

REPORT ON MACHINERY.

No. 29669

Date of writing Report 18-11-16 When made at Local Office 25/11/16 Port of Hull
 Received at London Office
 No. in Survey held at Hull Date, First Survey 23-3-16 Last Survey 16-11-16 19
 Reg. Book. Hull (Number of Visits 46)
 Gross 274
 Net 123
 Master Built at Beverley By whom built Cook, Welton & Gemmell When built 1916-11
 Engines made at Hull By whom made C. D. Holmes & Co. Ltd when made 1916-11
 Boilers made at Hull By whom made C. D. Holmes & Co. Ltd when made 1916-11
 Registered Horse Power Owners W. Grant Port belonging to Grimsby
 Nom. Horse Power as per Section 28 79 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 12 3/4 - 22 - 36 Length of Stroke 24 Revs. per minute Dia. of Screw shaft as per rule 7 1/2 Material of screw shafts Iron
 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 Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 35 1/2
 Dia. of Tunnel shaft as per rule 6 5/8 Dia. of Crank shaft journals as per rule 6 8/25 Dia. of Crank pin 7 1/2 Size of Crank web 4 1/2 x 4 3/2 Dia. of thrust shaft under
 collars 7 1/8 Dia. of screw 9-3 Pitch of Screw 10-8 No. of Blades 4 State whether moveable No Total surface 30 7
 No. of Feed pumps one Diameter of ditto 2 1/8 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps one Diameter of ditto 2 1/8 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines one & 2 1/2 inch Sizes of Pumps 5, 2 3/4 x 5 1/2 wheel No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room two 2 inch diam In Holds, &c. one 2 inch diam in each compartment
 all suction's also connected to water
 No. of Bilge Injections one sizes 3 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size 2 1/2 inch
 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's How are they protected strong wooden 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 18-7-16 of Stern Tube 18-7-16 Screw shaft and Propeller 18-7-16
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Stewarts & Lloyds
 Total Heating Surface of Boilers 1355 sq ft Is Forced Draft fitted No No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29-9-16 No. of Certificate 3164
 Can each boiler be worked separately Yes Area of fire grate in each boiler 45.7 sq ft No. and Description of Safety Valves to
 each boiler two spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers on uptakes and bunkers on woodwork 7 inch lagged Min dia. of boilers 15 1/3 1/6 Length 10-6 Material of shell plates steel
 Thickness 3/32 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double
 tong. seams J.P.D.B. Diameter of rivet holes in long. seams 1 1/6 Pitch of rivets 6 7/8 Lap of plates or width of butt straps 15 3/8
 Per centages of strength of longitudinal joint rivets 87.8 Working pressure of shell by rules 180 lbs Size of manhole in shell 16 x 12
 plate 84.5
 Size of compensating ring 7 x 1 3/32 No. and Description of Furnaces in each boiler three plain Material steel Outside diameter 38
 Length of plain part top 79 1/2 Thickness of plates crown 4 1/6 1/4 Description of longitudinal joint welded No. of strengthening rings
 bottom 74
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 2 3/32 Back 2 3/32 Top 6 5/8 3/4 Bottom 2 3/32
 Pitch of stays to ditto: Sides 11 x 8 1/2 Back 11 x 8 1/2 Top 11 x 9 8/16 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 185
 Material of stays steel Diameter at smallest part 2.4 Area supported by each stay 116 Working pressure by rules 186 End plates in steam space
 Area
 Material steel Thickness 1 1/6 Pitch of stays 18 x 16 How are stays secured J.P.D.B. Working pressure by rules 185 Material of stays steel
 Diameter at smallest part 5.27 Area supported by each stay 288 Working pressure by rules 190 Material of Front plates at bottom steel
 Thickness 7/8 Material of Lower back plate steel Thickness 2 7/32 Greatest pitch of stays 14 x 8 1/2 Working pressure of plate by rules 184
 Diameter of tubes 3 1/2 Pitch of tubes 5 Material of tube plates steel Thickness: Front 7 1/8 3/4 1/4 Back 7/8 Mean pitch of stays 11 1/2
 Pitch across wide water spaces 14 Working pressures by rules 216 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9 x 1 3/4 Length as per rule 34.93 Distance apart 9 dia. Number and pitch of stays in each two 11
 Working pressure by rules 202 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

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 set each of air, circulating, feed & bilge pump valves, one set of donkey pump valves, 6 junking studs & nuts, one main & one donkey check valve, two safety valve springs & a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,
 BY CHARLES D. HOLMES & Co. LTD
Arthur Holmes DIRECTOR Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1916: - Mar 23 Apr 19 27 Jun 6 22 27 Jul 2 14 17 18 19 21 26 Aug 8 9 11 15 19 23 28 29 Sep 1 2 5 7 9 12 15 19 21 23 27 29
 { During erection on board vessel - - - } Oct 5 10 12 18 19 20 31 Nov 2 7 9 10 14 16
 Total No. of visits 46 Is the approved plan of main boiler forwarded herewith yes please
" " " donkey " " " Pattern for water vessel

Dates of Examination of principal parts - Cylinders 1-9-16 Slides 5-10-16 Covers 29-9-16 Pistons 21-9-16 Rods 27-9-16
 Connecting rods 27-9-16 Crank shaft 23-9-16 Thrust shaft 14-7-16 Tunnel shafts Screw shaft 19-7-16 Propeller 19-7-16
 Stern tube 17-7-16 Steam pipes tested 7-11-16 Engine and boiler seatings 18-7-16 Engines holding down bolts 2-11-16
 Completion of pumping arrangements 16-11-16 Boilers fixed 2-11-16 Engines tried under steam 16-11-16
 Main boiler safety valves adjusted 10-11-16 Thickness of adjusting washers 7/32" & 11/32"
 Material of Crank shaft Iron Identification Mark on Do. 738 FLS Material of Thrust shaft Iron Identification Mark on Do. 1706 FLS
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 1709 FLS
 Material of Steam Pipes Solid drawn copper Test pressure 400 lbs
 Is an installation fitted for burning oil fuel 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 Lapageria
 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 by hydraulic pressure as above & found sound & good. The machinery has been properly fitted & secured on board & on completion tried under steam & found to work satisfactorily. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 196 lbs. In my opinion the vessel is eligible for the record + L.M.C. 11-16

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11-16.

JWD
30/11/16

The amount of Entry Fee ... £ 1 : 0 :
 Special ... £ 11 : 17 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) ... £ 2 : :
 When applied for, 28/11/16
 When received, 2/12/16

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

Committee's Minute FRI. 1-DEC 1916
 Assigned + L.M.C. 11.16



Certificate (if required) to be sent to