

Rpt. 4.

REPORT ON MACHINERY.

No. 43157

Received at 7.11 Office WFO 21 NOV. 1923

Date of writing Report 17. 11 1923 When handed in at Local Office 20. 11 23 Port of Glasgow.
 No. in Survey held at 6patbridge Date, First Survey 4th June Last Survey 5th Nov 1923
 Reg. Book. 144 on the machinery for S.S. WHEAT PLAIN (Number of Visits 18)

Master Built at Bideford By whom built Hansen S. S. R. Co. Ltd. No. 10. Tons Gross 522.64 Net 190.08
 When built 1923

Engines made at 6patbridge By whom made Wm Beardmore & Co. Ltd. No. 594 when made 1923

Boilers made at Palmuir By whom made Wm Beardmore & Co. Ltd. No. N 360 when made 1923

Registered Horse Power Owners Messrs Spiller & Butler Port belonging to Cardiff

Nom. Horse Power as per Section 28 108 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines

Compound

No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 20" x 42" Length of Stroke 30" Revs. per minute 9.6" as per rule 8.72" Material of M.S. screw shaft as fitted 9.2"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No. liner Is the after end of the liner made water tight in the propeller boss 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

liners are fitted, is the shaft lapped or protected between the liners Vickers oil gland fitted. Length of stern bush 40"

Dia. of Tunnel shaft 8.36" as per rule 7.85" as fitted home Dia. of Crank shaft journals 8.8" as per rule 8.24" as fitted 9" Dia. of Crank pin 9" Size of Crank webs 14" x 6" Dia. of thrust shaft under collars 9" Dia. of screw 10" x 9" Pitch of Screw 12" x 0" No. of Blades 4 State whether movable No Total surface 42.45 sq

No. of Feed pumps 2 Diameter of ditto 2 1/2" 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 10 1/2" Can one be overhauled while the other is at work Yes

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

In Engine Room 2 x 2 1/2 In Holds, &c. 2 x 2 1/2

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

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 Hold Suctions How are they protected Under platform

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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers 2 Glasgow Rps No. 43157

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 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 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 Thickness of plates crown 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

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

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IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:—

*Two top & two bottom end connecting rod bolts & nuts, two main
bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed
& large pump valves, one main & one supply feed check valve
assorted bolts & nuts etc.*

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1923 June 4, 12, 18, Jul 2, 31, Aug 13, 17, 27, Sep 25, Oct 2, 8, 15, 19, 24, 26, 30, Nov 1, 5.
During erection on board vessel -- Jan 21, 28, 29, Feb 1, 2, 8, 15, 20, 29, Mar 8, 12, 13, 14
Total No. of visits 18. + 13.

Is the approved plan of main boiler forwarded herewith? *No*

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 2.10.23. Slides 19.10.23. Covers 2.10.23. Pistons 8.10.23. Rods 15.10.23.

Connecting rods 19.10.23. Crank shaft 25.9.23. Thrust shaft 30.10.23. Tunnel shafts *none*. Screw shaft 30.10.23. Propeller 15.10.23.

Stern tube 15.10.23. Steam pipes tested 8.3.24. Engine and boiler seatings 24.11.23. Engines holding down bolts 29.2.24.

Completion of pumping arrangements 14.3.24. Boilers fixed 2.3.24. Engines tried under steam 14.3.24.

Completion of fitting sea connections 1.2.24. Stern tube 1.2.24. Screw shaft and propeller 1.2.24.

Main boiler safety valves adjusted 12.3.24. Thickness of adjusting washers *Per 15*

Material of Crank shaft M.S. Identification Mark on Do. *20.4* Material of Thrust shaft M.S. Identification Mark on Do. *Lloyds No. 4*

Material of Tunnel shafts *none*. Identification Marks on Do. *25-9-23* Material of Screw shafts M.S. Identification Marks on Do. *30.10.23*

Material of Steam Pipes *Silver drawn 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? *Yes* If so, state name of vessel *'s Wheatcrop*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engine has been built under Special Survey in accordance with the Rules of the Society. The materials and Workmanship are good. The Engine has been dispatched to Bideford to be fitted on board the Vessel.*

The machinery will be eligible in my opinion to have Record of + L.M.C (with date) when properly fitted on board and tried under working conditions with satisfactory results.

This machinery has now been fitted & secured in transit according to the Rules, tried under working conditions & found satisfactory & is now eligible in my opinion to have record of + L.M.C 3.24.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 3.24. OG.

The amount of Entry Fee ... £ 3 : 0

Special ... £ 10 : 16

Donkey Boiler Fee ... £ 5 : 8

Travelling Expenses (if any) £ 10 : 16

When applied for,

20/11/23

When received,

24/3/24

Committee's Minute

Assigned *Deferred*

GLASGOW 20 NOV 1923

TUE MAR 25 1924

+ L.M.C. 3.24

G.E.

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Foundation