

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 *8th May* 1924 Port of *Barrow-in-Furness*No. in Survey held at *Barrow* Date, First Survey *28th May 1923* Last Survey *2nd May* 1924Reg. Book. on the *Steel screw steamer "Glanrhyd"* (Number of Visits *67*)Master *✓* Built at *Barrow* By whom built *Bickers Ld.* Tons { Gross *1525* Net *704*When built *1924-5*Engines made at *Barrow* By whom made *Bickers Ld.* when made *1924*Boilers made at *h* By whom made *h* when made *h*Registered Horse Power *✓* Owners *Owen 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓* If twoliners are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *3'-8 1/2"*Dia. of Tunnel shaft *as per rule 9.425* Dia. of Crank shaft journals *as per rule 9.446* Dia. of Crank pin *9 3/4"* Size of Crank webs *6 1/8 x 18 1/4"* Dia. of thrust shaft undercollars *9 3/4"* Dia. of screw *13'-3"* Pitch of Screw *13'-0"* No. of Blades *4* State whether moveable *no* Total surface *45 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: 6 x 4 1/2 x 6* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *3 of 3" and 1 of 2 1/2" in thrust recess* In Holds, &c. *2 of 3" in fd hold and 2 of 3" in after*No. of Bilge Injections *6* sizes *5"* Connected to condenser, or to circulating pump *Circumpump* 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 Ld & David Colville & Co*Total Heating Surface of Boilers *2900 ft* Is Forced Draft fitted *no* No. and Description of Boilers *2 2SB. Multi 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 ft* No. and Description of Safety Valves toeach boiler *Two direct spring loaded* Area of each valve *4.9 sq* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *Yes*Smallest distance between boilers *on top of 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 *WRAPS* 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 *91* rivets *35.3* } *89* 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 CF. Bughton* Material *Steel* Outside diameter *3'-10 1/2"*Length of plain part *top* Thickness of plates *crown* *1 1/32"* Description of longitudinal joint *Weld* No. of strengthening rings *✓*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 1/8* Area supported by each stay *44.25 sq* 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* Working pressure by rules *183 lb* Material of Front plates at bottom *Steel*Thickness *2 1/2* Material of Lower back plate *Steel* Thickness *3/4"* 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 1/2"* 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 andthickness 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 *✓* % 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:— 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 & shaft steel.

The foregoing is a correct description,
FOR VICKERS LIMITED,

Hender

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 Jan 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 Feb 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 Mar 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 Apr 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 May 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 -- 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 Jan 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 Feb 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 Mar 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 Apr 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 May 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
Total No. of visits 64

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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 boiler PV 3/8 3V 7/16; Star boiler PV 3/8 3V 7/16

Material of Crank shaft Inspected Identification Mark on Do. 11-22-24 Material of Thrust shaft Inspected Identification Mark on Do. 11-22-24

Material of Tunnel shafts Inspected Identification Marks on Do. 11-22-24 Material of Screw shafts Inspected Identification Marks on Do. 11-22-24

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 engine 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. + LMC 5.24. C.L.

W.D. C.W.S.
12/5/24

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, 2/5/24

W.D. C.W.S.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

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

FRI. MAY. 16 1924



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