

REPORT ON MACHINERY

No. 29155

Received at London Office

SAT. 26 FEB. 1916

Date of writing Report 19-2-16 When handed in at Local Office 19. 2. 16 Port of Hull

No. in Survey held at Hull Date, First Survey 18. 5. 16 Last Survey 17. 2. 19 16
Reg. Book. (Number of Plates 55)

Master Built at Hull By whom built Lord Jersey
Engines made at Hull By whom made C. D. Holmes & Co. Ltd (No 1110) when made 1916-2
Boilers made at Hull By whom made C. D. Holmes & Co. Ltd when made 1916-2

Registered Horse Power Owners Pickering & Haldane Ltd Hull Port belonging to Hull

Nom. Horse Power as per Section 28 88 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 13-23-37 Length of Stroke 26 Revs. per minute 114 Dia. of Screw shaft as per rule 7.88 as fitted 8 1/4 Material of screw shaft 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

If two liners are fitted, is the shaft lapped or protected between the liners Length of stern tube 35 1/2

Dia. of Tunnel shaft as per rule 7.04 as fitted 7.39 Dia. of Crank shaft journals as per rule 7 1/2 as fitted 7 1/2 Dia. of Crank pin 7 1/2 Size of Crank webs 1 1/4 x 1 1/2 Dia. of thrust shaft under collars 7 1/2

Dia. of screw 9-7 1/2 Pitch of Screw 11-0 No. of Blades 4 State whether moceable no Total surface 33 1/2

No. of Feed pumps one Diameter of ditto 2 5/8 Stroke 14 3/4 Can one be overhauled while the other is at work

No. of Bilge pumps one Diameter of ditto 2 5/8 Stroke 14 3/4 Can one be overhauled while the other is at work

No. of Donkey Engines one & 3 ejectors Sizes of Pumps 6, 4 1/2 x 6 duplex 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 ejector

No. of Bilge Injections one size 3 1/2 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size 3" ejector

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 sized 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 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 2-10-15 of Stern Tube 2-10-15 Screw shaft and Propeller 2-10-15

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 1440 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 11-12-15 No. of Certificate 3120

Can each boiler be worked separately Area of fire grate in each boiler 48 1/2 No. and Description of Safety Valves to each boiler Two Springs loaded Area of each valve 49 1/2 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" Mean dia. of boilers 165" Length 10-6" Material of shell plates steel

Thickness 1 5/16 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams J.P.D.B.T Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 8 1/8 Lap of plates width of butt straps 18"

Per centages of strength of longitudinal joint rivets 87 plate 85 Working pressure of shell by rules 201 Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 1/16 No. and Description of Furnaces in each boiler 3 Plain Material steel Outside diameter 40"

Length of plain part top 78 1/2 bottom 69 Thickness of plates crown 3 13/16 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 206 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 23/32 Top 3/4" Bottom 3/4"

Pitch of stays to ditto: Sides 10" x 8" Back 9 3/4" x 8 3/4" Top 11" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 208

Material of stays steel Diameter at smallest part 2.07 Area supported by each stay 68 1/2 Working pressure by rules 211 End plates in steam space:

Material steel Thickness 1 7/32 Pitch of stays 19" x 17 1/2 How are stays secured D.T. & W Working pressure by rules 210 Material of stays steel

Diameter at smallest part 7.5 Area supported by each stay 335 1/2 Working pressure by rules 213 Material of Front plates at bottom steel

Thickness 1 5/16 Material of Lower back plate steel Thickness 1 5/16 Greatest pitch of stays 13 3/4 x 9 9/16 Working pressure of plate by rules 216

Diameter of tubes 3 1/2 Pitch of tubes 4 7/8 Material of tube plates steel Thickness: Front 1 5/16 x 3/4 Back 7/8 Mean pitch of stays 10"

Pitch across wide water spaces 14 Working pressures by rules 275 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 11" x 1 3/4 Length as per rule 36.218 Distance apart 11 Number and pitch of stays in each two 8

Working pressure by rules 208 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 set of air feed & bilge pump valves, two valves for donkey pump, one set of valves & nuts for check valves, one impeller shaft, one safety valve spring, top & bottom end bolts for circulating pump (centrifugal) and a quantity of bolts & nuts & nuts of various sizes

The foregoing is a correct description,

P. 270 CHARLES D. HOLMES & Co. LTD.

David P. Shearman

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1915: - May 18, 21, Jun 3, 15, 21, Jul 12, 20, 23, Aug 10, 13, 16, 19, 25, 29, Sep 7, 14, 18. During erection on board vessel - 1916: - Jan 5, 10, 12, 26, 28, Feb 3, 5, 9, 12, 15, 16, 17. Total no. of visits 55

Is the approved plan of main boiler forwarded herewith *Yes* *Manufacturer for eight vessels returned 28/2/16*

Dates of Examination of principal parts - Cylinders 16-11-15 Slides 10-1-16 Covers 5-1-16 Pistons 1-1-16 Rods 5-1-16 Connecting rods 5-1-16 Crank shaft 30-12-15 Thrust shaft 10-1-16 Tunnel shafts - Screw shaft 29-9-15 Propeller 29-9-15 Stern tube 27-9-15 Steam pipes tested 3-2-16 Engine and boiler seatings 2-10-15 Engines holding down bolts 26-1-16 Completion of pumping arrangements 15-2-16 Boilers fixed 3-2-16 Engines tried under steam 15-2-16 Main boiler safety valves adjusted 5-2-16 Thickness of adjusting washers *Both 3/8*

Material of Crank shaft *Iron* Identification Mark on Do. *1557 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *7387 T.J.F* Material of Tunnel shafts *Iron* Identification Marks on Do. Material of Screw shafts *Iron* Identification Marks on Do. *1521 FLS*

Material of Steam Pipes *Solid drawn copper* Test pressure *40 lbs* 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. *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 & good. The machinery has been properly fitted & secured on board the vessel & on completion was tried under full working conditions & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 2 1/3 lbs. In my opinion the vessel is eligible for the record + d. h. c. 2-16*

It is submitted that this vessel is eligible for *THE RECORD + LMC 2-16*

J.W.D.
J.M. 28/2/16

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

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 13 : 4 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 2/2 :
When applied for: 25/2/1916
When received: 29.2.1916

Committee's Minute TUE 29 FEB. 1916
Assigned + L.M.C. 2-16

MACHINERY CERTIFICATE WRITTEN

