

REPORT ON MACHINERY.

No. 28911

Received at London Office

MON.-TUEV. 1915

Date of writing Report 15-10-15 When handed in at Local Office 15/10 1915 Port of Hull
 No. in Survey held at Reg. Book. 728 on the steel screw steamer Grand Duke Date, First Survey 11.3.15 Last Survey 15-10-15 19
 (Number of Visits 46) Gross 327 Tons Net 171 When built 1915-10
 Master Built at Telby By whom built Cochrane & Sons Ltd
 Engines made at Hull By whom made C. D. Holmes & Co Ltd (R/1114) when made 1915-10
 Boilers made at Hull By whom made C. D. Holmes & Co Ltd when made 1915-10
 Registered Horse Power Owners F Barrett Port belonging to Gimsby
 Nom. Horse Power as per Section 28 90 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 13½" - 23" - 37" Length of Stroke 26" Revs. per minute Dia. of Screw shaft as per rule 7.96" Material of screw shaft as fitted 8½" Material of screw shaft
 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 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 35½"
 Dia. of Tunnel shaft as per rule 7.15" Dia. of Crank shaft journals as per rule 7.5" Dia. of Crank pin 7¾" Size of Crank webs 5" x 14½" Dia. of thrust shaft under collars 7¾" Dia. of screw 9" - 7½" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 33 ft²
 No. of Feed pumps one Diameter of ditto 2¾" Stroke 14¾" Can one be overhauled while the other is at work yes 69.7 cwt
 No. of Bilge pumps one Diameter of ditto 2¾" Stroke 14¾" Can one be overhauled while the other is at work yes
 No. of Donkey Engines two 3" yds Sizes of Pumps 6" x 6" & 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room two 2" dia In Holds, &c. one 2" dia in each compartment
 all suction also connected to yacht
 No. of Bilge Injections one size 3½" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" yds
 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 Forward suction How are they protected strong wooden casings
 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 28-5-15 of Stern Tube 28-5-15 Screw shaft and Propeller 28-5-15
 Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Stewarts & Lloyds
 Total Heating Surface of Boilers 1502 ft² Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 14-9-15 No. of Certificate 3100
 Can each boiler be worked separately Area of fire grate in each boiler 44¼ ft² No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 4.9 ft² Pressure to which they are adjusted 205 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7" lagged in Mean dia. of boilers 168" Length 10'-8" Material of shell plates Steel
 Thickness ½" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams 7 R & B Diameter of rivet holes in long. seams 1/32 Pitch of rivets 8 3/32 Lap of plates or width of butt straps 17½"
 Per centages of strength of longitudinal joint rivets 85.7 plate 84.9 Working pressure of shell by rules 250 Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1¼" No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 41"
 Length of plain part top 77½" bottom 69" Thickness of plates crown 7 13/16" Description of longitudinal joint welded No. of strengthening rings one per
 Working pressure of furnace by the rules 201 Combustion chamber plates: Material S Thickness: Sides ¾" Back ¾" Top ¾" Bottom 1½"
 Pitch of stays to ditto: Sides 9" x 8¾" Back 9½" x 8½" Top 8½" x 8½" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 246
 Material of stays S Diameter at smallest part 2.40" Area supported by each stay 99 ft² Working pressure by rules 218 End plates in steam space: Material S Thickness 1½" Pitch of stays 18" x 17" How are stays secured 7 x 4 Working pressure by rules 241 Material of stays S
 Diameter at smallest part 7.5" Area supported by each stay 306 ft² Working pressure by rules 255 Material of Front plates at bottom Steel
 Thickness 1½" Material of Lower back plate S Thickness 1½" Greatest pitch of stays 16" x 8½" Working pressure of plate by rules 270
 Diameter of tubes 3½" Pitch of tubes 5" x 5½" Material of tube plates S Thickness: Front 1½" Back 1" Mean pitch of stays 12"
 Pitch across wide water spaces 14½" Working pressures by rules 216 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10½" x 1¾" Length as per rule 38.43 Distance apart 8½" Number and pitch of stays in each Three 24"
 Working pressure by rules 202 Superheater or Steam chest; how connected to boiler 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 end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one impeller & one impeller shaft, one set of air, feed & bilge pump valves, one set of donkey pump valves, one main & one donkey check valve, two safety valve springs, one set of escape valve springs, one set of piston studs & nuts & a quantity of bolts & nuts of various sizes.

The foregoing is a correct description,

p. pro. CHARLES D. HOLMES & CO. LTD.

David Sheardson. DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1915: - Mar 11, 24, 31, Apr. 9, May 7, 18, 21, 27, 28 Jun 16, 24, 25, 29 Jul 5, 7, 12, 16, 20, 22, 23, 26, 28, 29, Aug 6, 10, 13, 16, 20, 19, 25, 26, 29, Sep 7, 10, 14, 18, 21, 25, 28, 30, Oct 1, 4, 6, 12, Total No. of visits 46

Is the approved plan of main boiler forwarded herewith? ✓

" " " donkey " " " " ✓

Dates of Examination of principal parts - Cylinders 20-7-15 Slides 20-8-15 Covers 20-7-15 Pistons 20-8-15 Rods 10-8-15

Connecting rods 20-8-15 Crank shaft 26-7-15 Thrust shaft 25-8-15 Tunnel shafts ✓ Screw shaft 27-5-15 Propeller 27-5-15

Stern tube 28-5-15 Steam pipes tested 30-9-15 Engine and boiler seatings 28-5-15 Engines holding down bolts 28-9-15

Completion of pumping arrangements 12-10-15 Boilers fixed 28-9-15 Engines tried under steam 12-10-15

Main boiler safety valves adjusted 6-10-15 Thickness of adjusting washers 3/8" F 7/16" A

Material of Crank shaft Iron Identification Mark on Do. 1513 FLS Material of Thrust shaft Iron Identification Mark on Do. 6859 DD

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1458 J6

Material of Steam Pipes solid drawn copper ✓ Test pressure 400 ✓

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 Willongra, Corrie Roy.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been

constructed under special survey in accordance with the approved plans & the

rules of this Society, the materials & workmanship are good. The Boiler & steam

pipes have been tested as above & found sound & tight, the machinery has been

properly fitted & secured on board the vessel & on completion was tested under

full working conditions & found satisfactory, the safety valves have been

adjusted under steam & tested for accumulation which did not exceed 208

In my opinion the vessel is eligible for the record + L.M.C. 10, 15.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10, 15.

JMM JWR 7/11/15

The amount of Entry Fee ... £ 1 : 0 :

Special ... £ 13 : 10 :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ : 4/11 :

When applied for,

27-10-15

When repaired,

29-10-15

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

Committee's Minute

Assigned

10E.NOV.-2.1915

+ L.M.C. 10, 15

MACHINERY CERTIFICATE WRITTEN



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