

REPORT ON MACHINERY.

No. 11134

Received at London Office WED. MAY. 14. 1913

Date of writing Report 12.5.1913 When handed in at Local Office 13.5.1913. Port of Aberdeen.

No. in Survey held at Aberdeen. Date, First Survey 13.11.12 Last Survey 30.4.1913
Reg. Book. on the S.S. "SOUTH BULLI" (Number of Visits 42) Tons } Gross 518.08
Net 359.18

Master A. J. G. Billeh. Built at Aberdeen. By whom built Hall Russell & Co. Ltd. No. 529. When built 1913.

Engines made at Aberdeen. By whom made Hall Russell & Co. Ltd. No. 529. when made 1913.

Boilers made at do. By whom made do do do. when made 1913.

Registered Horse Power 140 Owners Messrs Bellambi Coal Co. Ltd. Port belonging to Sydney.

Nom. Horse Power as per Section 28 140. 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 16", 26", 43" Length of Stroke 33" Revs. per minute 100. Dia. of Screw shaft as per rule 8.11.2. Material of screw shaft as fitted 10" (Scapiano)

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 Yes. If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4' 9 1/2"

Dia. of Tunnel shaft as per rule 8.30.4.9. Dia. of Crank shaft journals as per rule 8.37.2. Dia. of Crank pin 9 1/4" Size of Crank webs 14" x 6 3/4" Dia. of thrust shaft under collars 9 1/2" Dia. of screw 10' 9" Pitch of Screw 14' 0" No. of Blades 4. State whether moveable No Total surface 40 #

No. of Feed pumps 2. Diameter of ditto 2 3/4" Stroke 18" Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2. Diameter of ditto 2 3/4" Stroke 18" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines 3. Sizes of Pumps Feed 8 1/2" x 6" x 18" Gear 5" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 1 centre & 2 wing, each 2 1/2" Ballast 8" x 8" x 8" In Holds, &c. No 1 Hold 2 of 2" No 2 Hold 2 of 2 1/2"

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. 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 None.

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 Sucs from Nos 1 & 2 holds. 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 31.3.13. of Stern Tube 31.3.13. Screw shaft and Propeller 2.4.13.

Is the Screw Shaft Tunnel watertight None. Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record (7).) Manufacturers of Steel W. Beardmore & Co. Ltd - D. Colville & Sons Ltd.

Total Heating Surface of Boilers 2506 # Is Forced Draft fitted No. No. and Description of Boilers 2. Cyl. mult, Single ended.

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 15.3.13. No. of Certificate 445

Can each boiler be worked separately Yes. Area of fire grate in each boiler 38.5 # No. and Description of Safety Valves to each boiler 2: direct spring. Area of each valve 4.9 # Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork ^{inside} hot side bunkers Mean dia. of boilers 12' 0" Length 11' 0" Material of shell plates S.

Thickness 1 3/32" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams d. 7: lap. long. seams dble straps Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 4 1/4" 3 1/2" Lap of plates or width of butt straps 16 3/8" x out. 4 1/2"

Per centages of strength of longitudinal joint rivets 85.8 plate 85.4 Working pressure of shell by rules 202.9 Size of manhole in shell 16" x 12"

Size of compensating ring Melleil No. and Description of Furnaces in each boiler 2. Bighton. Material S. Outside diameter 46 1/4"

Length of plain part top 3" bottom 1" Thickness of plates crown 9" bottom 10" Description of longitudinal joint weld. No. of strengthening rings 1

Working pressure of furnace by the rules 190.5 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8 1/2" x 8 1/2" Top 9" x 8" If stays are fitted with nuts or riveted heads No. Working pressure by rules 186.8

Material of stays Iron. Diameter at smallest part 1 9/16" Area supported by each stay 42.25 # Working pressure by rules 200. End plates in steam space: Material S. Thickness 1 3/32" Pitch of stays 1 1/2" x 1 1/2" How are stays secured A. N. H. Working pressure by rules 185. Material of stays S.

Diameter at smallest part 2 13/16" Area supported by each stay 306.25 # Working pressure by rules 211. Material of Front plates at bottom S.

Thickness 1/16" Material of Lower back plate S. Thickness 3/8" Greatest pitch of stays 14 1/2" x 8 1/2" Working pressure of plate by rules 184.2

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates S. Thickness: Front 1/16" Back 3/8" Mean pitch of stays 11 3/4"

Pitch across wide water spaces 15 1/4" Working pressures by rules 13.193.4 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 8 1/2" x 1 3/4" Length as per rule 32 3/4" Distance apart 9" Number and pitch of stays in each three. 8"

Working pressure by rules 184.4 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

le 34.0 ft.
given as il
ater Capacity.
Tons.
70
8
1.27.30.
17.22.
42.

VERTICAL DONKEY BOILER— Manufacturers of Steel

Table with columns: No., Description, Made at, By whom made, When made, Where fixed, Working pressure, tested by hydraulic pressure to, Date of test, No. of Certificate, Fire grate area, Description of Safety Valves, No. of Safety Valves, Area of each, Pressure to which they are adjusted, Date of adjustment, If fitted with easing gear, If steam from main boilers can enter the donkey boiler, Dia. of donkey boiler, Length, Material of shell plates, Thickness, Range of tensile strength, Descrip. of riveting long. seams, Dia. of rivet holes, Whether punched or drilled, Pitch of rivets, Lap of plating, Per centage of strength of joint, Rivets, Plates, Working pressure of shell by rules, Thickness of shell crown plates, Radius of do., No. of stays to do., Dia. of stays, Diameter of furnace Top, Bottom, Length of furnace, Thickness of furnace plates, Description of joint, Working pressure of furnace by rules, Thickness of furnace crown plates, Radius of do., Stayed by, Diameter of uptake, Thickness of uptake plates, Thickness of water tubes, Dates of survey

SPARE GEAR. State the articles supplied:— 2 top & 2 bottom end, 2 main bearing, 4 1 set coupling, bolts & nuts; 2 set each, Air, Feed, & Bilge pump valves; 1 Air pump rod; 1 each feed & bilge pump plungers; 1 impeller and shaft for Air pump; 1 set piston rings for each cylinder; 1 valve spindle, with saddle block & ecc. strap; 1, 1 air each, top & bottom end brasses; 1 tail shaft, & 1 propeller; 1 full set, main & donkey check valves; 1 safety valve spring; bolts & nuts assorted, & iron of various sizes.

The foregoing is a correct description,

HALL, RUSSELL & CO., LTD.

Manufacturers of main Engines & Boilers.

Dates of Survey: 1912 Nov. 13, 20, 25, 24 - Dec. 4, 10, 16, 24, 26, 30. 1913 Jan. 4, 14, 15, 16, 14, 18, 20, 23, 30 - Feb. 4, 4, 13, 14, 19. 24, 28 - Mar. 5, 13, 15, 18, 24, 24, 31 - Apr. 2, 3, 4, 5, 8, 14, 16, 18, 29, 30.

Dates of Examination of principal parts—Cylinders 25 26 28 13 Slides 20 13 Covers 24 4 2 Pistons 24 24 13 Rods 24 20 24 Connecting rods 24 20 18 18 Crank shaft 18 2 Thrust shaft 24 30 24 Tunnel shafts ✓ Screw shaft 18.20 13.24 Propeller 18.24 Stern tube 13.24 Steam pipes tested 14.4.13. Engine and boiler seatings 16.24 Engines holding down bolts 14.4.13. Completion of pumping arrangements 18.4.13. Boilers fixed 14.4.13. Engines tried under steam 18.4.13. Main boiler safety valves adjusted 18.4.13. Thickness of adjusting washers Port boiler-port 1/2" Star 5/16" Star boiler-port 1/2" Star 5/16"

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

These Engines & Boilers, have been constructed under Special Survey, & in accordance with the Secretary's letters, the Rules, and approved plans. The materials and workmanship are good. When completed and properly fitted on board, they were tried under steam at moorings with satisfactory results, and are now in good working order, and in my opinion entitled to the record L.M.C. 4.13 in the Register Book.

An electric light installation has been fitted on board the vessel, a report on which will be forwarded in due course.

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.13.

J.W.D. 14/5/13. F.P.R.

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

The amount of Entry Fee £ 2 : : When applied for. Special £ 21. 0 : : 13.5.1913. Donkey Boiler Fee £ : : When received. Travelling Expenses (if any) £ : : 13.5.1913.

Committee's Minute FRI. MAY. 16. 1913

Assigned Thine 4.13

MACHINERY CERTIFICATE WRITTEN.



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WEB-FRA, COLLIS, PARTITION, LONGITUD, STR, FLAT PLATE, GARBORD, MAINS, BR. D.K.S., THAMES, CLEAR OF, DBLG. of, POOR SE, SHORT E, FORECAS, MAIN, String, QUAR, String, FRAM, REVEL, LOWER, BOWSP, Topma, Riggi, Sails.

Rpt. 13. Port of, No. in Reg. Book, 164, Owners, Yard No., DESCRIP, One s, contin, Capacity of, Where is L, Position of, Positions of, with, If cut outs, circuits, If cessel is, Are the cut, Are all cut, are per, Are all suit, Total numb, A, B, C, D, E, 2, 2, 8, If are light, Where are, DESCRIP, Main cable, Branch cabl, Branch cabl, Leads to lan, Cargo light, DESCRIP, Joints in ca, Are all the, made i, Are there a, How are th, to A