

REPORT ON MACHINERY.

Hull 20.222

No. 70583
FEB 26 JUN 1909

Date of writing Report 19 When handed in at Local Office 19 Port of London
 No. in Survey held at Kings Lynn Date, First Survey 100.29 Last Survey 1908
 Reg. Book. 633 on the Machinery for Gazelle (Number of Visits 2+14) 19
 Master Built at New Holland By whom built W. A. Warren Tons Gross 39 Net nil
 Engines made at Kings Lynn By whom made A. Dodman & Co 201184 when made 1908
 Boilers made at Kings Lynn By whom made A. Dodman & Co 201184 when made 1908
 Registered Horse Power Owners Thomas Milward Port belonging to Swansea
 Nom. Horse Power as per Section 28 24 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders Two No. of Cranks Two
 Dia. of Cylinders 10 1/4" & 20 1/2" Length of Stroke 15" Revs. per minute 135 Dia. of Screw shaft as per rule 4 1/2" Material of screw shaft Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 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 two liners fitted Length of stern bush 20"
 Dia. of Tunnel shaft as per rule 4 1/4" Dia. of Crank shaft journals as per rule 4 3/4" Dia. of Crank pin 4 3/4" Size of Crank webs 3 1/2" x 5 1/2" Dia. of thrust shaft under
 collars 4 3/4" Dia. of screw 63" Pitch of Screw P-6" No. of Blades 4 State whether moveable yes Total surface
 No. of Feed pumps one Diameter of ditto 2 1/2" Stroke 7 1/2" Can one be overhauled while the other is at work
 No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 7 1/2" Can one be overhauled while the other is at work
 No. of Donkey Engines One Sizes of Pumps Cyl. 3 3/4" pmp 2 1/2" Stroke 4 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three 2" In Holds, &c. One 2" to each fore main holds
 No. of Bilge Injections 1 sizes 2" Connected to condenser, or to circulating pump pump 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 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 below
 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 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 21.5.08 of Stern Tube 21.5.08 Screw shaft and Propeller 21.5.08
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Parkgate Iron & Steel Co
 Total Heating Surface of Boilers 534 Is Forced Draft fitted no No. and Description of Boilers one single ended return tube
 Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs Date of test 30-3-08 No. of Certificate 786
 Can each boiler be worked separately Area of fire grate in each boiler 26.6 sq ft No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 3.14 sq in Pressure to which they are adjusted 125 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2 1/2" inside Mean dia. of boilers 96" Length P-0" Material of shell plates Steel
 Thickness 9/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 24 riv
 long. seams R.R.R.B.S Diameter of rivet holes in long. seams 13/16" Pitch of rivets 4 1/8" Lap of plates or width of butt straps 8 1/2"
 Per centages of strength of longitudinal joint rivets 100 plate 80.3 Working pressure of shell by rules 128 Size of manhole in shell 12" x 16"
 Size of compensating ring 6" x 3/4" No. and Description of Furnaces in each boiler two plain Material Steel Outside diameter 33"
 Length of plain part top 69" x 3/4" bottom 66" Thickness of plates crown 9/16" Description of longitudinal joint 24 butt straps No. of strengthening rings one pair
 Working pressure of furnace by the rules 150 Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"
 Pitch of stays to ditto: Sides 9" x 8" Back 9 1/8" x 9 1/8" Top 9 1/2" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 122
 Material of stays Steel Diameter of smallest part 2 1/8" x 1 5/8" Area supported by each stay 123 1/2 sq in Working pressure by rules 164 1/35 End plates in steam space:
 Material Steel Thickness 3/4" x 7/8" Pitch of stays 17" x 17" How are stays secured R nuts Working pressure by rules 175 Material of stays Steel
 Diameter at smallest part 3 1/2" Area supported by each stay 289 sq in Working pressure by rules 129 Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 128
 Diameter of tubes 3" Pitch of tubes 3 7/8" Material of tube plates Steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 10 7/8"
 Pitch across wide water spaces 13" Working pressures by rules 120 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 6" x 1 1/2" Length as per rule 19" Distance apart 9 1/2" Number and pitch of stays in each one 8"
 Working pressure by rules 180 Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked
 separately no Diameter 24 3/4" Length 24" Thickness of shell plates 3/8" Material Steel Description of longitudinal joint riv Diam. of rivet
 holes 13/16" Pitch of rivets 2" Working pressure of shell by rules 206 Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness 9/16" How stayed one stay in ctr
 Working pressure of end plates 140 Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— Manufacturers of Steel

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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts nuts, one set coupling bolts and nuts, one set each feed and bilge pump valves, a quantity of assorted bolts nuts etc

The foregoing is a correct description,

A. Rodeman & Co Ltd. Manufacturer.

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - -
 Total No. of visits

1908 Nov 29 Dec 17 Jan 17 Feb 17 March 17
 Hull - April 4 25 May 6 14 18 21 27 30 June 1 3 5 15 19
 5 + 14 = 19.

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 7-1-08 Slides 7-1-08 Covers 7-1-08 Pistons 7-1-08 Rods 17-2-08
 Connecting rods 17-2-08 Crank shaft 6-3-08 Thrust shaft 6-3-08 Tunnel shafts 6-3-08 Screw shaft 6-3-08 Propeller 6-3-08
 Stern tube 6-3-08 Steam pipes tested 26-5-08 Engine and boiler seatings 23-4-08 Engines holding down bolts 5-6-08
 Completion of pumping arrangements 5-6-08 Boilers fixed 5-6-08 Engines tried under steam 15-6-08
 Main boiler safety valves adjusted 5-6-08 Thickness of adjusting washers $\frac{1}{16}$ $\frac{1}{32}$
 Material of Crank shaft Steel Identification Mark on Do. 608 F.L.S. Material of Thrust shaft Steel Identification Mark on Do. 609 F.L.S.
 Material of Tunnel shaft Steel Identification Marks on Do. 609 F.L.S. Material of Screw shaft Steel Identification Marks on Do. 610 F.L.S.
 Material of Steam Pipes Solid drawn Copper Test pressure 240 lbs \square

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery for this vessel has been constructed under special survey, the material tested as required by the rules & the workmanship is good. The boiler has been tested by hydraulic pressure to 240 lbs found tight.

The machinery has been forwarded to Hull to be fitted on board W. H. Warrens vessel No 63.

These engines and boiler have been fitted on board, tested under steam and found satisfactory, and are now eligible in my opinion to be classed with the notation of CLM. 66-08 in the Register Book.

It is submitted that

the vessel is eligible for THE RECORD M.C. 6-08.

James Barclay

APR 26 1908

26-6-08

The amount of Entry Fee. £ 1 : 0 :
 Special Reduced £ 0 : 0 :
 Donkey Boiler Fee £ 6 : 14 :
 Travelling Expenses (if any) £ 6 : 13 :
 When applied for. 11/4/08
 When received. 24/6/08
 27-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100

TUES. 30 JUN 1908

Committee's Minute

Assigned

+ LMB 6-08

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



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MACHINERY CERTIFICATE WRITTEN