

REPORT ON MACHINERY.

No. 28299

Date of writing Report

19

When handed in at Local Office

15 March 1922 Port of SUNDERLAND.

Received at London Office

FRI 17 MAR 1922

No. in Survey held at SUNDERLAND.

Date, First Survey 13th April 1920 Last Survey 11th March 1922

Reg. Book.

on the S.S. "BLYTHMOOR"

(Number of Visits 64)

Master Built at Sunderland By whom built Messrs Wm Dredford & Sons (S.S.) Tons Gross 6582

Engines made at Sunderland By whom made Messrs Wm Dredford & Sons (S.S.) when made 1922

Boilers made at Sunderland By whom made Messrs Wm Dredford & Sons (S.S.) when made 1922

Registered Horse Power Owners W. Runciman & Co. Ltd Port belonging to London

Nom. Horse Power as per Section 28 577 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27.44 75 Length of Stroke 54 Revs. per minute 70 Dia. of Screw shaft as per rule 15.16 Material of screw shaft as fitted 15.34

Is the screw shaft fitted with a continuous liner the whole length of the stern tube 410 Is the after end of the liner made water tight

the propeller boss 410 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 5-10

Dia. of Tunnel shaft as per rule 13.91 Dia. of Crank shaft journals as per rule 14.6 Dia. of Crank pin 14.3 Size of Crank webs 20 7/8 x 9 3/4 Dia. of thrust shaft under

collars 14 3/4 Dia. of screw 18-0 Pitch of Screw 18-0 No. of Blades 4 State whether moveable No Total surface 102 5

No. of Feed pumps 2 Diameter of ditto 5 Stroke 30 Can one be overhauled while the other is at work 410

No. of Bilge pumps 2 Diameter of ditto 6 Stroke 30 Can one be overhauled while the other is at work 410

No. of Donkey Engines 3 Sizes of Pumps 11 1/2 x 4, 10 1/2 x 8 x 21, 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 @ 3 1/2 in oil well 3 1/2 In Holds, &c. In No. 1, 2 each @ 3 1/2 In No. 3, 2 @ 3 1/2

+ 2 @ 3 in No. 4 hold well 1 @ 3 1/2 Tunnel well 1 @ 3 in cofferdams in E. room 2 @ 2 1/2

No. of Bilge Injections 1 sizes 9 Connected to condenser or to circulating pump 410 Is a separate Donkey Suction fitted in Engine room & size 410 3 1/2

Are all the bilge suction pipes fitted with roses 410 Are the roses in Engine room always accessible 410 Are the sluices on Engine room bulkheads always accessible None

Are all connections with the sea direct on the skin of the ship 410 Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates 410 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 410 Are the Blow Off Cocks fitted with a spigot and brass covering plate 410

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 410

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges 410

Is the Screw Shaft Tunnel watertight 410 Is it fitted with a watertight door 410 worked from Upper Platform

OILERS, &c.—(Letter for record 5 Manufacturers of Steel Spencer & Sons

Total Heating Surface of Boilers 8530 Is Forced Draft fitted 410 No. and Description of Boilers Three Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5.10.21, 10.10.21 No. of Certificate 3778, 3779, 3780

Can each boiler be worked separately 410 Area of fire grate in each boiler 63 1/2 No. and Description of Safety Valves to

each boiler 2 Spring Valves Area of each valve 12.56 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear 410

Smallest distance between boilers or uptakes and bunkers or woodwork No Bunkers in 1st dia. of boilers 18-11 Length 12-0 Material of shell plates S

Thickness 1 5/16 Range of tensile strength 28 1/2 - 32 3/8 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap & riv

long. seams 2 1/2 in riv. Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 8 3/4 Lap of plates or width of butt straps 19

Per centages of strength of longitudinal joint rivets 87 plate 85 Working pressure of shell by rules 189 Size of manhole in shell 16 x 12

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Monian Material S Outside diameter 4-5 3/4

Length of plain part top 3 3/4 bottom 3 3/4 Thickness of plates crown 3 3/4 bottom 3 3/4 Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 181 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 1 5/16

Pitch of stays to ditto: Sides 7 1/8 x 7 1/8 Back 7 1/8 x 7 1/8 Top 7 1/8 x 7 1/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 217

Material of stays S Area at smallest part 1.44 Area supported by each stay 62 1/2 Working pressure by rules 186 End plates in steam space:

Material S Thickness 1 1/4 Pitch of stays 21 3/4 x 16 How are stays secured d.n. & riv. Working pressure by rules 192 Material of stays S

Area at smallest part 8.48 Area supported by each stay 348 1/2 Working pressure by rules 253 Material of Front plates at bottom S

Thickness 2 9/32 Material of Lower back plate S Thickness 5 3/4 Greatest pitch of stays 14 1/8 Working pressure of plate by rules 181

Diameter of tubes 2 1/2 Pitch of tubes 3 5/8 x 3 3/4 Material of tube plates S Thickness: Front 2 9/32 Back 3/4 Mean pitch of stays 7 1/2 x 7 1/4

Pitch across wide water spaces 12 1/2 Working pressures by rules 201 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 9 1/2 x 1 1/2 Length as per rule 35 1/2 Distance apart 7 7/8 Number and pitch of stays in each 3, 7 7/8

Working pressure by rules 185 Steam dome: description of joint to shell None % 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 None 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

W454-0010

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end + two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set fut and bilge pump valves assorted bolts and nuts, seven various sizes, one propeller, one propeller shaft.

The foregoing is a correct description,
WILLIAM DOXFORD & SONS, Limited.

Manufacturer.

Dates of Survey while building	During progress of work in shops --	1920. Apr. 13. May. 19. June 8. 16. 17. 29. July. 26. Aug. 4. 16. Sep. 3. 15. 17. Oct. 2. 21. 26. 27. Nov. 8. 16. 29. Dec. 6. 13.
	During erection on board vessel --	1921. Jan. 5. 13. 17. 20. 26. Feb. 2. 9. 14. 17. 18. 25. Mar. 11. Aug. 10. 22. Sep. 2. 9. 22. 28. Oct. 5. 10. 20. Jan. 9. 10. 11. 13. 17. 19. 23.
	Total No. of visits	64. 24. 26. Feb. 2. 9. 13. 14. 15. 16. 21. 22. 24. 28. Mar. 6. 7. 8. 11.
		Is the approved plan of main boiler forwarded herewith YES

Is the approved plan of main boiler forwarded herewith **YES**

“ “ “ *donkey* “ “ “

Dates of Examination of principal parts—Cylinders 25.2.21 Slides 2.2.21 Covers 11.3.21 Pistons 11.3.21 Rods 25.2.21

Connecting rods 11.3.21 Crank shaft 25.2.21 Thrust shaft 25.2.21 Tunnel shafts 25.2.21 Screw shaft 9.2.21 Propeller 11.3.21

Stern tube 29.11.20 Steam pipes tested 25.2.21/14.2.22 Engine and boiler seatings 16.2.22 Engines holding down bolts 16.2.22

Completion of pumping arrangements 24. 2. 22 Boilers fixed 21. 2. 22 Engines tried under steam 7. 3. 22

Completion of fitting sea connections 26.1.22 Stern tube 26.1.22 Screw shaft and propeller 16.2.22

Main boiler safety valves adjusted 7.3.22 Thickness of adjusting washers P¹B. P¹/₁₆ S³/₈ C⁵B. P³/₁₆ S³/₈ S¹A.B. P³/₁₆ S³/₈

Material of Crank shaft Steel Identification Mark on Do. 552 GAH Material of Thrust shaft Steel Identification Mark on Do. 552 GAH

Material of Tunnel shafts *Shul* Identification Marks on Do. *552 GAH* Material of Screw shafts *Shul* Identification Marks on Do. *552 GAH*

Material of Steam Pipes Copper Test pressure 400 lbs

Is an installation fitted for burning oil fuel. **YES** Is the flash point of the oil to be used over 150°F. **YES**

Have the requirements of Section 49 of the Rules been complied with **YES**

Is this machinery duplicate of a previous case? If so, state

If so, state name of vessel **S.S. "HALL GYN."**

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

The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good. The oil fuel installation has been tested and tried under working conditions. The machinery renders the vessel slight in my opinion to have the record of $\frac{1}{4}$ -L.M.C. 3.22. Fitted for burning oil fuel F.P. above 150° 3.22.

It is submitted that
this vessel is eligible for
THE RECORD. *TH* /

THE RECORD. \mp L. M. C. - 3.22 F.D. C.L.

Tested for Oil Fuel, 3.22, F.P. above 150° F

Paul
27
20/3/22

The amount of Entry Fee ... £ 6 : : When applied for.

Special £ 103 : 17 : 14 MAR 1922

Donkey Boiler Fee	...	£	:	:	When received,
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Travelling Expenses (if any) £ : : 16 MAR 1922

Committee's Minute

Assigned

+ Lm 3.22

FD. C. L.

Heard for the first 3. 22
F.O. above 150° F.

**MACHINERY ON
WRITER**



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