

## REPORT ON MACHINERY.

No. 35489

Received at London Office WED. 6-OCT. 1915

Date of writing Report 2 Oct. 1915 Which was held at Local Office 2 Oct. 1915 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 6/11/14 Last Survey 30 Sept 1915  
 Reg. Book. on the Machinery of SS WHEATSHEAF (Number of Visits 36)  
 Master Herbert Proctor Built at Ardrossan By whom built Ardrossan S.S. Co. (1863) When built 1915  
 Engines made at Glasgow By whom made McAlister & Co. Eng 804 when made 1915  
 Boilers made at Glasgow By whom made A. D. Dalgleish Bala 1860 when made 1915  
 Registered Horse Power 110 Owners Spillers & S. Co Ltd Port belonging to Gardiff  
 Nom. Horse Power as per Section 28 110 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

## ENGINES, &amp;c.—Description of Engines

Compound No. of Cylinders 2 No. of Cranks 2  
 Dia. of Cylinders 20 & 42 Length of Stroke 30 Revs. per minute 95 Dia. of Screw shaft 9 1/4 Material of Iron  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners 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 3-3  
 Dia. of Tunnel shaft 8 1/2 Dia. of Crank shaft journals 8 1/2 Dia. of Crank pin 8 1/2 Size of Crank webs 16 1/2 x 3 1/2 Dia. of thrust shaft under collars 8 1/2 Dia. of screw 10-3 Pitch of Screw 13-0 No. of Blades 4 State whether moveable no Total surface 40 sq ft  
 No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 3 Sizes of Pumps 1 1/2, 1, 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one 1" central, one 1" Port, one 1" Star In Holds, &c. one 1" Port, one 1" Star

No. of Bilge Injections 1 sizes 4 1/2 Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 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 one Port & one Star hold Bilge How are they protected wood casing  
 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  
 Dates of examination of completion of fitting of Sea Connections 17-6-15 of Stern Tube 17-6-15 Screw shaft and Propeller 17-6-15  
 Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door yes worked from yes

## BOILERS, &amp;c.—(Letter for record (S) Manufacturers of Steel

Total Heating Surface of Boilers 2000 sq ft Is Forced Draft fitted no No. and Description of Boilers One single ended  
 Working Pressure 135 lbs Tested by hydraulic pressure to 160 lbs Date of test 13/07 No. of Certificate 13/07  
 Can each boiler be worked separately yes Area of fire grate in each boiler 8-30 No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 8-30 Pressure to which they are adjusted 160 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 4' 8" Mean dia. of boilers 4' 8" Length 16' 0" Material of shell plates Iron  
 Thickness 3/16" Range of tensile strength 35,000 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams yes  
 long. seams yes Diameter of rivet holes in long. seams 1/4" Pitch of rivets 4" Lap of plates or width of butt straps 1"  
 Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 135 lbs Size of manhole in shell 18"  
 Size of compensating ring 18" No. and Description of Furnaces in each boiler 1 Material Iron Outside diameter 4' 0"  
 Length of plain part 10' 0" Thickness of plates 3/16" Description of longitudinal joint butt No. of strengthening rings 1  
 Working pressure of furnace by rules 135 lbs Combustion chamber plates: Material Iron Thickness: Sides 3/16" Back 3/16" Top 3/16" Bottom 3/16"  
 Pitch of stays to ditto: Sides 4" Back 4" Top 4" If stays are fitted with nuts or riveted heads yes Working pressure by rules 135 lbs  
 Material of stays Iron Diameter at smallest part 1/2" Area supported by each stay 1 sq ft Working pressure by rules 135 lbs End plates in steam space yes  
 Material Iron Thickness 3/16" Pitch of stays 4" How are stays secured by nuts Working pressure by rules 135 lbs Material of stays Iron  
 Diameter at smallest part 1/2" Area supported by each stay 1 sq ft Working pressure by rules 135 lbs Material of Front plates at bottom Iron  
 Thickness 3/16" Material of Lower back plate Iron Thickness 3/16" Greatest pitch of stays 4" Working pressure of plate by rules 135 lbs  
 Diameter of tubes 2" Pitch of tubes 4" Material of tube plates Iron Thickness: Front 3/16" Back 3/16" Mean pitch of stays 4"  
 Pitch across wide water spaces 4" Working pressures by rules 135 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 4" Length as per rule 4" Distance apart 4" Number and pitch of stays in each 1  
 Working pressure by rules 135 lbs Superheater or Steam chest; how connected to boiler by pipe Can the superheater be shut off and the boiler worked separately yes Diameter 4" Length 4" Thickness of shell plates 3/16" Material Iron Description of longitudinal joint butt Diam. of rivet holes 1/4" Pitch of rivets 4" Working pressure of shell by rules 135 lbs Diameter of flue 4" Material of flue plates Iron Thickness 3/16"  
 If stiffened with rings yes Distance between rings 4" Working pressure by rules 135 lbs End plates: Thickness 3/16" How stayed by stays  
 Working pressure of end plates 135 lbs Area of safety valves to superheater 1 sq ft Are they fitted with easing gear yes



IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Already forwarded Glasgow Report No 34820

SPARE GEAR.

State the articles supplied: - Propeller, 2 end of top & bottom end & main bearing bolts & nuts, a set of coupling bolts & nuts, a set of feed & bilge pump valves, assorted bolts & nuts, iron of various sizes.

The foregoing is a correct description,

Mackie Baxter.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1914 Nov. 6-12-19-24-30 Dec. 3-8-10-23. 1915 Jan. 5-8-13-21 Feb. 2-9-11-12-17-26 Mar. 2-9-10-22-26-29  
During erection on board vessel - - - Apr. 7-9-15-26 May. 6-10-14-18-20-21-27-31 June. 7-11-14-17-24 July. 5-15 Aug. 2-7-12-17-23 Sept. 7-10-15-18-23-26-30  
Total No. of visits 56

Is the approved plan of main boiler forwarded herewith NO.

" " " donkey " " " NO.

Dates of Examination of principal parts—Cylinders 2-2-15 Slides 26-2-15 Covers 15-7-15 Pistons 14-6-15 Rods 21-1-15.

Connecting rods 6-5-15 Crank shaft 2-8-15 Thrust shaft 7-8-15 Tunnel shafts none Screw shaft 15-4-15 Propeller 17-2-15.

Stern tube 9-4-15 Steam pipes tested 15-15-9-15 Engine and boiler seatings 17-6-15 Engines holding down bolts 9-9-15.

Completion of pumping arrangements 24-9-15 Boilers fixed 17-9-15 Engines tried under steam 30-9-15.

Main boiler safety valves adjusted 24-9-15 Thickness of adjusting washers Port 3/32 Star 5/16

Material of Crank shaft Steel Identification Mark on Do. N.C. 17 Material of Thrust shaft Steel Identification Mark on Do. N.C. 17

Material of Tunnel shafts none Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. N.C. 17

Material of Steam Pipes Solid drawn Copper Test pressure 270 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.) This machinery has been constructed under special hurry. The materials & workmanship are good. It has been satisfactorily fitted into the vessel & tried under steam & the case is eligible in our opinion for the notation + L.M.C. 9.15.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 9.15.

The amount of Entry Fee ... £ 2 : 0 : 0. When applied for.

3/4 Special ... £ 11 : 0 : 0. 5/10/1915

Donkey Boiler Fee ... £ 1 : 13 : 0.

Travelling Expenses (if any) £ 0

Committee's Minute Glasgow 5 OCT. 1915

Assigned + L.M.C. 9.15.

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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