

REPORT ON MACHINERY.

No. 29360

Received at London Office

SAT. 10 JUN. 1916

Date of writing Report 22-5-16 19 When handed in at Local Office 22/5/16 Port of Hull

No. in Survey held at Hull
Reg. Book.

Date, First Survey 19-8-15 Last Survey 20-5-16 19

(Number of Visits 57)

Gross 219

Net 102

When built 1916-5

Master Built at Hull

By whom built Cochran & Sons Ltd

Engines made at Hull

By whom made C. D. Holmes & Co Ltd

(No 1087) when made 1916-5

Boilers made at Hull

By whom made C. D. Holmes & Co Ltd

when made 1916-5

Registered Horse Power

Owners H. C. Baker

Port belonging to Gurnsey

Nom. Horse Power as per Section 28 67

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"-21½"-34" Length of Stroke 24" Revs. per minute

Dia. of Screw shaft as per rule 7.02" 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 yes

If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 30½"

Dia. of Tunnel shaft as per rule 6.29" Dia. of Crank shaft journals as per rule 6.6" Dia. of Crank pin 6½"

Collars 6½" Dia. of screw 8-6" Pitch of Screw 10-7½" No. of Blades 4 State whether moveable no Total surface 29 ft²

No. of Feed pumps one Diameter of ditto 2½" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps one Diameter of ditto 2½" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines one & 2½" Sizes of Pumps 5" 2½" & 5" 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

No. of Bilge Injections one sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2½" dia.

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room 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 stowage plates yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes

What pipes are carried through the bunkers Forward suction How are they protected wooden casings

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections 23-10-15 of Stern Tube 23-10-15 Screw shaft and Propeller 30-11-15

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Stewart & Lloyd

Total Heating Surface of Boilers 1110 ft² 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 27-4-16 No. of Certificate 3135

Can each boiler be worked separately yes Area of fire grate in each boiler 32.25 ft² No. and Description of Safety Valves to

each boiler Two spring loaded Area of each valve 3.9 ft² Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or machinery 7" Mean dia. of boilers 150" Length 10'-0" Material of shell plates steel

Thickness 1½" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams L.P.B.B. Diameter of rivet holes in long. seams 1½" Pitch of rivets 7½" Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 84.4 Working pressure of shell by rules 185 Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1½" No. and Description of Furnaces in each boiler Two cu flue 14 ft x 16 ft Material steel Outside diameter 43"

Length of plain part top 7.62 Thickness of plates crown 7.267 Description of longitudinal joint welded No. of strengthening rings one ft

Working pressure of furnace by the rules 183 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"

Pitch of stays to ditto: Sides 9" x 9¾" Back 10" x 8¾" Top 9¾" x 8¾" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 185

Material of stays steel Diameter at smallest part 2.07" Area supported by each stay 87.75 ft² Working pressure by rules 188 End plates in steam space:

Material steel Thickness 1½" Pitch of stays 17" x 17" How are stays secured R. H. & W. Working pressure by rules 185 Material of stays steel

Diameter at smallest part 5.79" Area supported by each stay 289 ft² Working pressure by rules 208 Material of Front plates at bottom steel

Thickness 7/8" Material of Lower back plate steel Thickness 29/32 Greatest pitch of stays 15" x 8¾" Working pressure of plate by rules 188

Diameter of tubes 3½" Pitch of tubes 5" Material of tube plates steel Thickness: Front 7/8" + 3/4" Back 7/8" Mean pitch of stays 11½"

Pitch across wide water spaces 15" Working pressures by rules 216 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 8" x 1¾" Length as per rule 31 7/16 Distance apart 8½" Number and pitch of stays in each Two 9¾"

Working pressure by rules 205 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked

separately yes 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 circulating, feed & bilge pump valves, one set of donkey pump valves, one main & one donkey pump check valve, 3 condenser & 3 Boiler tubes, Two safety valve springs & a quantity of bolts & nuts & iron of various sizes

The foregoing is a correct description,

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

S. Arthur Holmes

DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1915: Aug 19 Oct 19 21 25 26 27 30 Nov 2 9 10 11 16 25 30 Dec 6 15 30 1916: Jan 10
During erection on board vessel - - - 13 16 20 25 31 Feb 3 10 11 14 22 24 25 29 Mar 3 8 14 16 21 23 28 30 31 Apr 3
Total No. of visits 59
Is the approved plan of main boiler forwarded herewith yes ✓

Dates of Examination of principal parts—Cylinders 8-3-16 Slides 18-4-16 Covers 17-4-16 Pistons 17-4-16 Rods 25-4-16

Connecting rods 13-4-16 Crank shaft 11-4-16 Thrust shaft 27-10-15 Tunnel shafts ✓ Screw shaft 11-11-15 Propeller 11-11-15

Stern tube 21-10-15 Steam pipes tested 16-5-16 Engine and boiler seatings 23-10-15 Engines holding down bolts 16-5-16

Completion of pumping arrangements 20-5-16 Boilers fixed 16-5-16 Engines tried under steam 20-5-16

Main boiler safety valves adjusted 16-5-16 Thickness of adjusting washers 7 1/32 & 9/32

Material of Crank shaft Iron Identification Mark on Do. 1575 FLS Material of Thrust shaft Iron Identification Mark on Do. 1540 FLS

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1539 FLS

Material of Steam Pipes solid drawn copper ✓ Test pressure 400 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 ✓ 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 by hydraulic pressure as above & found sound & good. The machinery has been properly fitted & secured on board & on completion was tested under full working conditions & found satisfactory. The safety valves have been adjusted under steam & checked for accumulation which did not exceed 180 lbs.

In my opinion the vessel is eligible for the record + L.M.C. 5-16

It is submitted that
this vessel is eligible for
THE BROOD + L.M.C. 5-16

The amount of Entry Fee ... £ 1 : 0 :

Special ... £ 10 : 1 :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ : 8/2 :

When applied for,

When received,

Committee's Minute TUE 13 JUN 1916

Assigned

+ L.M.C. 5-16

Frank L. Sturgeon

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

MACHINERY CERTIFICATE
WRITTEN



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Foundation