

REPORT ON MACHINERY

No. 2064

MON. 12 MAY. 1924

Received at London Office

Date of writing Report 4th May 1924 When handed in at Local Office 5th May 1924 Port of Barrow-in-Furness

No. in Survey held at Barrow Date, First Survey 28th March Last Survey 2nd May 1924

Reg. Book. on the Steel screw steamer "Glanrhya" (Number of Visits 67)

Muster Built at Barrow By whom built Bickers Ltd. Tons } Gross 1525 Net 704 When built 1924-5

Engines made at Barrow By whom made Bickers Ltd. when made 1924

Boilers made at A By whom made A when made A

Registered Horse Power Owners Own. L. Harris Port belonging to Swansea

Nom. Horse Power as per Section 28 173 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 18" - 30" - 50" Length of Stroke 33" Revs. per minute 85 Dia. of Screw shaft as per rule 10.46 Material of screw shaft best steel

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'-8 1/2"

Dia. of Tunnel shaft as per rule 9.25 Dia. of Crank shaft journals as per rule 9.46 Dia. of Crank pin 9 3/4" Size of Crank webs 6 1/8" x 18 1/4" Dia. of thrust shaft under collars 9 3/4" Dia. of screw 13'-3" Pitch of Screw 13'-0" No. of Blades 4 State whether moceable no Total surface 45 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps YXYS: YXYS: 6x4 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 3" and 1 of 2 1/2" in thrust recess In Holds, &c. 2 of 3" in fwd hold and 2 of 3" in after hold. 1 of 2 1/2" in Tunnel well.

No. of Bilge Injections 6 sizes 5" Connected to condenser, or to circulating pump Cir pump Is a separate Donkey Suction fitted in Engine room & size Yes: 3 1/2"

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 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 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 Forward bilge suction 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 Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Mr Beardmore & Co Ltd & David Colville & Co

Total Heating Surface of Boilers 2900 sq ft Is Forced Draft fitted no No. and Description of Boilers 2 2SB. mult. Cylindrical

Working Pressure 180 lb. Tested by hydraulic pressure to 320 lb. Date of test 18-1-24 No. of Certificate 354

Can each boiler be worked separately Yes Area of fire grate in each boiler 45 sq ft No. and Description of Safety Valves to each boiler Two direct spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 185 lb. Are they fitted with easing gear Yes

Smallest distance between boilers on uptakes and bunkers or woodwork 2'-8" Mean dia. of boilers 12'-6" Length 10'-4" Material of shell plates Steel

Thickness 1 1/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams BR lap long. seams VRASL Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 4 1/2" Lap of plates or width of butt straps 16 1/4"

Per centages of strength of longitudinal joint rivets 91 plate 85.8 Working pressure of shell by rules 185 lb. Size of opening in shell 20 1/2" x 16 1/4"

Size of compensating ring 9" x 1 1/16" flanged No. and Description of Furnaces in each boiler 2 2CS. Bughton Material Steel Outside diameter 3'-10 1/2"

Length of plain part top 19 1/2" bottom 19 1/2" Thickness of plates crown 19/32" bottom 19/32" Description of longitudinal joint Weld No. of strengthening rings 1

Working pressure of furnace by the rules 184 lb. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1 1/4"

Pitch of stays to ditto: Sides 8 1/4" x 9" Back 8" x 9" Top 8 1/4" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lb.

Material of stays Steel Area at smallest part 157 sq in Area supported by each stay 44.25 sq in Working pressure by rules 213 lb. End plates in steam space: Material Steel Thickness 1 3/32" Pitch of stays 14.2" x 14" How are stays secured Double nuts Working pressure by rules 183 lb. Material of stays Steel

Area at smallest part 2 1/2" Area supported by each stay 293 sq in Working pressure by rules 183 lb. Material of Front plates at bottom Steel Thickness 2 1/2" Material of Lower back plate Steel Thickness 9/4" Greatest pitch of stays 15 1/4" x 8" Working pressure of plate by rules 189 lb.

Diameter of tubes 5 1/4" Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates Steel Thickness: Front 2 1/32" Back 2 5/32" Mean pitch of stays 13 1/8" x 8 3/4"

Pitch across wide water spaces 13 3/4" Working pressures by rules 180 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 4 3/4" x 1 1/4" Length as per rule 2'-5" Distance apart 8 1/4" Number and pitch of stays in each 2 @ 9"

Working pressure by rules 186 lb. Steam dome: description of joint to shell Yes % of strength of joint Yes

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

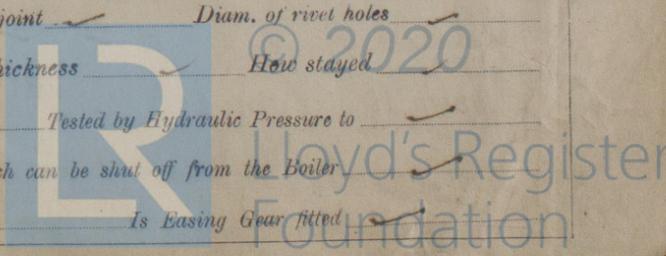
Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

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

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

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

W471-0231



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Top end bolts & nuts; 2 Bottom end bolts & nuts; 2 main bearing bolts & nuts; 1 set of coupling bolts & nuts; 1 Propeller; 1 set of feed pump valves; 1 set of bilge pump valves; 1 set of air pump valves; 1 main and 1 auxiliary feed check valve; 1 safety valve spring; Assorted bolts & nuts; rod & sheet steel.

The foregoing is a correct description,
FOR VICKERS LIMITED,

Henson

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1923: - May 28-29 June 27 July 10-16-20-24 Aug 1-27-28 Sept 7-9-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31 Oct 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31 Nov 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31 Dec 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31
During erection on board vessel -- 1924: - Jan 4-12-14-15-25 Feb 4-18
Total No. of visits *64*

Is the approved plan of main boiler forwarded herewith

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Dates of Examination of principal parts—Cylinders 9-10-23 Slides 20-11-23 Covers 9-10-23 Pistons 9-10-23 Rods 11-10-23
Connecting rods 11-10-23 Crank shaft 7-9-23 Thrust shaft 4-10-23 Tunnel shafts 27-11-23 Screw shaft 12-12-23 Propeller 26-9-23
Stern tube 22-10-23 Steam pipes tested 23-4-24 Engine and boiler seatings 24-3-24 Engines holding down bolts 25-4-24
Completion of pumping arrangements 29-4-24 Boilers fixed 25-4-24 Engines tried under steam 2-5-24
Completion of fitting sea connections 24-3-24 Stern tube 24-3-24 Screw shaft and propeller 25-3-24
Main boiler safety valves adjusted 29-4-24 Thickness of adjusting washers *Port side PV 3/8 SV 7/16; Starboard PV 3/8 SV 3/8*

Material of Crank shaft *Imperial* Identification Mark on Do. *11-227* Material of Thrust shaft *Imperial* Identification Mark on Do. *11-227*
Material of Tunnel shafts *Imperial* Identification Marks on Do. *11-227* Material of Screw shafts *Imperial* Identification Marks on Do. *11-227*
Material of Steam Pipes *Solid drawn copper* Test pressure *360 lbs per sq inch*

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

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

The engines and boilers of this vessel has been built under special survey. The materials and workmanship are good. They have been efficiently fitted on board and proved satisfactory under full working conditions. The vessel is eligible in my opinion to have the notation of *L.M.C. 5.24* made in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 5.24. C.L.

J. D. Cross
19/5/24

Wm Cross
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 43 : 5 :
Donkey Boiler Fee ... £ - : - :
Travelling Expenses (if any) £ - : - :
When applied for, *3rd May 1924*
When received, *20th May 1924*

Committee's Minute

Assigned

+ L.M.C. 5.24. C.L.

FRI. MAY. 16 1924

NEED NOT BE WRITTEN



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Lloyd's Register
Foundation

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