

REPORT ON MACHINERY

No. 29019

WED. 22 DEC. 1915

Received at London Office

Date of writing Report 13-12-15 When handed in at Local Office 13.12.15 Port of Hull
No. in Survey held at Hull Date, First Survey 7.5-15 Last Survey 11th Dec 1915
Reg. Book. (Number of Visits 42)

Master Built at Beverley By whom built Cook Wilton & Gemmill Tons { Gross 248 Net 108
Engines made at Hull By whom made C. D. Holmes 160th when made 1915-12
Boilers made at Hull By whom made C. D. Holmes 160th when made 1915-12
Registered Horse Power Owners G. F. Height Port belonging to Gimsby
Nom. Horse Power as per Section 28 80 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 12 1/2 - 22 - 35 Length of Stroke 24 Revs. per minute Dia. of Screw shaft as per rule 7.31 Material of Iron as fitted 7 1/2 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 35 1/2
Dia. of Tunnel shaft as per rule 6.6 Dia. of Crank shaft journals as per rule 6.93 Dia. of Crank pin 7 Size of Crank webs 4 7/8 x 3 1/4 Dia. of thrust shaft under collars 7 Dia. of screw 8.9 Pitch of Screw 10-9 No. of Blades 4 State whether moveable no Total surface 29 1/4
No. of Feed pumps one Diameter of ditto 2 3/8 Stroke 14 1/4 Can one be overhauled while the other is at work
No. of Bilge pumps one Diameter of ditto 2 3/8 Stroke 14 1/4 Can one be overhauled while the other is at work
No. of Donkey Engines two 2 1/2 cycles Sizes of Pumps 5 1/4 x 3 1/2 x 5 x 6, 4 1/4 x 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 ejector
No. of Bilge Injections one sizes 3 1/2 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size 2 1/2 yd in
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 yes
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 stowhold 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 Food 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 30-6-15 of Stern Tube 31-6-15 Screw shaft and Propeller 30-6-15
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 1402^{sq} Is Forced Draft fitted no No. and Description of Boilers one single ended
Working Pressure 195 lbs Tested by hydraulic pressure to 390 lbs Date of test 30-9-15 No. of Certificate 3104
Can each boiler be worked separately Area of fire grate in each boiler 43.2^{sq} No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 4.9^{sq} Pressure to which they are adjusted 250 Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 7" lagged Mean dia. of boilers 162" Length 10'-6" Material of shell plates steel
Thickness 1 3/16 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams T.P.D.B. Diameter of rivet holes in long. seams 1 7/32 Pitch of rivets 8 7/16 Lap of plates or width of butt straps 16 9/8
Per centages of strength of longitudinal joint rivets 86.8 plate 85.6 Working pressure of shell by rules 197 Size of manhole in shell 16" x 12"
Size of compensating ring 7" x 1 3/16 No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 40"
Length of plain part top 76 3/4 bottom 66 Thickness of plates crown 2 1/32 Description of longitudinal joint welded No. of strengthening rings
Working pressure of furnace by the rules 197 Combustion chamber plates: Material steel Thickness: Sides 1 1/16 Back 2 3/32, 3 1/16 Top 1 1/16, 3 1/16 Bottom 1 1/16
Pitch of stays to ditto: Sides 9 3/4 x 8" Back 9 1/2 x 9 3/4" Top 11" x 8 1/2" stays are fitted with nuts or riveted heads nuts Working pressure by rules 200
Material of stays steel Diameter at smallest part 2.07" Area supported by each stay 89" Working pressure by rules 209 End plates in steam space:
Material steel Thickness 1 7/32 Pitch of stays 18" x 18" How are stays secured D.T. & W. Working pressure by rules 195 Material of stays steel
Diameter at smallest part 6 3/32 Area supported by each stay 324" Working pressure by rules 203 Material of Front plates at bottom steel
Thickness 7/8" Material of Lower back plate steel Thickness 3/32 Greatest pitch of stays 15" x 9 3/8" Working pressure of plate by rules 204
Diameter of tubes 3 1/2" Pitch of tubes 4 3/4 Material of tube plates steel Thickness: Front 7 3/8" x 3/4" double 7/8" Mean pitch of stays 9 1/2"
Pitch across wide water spaces 15" Working pressures by rules 250 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10 3/4 x 1 3/4 Length as per rule 35.8" Distance apart 11" Number and pitch of stays in each three 8"
Working pressure by rules 197 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

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

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, fuel & oil pump valves, one main & one donkey check valve, one safety valve spring, 3 boiler tubes, & a quantity of bolts & nuts & iron of various sizes*

The foregoing is a correct description,

per CHARLES D. HOLMES & Co
Arthur Holmes DIRECTOR

Manufacturer.

Dates of Survey while building: During progress of work in shops - *1915: - May 7, 18, 21, June 3, 15, 21, 26, 29, 30, Jul 5, 12, 20, 23, Aug 10, 18, 19, Sept 7, 10, 20, 22, 27, 28, 29, 30, Oct 1, 5, 6, 8, 11, 14, 19, 22, 25, 27, Nov 4, 11, 12, 19, 23, Dec 4, 11*
During erection on board vessel -
Total No. of visits: *42*

Is the approved plan of main boiler forwarded herewith? *Yes*

Dates of Examination of principal parts - Cylinders *8-10-15* Slides *29-10-15* Covers *25-10-15* Pistons *11-10-15* Rods *27-10-15*
Connecting rods *9-10-15* Crank shaft *5-10-15* Thrust shaft *25-10-15* Tunnel shafts *30-6-15* Screw shaft *30-6-15* Propeller *30-6-15*
Stern tube *30-6-15* Steam pipes tested *12-11-15* Engine and boiler seatings *30-6-15* Engines holding down bolts *11-11-15*
Completion of pumping arrangements *4-12-15* Boilers fixed *11-11-15* Engines tried under steam *4-12-15*
Main boiler safety valves adjusted *4-12-15* Thickness of adjusting washers *Both 3/16*

Material of Crank shaft *Iron* Identification Mark on Do. *1532 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *7234 J.A.*
Material of Tunnel shafts *Iron* Identification Marks on Do. *1477 J.G.*
Material of Steam Pipes *Solid drawn copper* Test pressure *400 lb*

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 *S.S. Rondo*

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 tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 205 lbs. In my opinion the vessel is eligible for the record + L.M.C. 12, 15.*

Please return Boiler plan for dealing with sister vessels

It is submitted by *J.W.D.*
THE BROOKLYN + L.M.C. 12.15. *J.R. Jc*

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 12 : 0 :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : 2 :
When applied for, *21-12-1915*
When received, *31-12-1915*

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

Committee's Minute *FRI. 24 DEC. 1915*

Assigned

+ L.M.C. 12.15



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