

## REPORT ON MACHINERY

No. 29372.

SAT. 17 JUN. 1916

Date of writing Report 18-6-16

When handed in at Local Office 18-6-16

Port of Hull

No. in Survey held at Hull

Reg. Book.

Date, First Survey Mar. 11 - 1915 Last Survey 14-6-16

(Number of Vessels) 40

Gross

Net

Master

Built at Hull

By whom built Livingston &amp; Cooper

When built 1916-6

Engines made at Hull

By whom made

C. J. Holmes 16024 (10/08)

when made 1916-6

Boilers made at Hull

By whom made

C. J. Holmes 16024

when made 1916-6

Registered Horse Power

Owners W. H. Miller

Port belonging to Hull

Nom. Horse Power as per Section 28 63

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

## ENGINES, &amp;c.—Description of Engines

Compound

No. of Cylinders Two

No. of Cranks two

Dia. of Cylinders 15 1/2" - 33

Length of Strokes 22"

Revs. per minute 120

Dia. of Screw shaft as per rule 7.08"

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 bush 30 1/2"

Dia. of Tunnel shaft as per rule 6.53"

as fitted 6.57"

Dia. of Crank shaft journals as per rule 6.85"

as fitted 7"

Dia. of Crank pin 7 1/8"

Size of Crank webs 13 1/2" x 4 1/2"

Dia. of thrust shaft under

collars 7"

Dia. of screw 8-3"

Pitch of Screw 10-6"

No. of Blades 4

State whether moveable no

Total surface 28 sq ft

No. of Feed pumps one

Diameter of ditto 2 1/2"

Stroke 11 1/2"

Can one be overhauled while the other is at work

No. of Bilge pumps one

Diameter of ditto 2 1/2"

Stroke 11 1/2"

Can one be overhauled while the other is at work

No. of Donkey Engines one

Size of Pumps 6" x 4" x 6" duplex

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one 2" dia

In Holds, &amp;c. one 2" dia in each compartment

No. of Bilge Injections one

size 3"

Connected to condenser, or to circulating pump pump

Is a separate Donkey Suction fitted in Engine room &amp; 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 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 main steam pipes

How are they protected strong iron box

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 21-1-16

of Stern Tube 21-1-16

Screw Shaft and Propeller 21-1-16

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

## BOILERS, &amp;c.—(Letter for record S)

Manufacturers of Steel

J. Colville &amp; Sons

Total Heating Surface of Boilers 187 sq ft

Is Forced Draft fitted no

No. and Description of Boilers one single ended

Working Pressure 140 lbs

Tested by hydraulic pressure to 280 lbs

Date of test 21-6-15

No. of Certificate 3087

Can each boiler be worked separately

Area of fire grate in each boiler 34.5 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 145 lbs

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4-0"

Mean dia. of boilers 139 5/16"

Length 10-3"

Material of shell plates steel

Thickness 27/32"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged yes

Descrip. of riveting: cir. seams double

long. seams J.P.D.B.

Diameter of rivet holes in long. seams 27/32"

Pitch of rivets 5 1/2"

Top of plates or width of butt straps 12 1/2"

Per centages of strength of longitudinal joint rivets 87.8

plate 85

Working pressure of shell by rules 154

Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 27/32"

No. and Description of Furnaces in each boiler two plain

Material steel

Outside diameter 41"

Length of plain part top 7 1/2"

Thickness of plates crown 4 3/4"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 150

Combustion chamber plates: Material steel

Thickness: Sides 5/8"

Back 5/8"

Top 5/8"

Bottom 3/4"

Pitch of stays to ditto: Sides 9 1/2" x 9 1/2"

Back 10" x 9"

Top 9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 149

Material of stays steel

Diameter at smallest part 1 7/8"

Area supported by each stay 90"

Working pressure by rules 156

End plates in steam space

Material steel

Thickness 27/32"

Pitch of stays 16" x 14 1/2"

How are stays secured 8" x 4"

Working pressure by rules 145

Material of stays steel

Diameter at smallest part 3 8/5"

Area supported by each stay 232"

Working pressure by rules 172

Material of Front plates at bottom steel

Thickness 3/4"

Material of Lower back plate steel

Thickness 3/4"

Greatest pitch of stays 13 1/2" x 9"

Working pressure of plate by rules 146

Diameter of tubes 3 1/2"

Pitch of tubes 4 1/2" x 4 1/2"

Material of tube plates steel

Thickness: Front 3/4" double

Back 13/16"

Mean pitch of stays 11 1/4"

Pitch across wide water spaces 13 1/2"

Working pressure by rules 159

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8 1/2" x 1 1/2"

Length as per rule 33 1/2"

Distance apart 8 1/2"

Number and pitch of stays in each two 9 1/2"

Working pressure by rules 169

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

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

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

012514-012521-0224



IS A DONKEY BOILER FITTED?

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, 1 set of coupling bolts & nuts, one set of air, feed, bilge pump valves, 1 safety valve spring, & a quantity of Bolts & nuts & iron of various sizes

The foregoing is a correct description,

Arthur Holmes

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1915, Mar 11, 24, April 9, 20, 22, 23, June 3, 15, 21, Dec 20, 23, 30, (1916) Jan 1-10-18-12.  
During erection on board vessel -- 20, 21, 25, Feb. 3, 4, 10, 14, 22, 25, Mar 3, 8, 10, 14, 16, 21, 28, May 29, 31.  
Total No. of visits 40

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 12-1-16 Slides 16-3-16 Covers 16-3-16 Pistons 3-3-16 Rods 14-5-16  
Connecting rods 14-3-16 Crank shaft 8-5-16 Thrust shaft 10-3-16 Tunnel shafts ✓ Screw shaft 20-1-16 Propeller 20-1-16  
Stern tube 20-1-16 Steam pipes tested 17-6-16 Engine and boiler seatings 21-1-16 Engines holding down bolts 6-6-16  
Completion of pumping arrangements 14-6-16 Boilers fixed 9-6-16 Engines tried under steam 14-6-16  
Main boiler safety valves adjusted 9-6-16 Thickness of adjusting washers 10 1/2 1 1/16  
Material of Crank shaft Iron Identification Mark on Do. 1567 FLS Material of Thrust shaft Iron Identification Mark on Do. 6834 LCD  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1552 FLS  
Material of Steam Pipes Solid drawn copper ✓ Test pressure 300 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 workmanship is 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 under full working conditions & found satisfactory. The safety valves have been adjusted under steam & started for accumulation which did not exceed 150 lbs. In our opinion the vessel is eligible for the record + L.M.C. 6.16

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 6.16.

The amount of Entry Fee

£ 1 : 0 :

When applied for,

Specimen

£ 9 : 9 :

16-6-1916

Donkey Boiler Fee

£ 1 : 4 :

When received,

Traveling Expenses (if any) £

1 : 4 :

28/6/16

Committee's Minute

FRI JUN 23 1916

Assigned

+ L.M.C. 6.16

APPROVED  
WRITTEN



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