

# REPORT ON MACHINERY.

No. 43156

Received at London Office WFD. 21 NOV. 1923

Date of writing Report 17-11-1923 When handed in at Local Office 20-11-1923 Port of Glasgow  
 No. in Survey held at Coatbridge Date, First Survey 4th June Last Survey 24th Oct 1923  
 Reg. Book. on the Machinery for S S WHEATCROP. (Number of Visits 17+1) Gross 522 Tons Net  
 Master Built at Bideford By whom built Hansen Ship & Ship Repair Co Ltd When built 1923  
 Engines made at Coatbridge By whom made Wm Beardmore & Co Ltd No. 593 when made 1923  
 Boilers made at Dalnair By whom made Wm Beardmore & Co Ltd No. 360 when made 1923  
 Registered Horse Power Owners Messrs Spiller & Co Ltd Port belonging to Cardiff  
 Nom. Horse Power as per Section 28 108 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

**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 Dia. of Screw shaft 9.6" Material of screw shaft M.S.  
 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 If two  
 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" Dia. of Crank shaft journals 8.8" Dia. of Crank pin 9" Size of Crank webs 17x6" Dia. of thrust shaft under  
 collars 9" Dia. of screw 10.9" Pitch of Screw 12'-0" No. of Blades 4 State whether moveable No Total surface 42.75 sq. ft.  
 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 13 1/2" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 3 Sizes of Pumps 7x4 1/2", 8x4 1/2", 4x2 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 2 - 2 1/4" bore In Holds, &c. 2 - 2 1/2" Bore  
 No. of Bilge Injections / sizes 4 Connected to condenser, or to circulating pump Centrifugal Is a separate Donkey Suction fitted in Engine room & size Yes 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 suction How are they protected Unprotected  
 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 Rpt No 43156  
 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  
 bottom 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

to whether, and when, one will be sent?

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 bolts & nuts, one set of coupling bolts & nuts, two main bearing bolts & nuts, one main & one donkey feed chest valve, one set of feed & bilge pump valves 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 Jun 4-12-18-25 Jul 2-6-31 Aug 13-17-27-31 Sep 3-5 Oct 18-19-24  
During erection on board vessel --- 1923 Dec 4-11-14 1924 Jan 11-19-21-22  
Total No. of visits 17 + 4

Is the approved plan of main boiler forwarded herewith Yes  
" " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 25-9-23 Slides 25-9-23 Covers 25-9-23 Pistons 17-8-23 Rods 17-8-23  
Connecting rods 25-9-23 Crank shaft 13-8-23 Thrust shaft 2-10-23 Tunnel shafts None Screw shaft 2-10-23 Propeller 2-10-23  
Stern tube 2-10-23 Steam pipes tested 11-1-24 Engine and boiler seatings Engines holding down bolts 11-1-24  
Completion of pumping arrangements 21-1-24 Boilers fixed 14-12-23 Engines tried under steam 21-1-24  
Completion of fitting sea connections 7-12-23 Stern tube 11-12-23 Screw shaft and propeller 14-12-23  
Main boiler safety valves adjusted 21-1-24 Thickness of adjusting washers P+S 3/6

Material of Crank shaft M.S. Identification Mark on Do. None Material of Thrust shaft M.S. Identification Mark on Do. None  
Material of Tunnel shafts None Identification Marks on Do. None Material of Screw shafts M.S. Identification Marks on Do. None

Material of Steam Pipes Solid 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 No If so, state name of vessel ✓

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  $\pm$  L.M.C. (with date) when properly fitted on board and tried under working conditions with satisfactory results.

This machinery has been fitted & secured on board, and under working conditions with satisfactory results & so now eligible on my opinion for record of  $\pm$  L.M.C. ✓

The amount of Entry Fee ... £ 3 : 0 :  
Special 2/6 ... £ 10 : 16 :  
Donkey Boiler Fee 5/8 ... £ 5 : 8 :  
Travelling Expenses (if any) 1/3 : 8 :

When applied for, 20/11/1923  
When received, 20/11/1923

John Barr, John W. Gwynne  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW  
Assigned Deferred

FRI. FEB 8 1924

L.M.C. 124

© 2020 Lloyd's Register Foundation