 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 rivets plate 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 bottom Thickness of plates crown bottom 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

SUPERHEATER. 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

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IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 set each of top & bottom end, main bearing & coupling bolts and nuts, 1 set each of feed, bilge, air & circulating pump valves, 6 condenser tubes & 12 ferrules, 1 set of feed check valve, 3 plain boiler tubes, 6 cylinder cover studs & nuts, 6 junk ring bolts, 2 spare valves for donkey pumps, 1 safety valve spring, assorted bolts, nuts & washers.

The foregoing is a correct description,

For WILLIAM BEARDMORE & CO., LIMITED

Manufacturer.

R. Sneddon

Dates of Survey while building { During progress of work in shops - - 1921 May 27 Jun 7 10²¹ 29 Jul 12 Aug 9 17 22 Sep 14 Oct 7 12 18 28 Nov 11 15 Dec 8 21
During erection on board vessel - - - 1922 Jan 12 29 Feb 6 13 17 18.
Total No. of visits 27.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 21-6-21. Slides 18-10-21. Covers 29-6-21. Pistons 12-7-21. Rods 14-9-21.

Connecting rods 7-10-21. Crank shaft 4-6-21. Thrust shaft 28-10-21. Tunnel shafts ✓ Screw shaft 28-10-21. Propeller 28-10-21.

Stern tube 7-12-21. Steam pipes tested 10-2-22 Engine and boiler seatings *Dublin Rpt* Engines holding down bolts 30-7-22

Completion of pumping arrangements 17-2-22 Boilers fixed 30-1-22 Engines tried under steam 18-2-22.

Completion of fitting sea connections *Dublin Rpt* Stern tube *Dublin Rpt* Screw shaft and propeller *Dublin Rpt*.

Main boiler safety valves adjusted 13-2-22 Thickness of adjusting washers P. 7/16" S 7/16"

Material of Crank shaft M.S. Identification Mark on Do. *Lloyd's 3295* Material of Thrust shaft M.S. Identification Mark on Do. *Lloyd's 3295*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts M.S. Identification Marks on Do. *28-10-21*

Material of Steam Pipes *Seamless Copper* Test pressure *300 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 *no* If so, state name of vessel *"Meynagh"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been built under*

Special Survey. The materials & workmanship are good. The Engines have been

forwarded to Glasgow to be fitted on board the vessel.

These engines and boilers have been fitted on board in an efficient manner, tried

under working conditions and found satisfactory and are eligible in our

opinion to be classed with record of + L.M.C. 2-22.

It is submitted that

this vessel is eligible for

THE RECORD. + L.M.C. - 2.22. C.L.

L.Y.

*23/2/22. *Ans**

John Barr. & J. Sells.

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 24 FEB. 1922

GLASGOW 21 FEB 1922

Committee's Minute

Assigned + L.M.C. 2.22

subject to class. of hull

As now

Without Spl. Cond.

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CERTIFICATE WRITTEN

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PERHEATER

Date of Test

Diameter of Safety Valve

Working pressure by r

Thickness of girder at

Pitch across wide u

Pitch of rivets