

MAR. 1916

Date of writing Report 4. 3. 1916 When handed in at Local Office 4. 3. 1916 Port of Aberdeen
No. in Survey held at Aberdeen Date, First Survey 3. 6. 15 Last Survey 28. 2. 1916
Reg. Book on the S.S. BRACONDENE (Number of Visits 36)
Master Built at Aberdeen By whom built A. Hall & Cy. Ld. No. 510 Tons Gross 235.00 Net 88.83
Engines made at Aberdeen By whom made A. Hall & Cy. Ld. No. 210 when made 1916
Boilers made at do By whom made do do when made 1916
Registered Horse Power 81. Owners Don Lisking & Co. Port belonging to Aberdeen
Nom. Horse Power as per Section 28 81. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 12", 20", 34" Length of Stroke 24" Revs. per minute 110 Dia. of Screw shaft as per rule 6. 943. Material of screw shaft as fitted 4 1/4" Material of crank pin 6 3/4" Size of Crank webs 4 1/2" x 10 1/2" Dia. of thrust shaft under collars 6 3/4" Dia. of screw 8 1/2" Pitch of Screw 11 1/2" No. of Blades 4 State whether moveable No Total surface 31.6
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 tight in the propeller boss Yes If the liner is in more than one length are the joints burned length 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 No space If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 2 1/2" x 6 1/2"
Dia. of Tunnel shaft as per rule 6. 215 Dia. of Crank shaft journals as per rule 6. 225 Dia. of Crank pin 6 3/4" Size of Crank webs 4 1/2" x 10 1/2" Dia. of thrust shaft under collars 6 3/4" Dia. of screw 8 1/2" Pitch of Screw 11 1/2" No. of Blades 4 State whether moveable No Total surface 31.6
No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work
No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work
No. of Donkey Engines 2 Sizes of Pumps 1/2" x 3/4" x 5" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 1 of 2 In Holds, &c. Flush well in fishhold 1 of 2
Also ejector drawing from all parts, with separate suction to engine room 2" dia
No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump C. 70 Is a separate Donkey Suction fitted in Engine room & size Yes 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 No
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 Suctions from flush well & F.W. tank How are they protected Strong 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 28. 1. 16 of Stern Tube 3. 2. 16 Screw shaft and Propeller 3. 2. 16
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 1488) Manufacturers of Steel Stewart & Lloyd's Ltd. J. Dunlop & Cy. Ld. S. Colville & Sons Ltd.
Total Heating Surface of Boilers 1522 Is Forced Draft fitted No No. and Description of Boilers one, single ended.
Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 25. 1. 16 No. of Certificate 865
Can each boiler be worked separately Area of fire grate in each boiler 467 No. and Description of Safety Valves to each boiler 2: direct spring Area of each valve 4.91 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork about 8" Mean dia. of boilers 13' 0" Length 10' 9 1/2" Material of shell plates S
Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 6.7" lap long. seams 8.7" straps Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8" 14" Lap of plates or width of butt straps 18" x 1 1/2"
Per centages of strength of longitudinal joint rivets 83.64 plate 84.34 Working pressure of shell by rules 182.8 Size of manhole in shell 16" x 12"
Size of compensating ring No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40 1/2"
Length of plain part top 48 1/2" Thickness of plates crown 3/4" Description of longitudinal joint weld No. of strengthening rings 3 x 3 1/2" bottom 48 1/2" Thickness 3/4"
Working pressure of furnace by the rules 180.4 Combustion chamber plates: Material S Thickness: Sides 1 1/2" Back 3/4" Top 1 1/2" Bottom 1 1/2"
Pitch of stays to ditto: Sides 10" x 9" Back 9 3/4" x 9 3/4" Top 10" x 10" If stays are fitted with nuts or riveted heads No Working pressure by rules 180.5
Material of stays S Diameter at smallest part 7 1/8" Area supported by each stay 90" Working pressure by rules 204 End plates in steam space:
Material S Thickness 1 1/2" Pitch of stays 18 3/8" x 1 1/2" How are stays secured double nuts Working pressure by rules 180.8 Material of stays S
Diameter at smallest part 2 1/2" Area supported by each stay 330" Working pressure by rules 191 Material of Front plates at bottom S
Thickness 1 1/2" Material of Lower back plate S Thickness 3/4" Greatest pitch of stays 13 3/4" x 8" Working pressure of plate by rules 194
Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 3/8" Material of tube plates S Thickness: Front 1 1/2" x 7/8" Back 3/4" Mean pitch of stays 9 3/8"
Pitch across wide water spaces 14 1/4" Working pressures by rules 211 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 3/4" x 1 1/2" Length as per rule 3 1/2" Distance apart 10" Number and pitch of stays in each two: 10"
Working pressure by rules 180.8 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately
Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Two top and 2 bottom end bolts nuts; 2 main beam and 1 set coupling bolts nuts; 1 set each, Air circulating, Feed & Bilge valves; 1 each main & donkey check valve; bolts nuts assorted and iron various sizes.

The foregoing is a correct description,

p. Atall & Co. Ltd

Manufacturers of main & donkey boiler.

Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - - -
Total No. of visits

1915 June 3 - July 6, 8, 16, 23, 24 - Aug. 6, 18, 26 - Sept. 6, 15 - Oct. 6, 15, 19 - Nov. 1, 9, 15, 24
Dec. 1, 15, 14, 24, 28 - 1916 Jan. 10, 14, 21, 25, 28 - Feb. 3, 4, 9, 16, 19, 25, 28

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts - Cylinders $\frac{6}{9}$ $\frac{15}{10}$ $\frac{15}{11}$ $\frac{12}{12}$ Slides $\frac{9}{2}$ $\frac{12}{12}$ $\frac{9}{12}$ Covers $\frac{15}{10}$ $\frac{12}{12}$ $\frac{19}{12}$ Pistons $\frac{15}{10}$ $\frac{12}{12}$ $\frac{19}{12}$ Rods $\frac{15}{10}$ $\frac{12}{12}$ $\frac{19}{12}$
Connecting rods $\frac{15}{10}$ $\frac{12}{12}$ $\frac{19}{12}$ Crank shaft $\frac{14}{12}$ $\frac{15}{12}$ Thrust shaft $\frac{3}{2}$ $\frac{9}{12}$ Tunnel shafts $\frac{14}{12}$ $\frac{24}{12}$ Screw shaft $\frac{6}{12}$ $\frac{19}{12}$ $\frac{14}{12}$ Propeller $\frac{14}{12}$ $\frac{24}{12}$
Stern tube $\frac{14}{12}$ $\frac{14}{12}$ Steam pipes tested 9.2.16 Engine and boiler seatings 9.2.16 Engines holding down bolts 9.2.16
Completion of pumping arrangements 9.2.16 Boilers fixed 9.2.16 Engines tried under steam 19.2.16
Main boiler safety valves adjusted 19.2.16 Thickness of adjusting washers Port $\frac{1}{2}$ " Starboard $\frac{1}{2}$ "
Material of Crank shaft I.S. Identification Mark on Do. 598M (DUN) Material of Thrust shaft S. Identification Mark on Do. 944A
Material of Tunnel shafts I. Identification Marks on Do. 944A Material of Screw shafts I. Identification Marks on Do. 944A
Material of Steam Pipes Copper $3\frac{1}{4}$ " bore No. 6. B. 109. 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.)

These Engines, and the Boiler, have been constructed under special survey and in accordance with the Secretary's letter, the Rules, and approved plan. The materials and workmanship are good. When completed and properly fitted on board, they were tried under steam at loadings, with satisfactory results, and are now in good working order, and in my opinion entitled to the record \times L.M.C. 2.16 in the Register Book.

An electric light installation has been fitted on board, a report on which is herewith forwarded.

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C. 2.16.

The amount of Entry Fee ... £ 1 : :
Special ... £ 12 : 3 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 4.2.1916
When received, 14.1.1916

Committee's Minute TUE. 7-MAR. 1916

Assigned

+ L.M.C. 2.16

MACHINERY CERTIFICATE
WRITTEN



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Foundation