

REPORT ON MACHINERY.

No. 243.5 2

THU. NOV. 2--1911

Received at London Office

Date of writing Report

19

When handed in at Local Office 24th Oct 1911 Port of Hull

No. in Survey held at Reg. Book.

Hull

Date, First Survey

Apr 5th

Last Survey 21st Oct 1911

310 on the

Steel Sc. K. Flicker

(Number of Visits 43)

Gross Tons 192
Net Tons 72
When built 1911

Master

Built at Gooles.

By whom built Gooles S. B. & R. Co. Ltd

Machines made at

Hull

By whom made Messrs. Earles Co. Ltd.

when made 1911

Boilers made at

"

By whom made

"

"

"

when made 1911

Registered Horse Power

Owners Halsall Bros & Buching Ltd

Port belonging to Hull

Com. Horse Power as per Section 28 55

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 12" ~ 21" ~ 33"

Length of Stroke 21"

Revs. per minute 125

Dia. of Screw shaft

as per rule 7.38"

Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No

Is the after end of the liner made water tight

the propeller boss Yes

If the liner is in more than one length are the joints burned 2 liners

Separate 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 No

Length of stern bush 36"

Dia. of Tunnel shaft

as per rule 5.74"

Dia. of Crank shaft journals

as per rule 6.02"

as fitted 6.5"

Dia. of Crank pin 6.5"

Size of Crank webs 12 1/2" x 4 1/2"

Dia. of thrust shaft under

rollers 6.5"

Dia. of screw 9' - 6"

Pitch of Screw 7' - 0"

No. of Blades 4

State whether moveable No

Total surface 32 sq ft

No. of Feed pumps 1

Diameter of ditto 2 1/2"

Stroke 10"

Can one be overhauled while the other is at work

—

No. of Bilge pumps 1

Diameter of ditto 2 1/2"

Stroke 10"

Can one be overhauled while the other is at work

—

No. of Donkey Engines One

Sizes of Pumps 4 1/2" x 2 3/4" x 4"

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

—

—

Engine Room One each, 2', 2 1/2", 3 1/2"

In Holds, &c. One 2" to fore hold, Two 2"

to fore tank, and injector suction

No. of Bilge Injections 1

sizes 3 1/2"

Connected to condenser, or to circulating pump pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 2 1/2" &c.

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 0

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 hold suction

How are they protected wood 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 8.9.11

of Stern Tube 6.10.11

Screw shaft and Propeller 6.10.11

Is the Screw Shaft Tunnel watertight None

Is it fitted with a watertight door

worked from

—

BOILERS, &c.—(Letter for record S.)

Manufacturers of Steel Phoenix Act. Gas. Hoerde Verein

Total Heating Surface of Boilers 900 sq ft

Is Forced Draft fitted No

No. and Description of Boilers 1 Cyl. Mult. Single Ended

Working Pressure 160 lbs

Tested by hydraulic pressure to 320 lbs.

Date of test 21.6.11

No. of Certificate 1819

Can each boiler be worked separately —

Area of fire grate in each boiler 24.5 sq ft

No. and Description of Safety Valves to

each boiler Two Spring

Area of each valve 3.14 sq in

Pressure to which they are adjusted 163 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 11"

Mean dia. of boilers 10' - 6"

Thickness 27/32"

Range of tensile strength 28.32

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams L.D.

Long. seams D.B.S.D.R.

Diameter of rivet holes in long. seams 1 1/16"

Pitch of rivets 5 3/8"

Lap of plates or width of butt straps 1 1/2"

Percentage of strength of longitudinal joint rivets 86.7

Working pressure of shell by rules 161 lbs

Size of compensating ring 7" x 27/32"

No. and Description of Furnaces in each boiler Two plain

Material S

Outside diameter 34"

Length of plain part top 6' - 4 1/2"

Thickness of plates crown 2 1/8"

Description of longitudinal joint welded

No. of strengthening rings 0

Working pressure of furnace by the rules 176 lbs

Combustion chamber plates: Material S

Pitch of stays to ditto: Sides 9" x 8 1/2"

Back 10" x 9"

Top 9" x 7 1/2"

If stays are fitted with nuts or riveted heads No

Working pressure by rules 165 lbs

Material of stays S

Diameter at smallest part 1 1/2"

Area supported by each stay 76.5 sq in

Working pressure by rules 185 lbs

End plates in steam space: Material S

Thickness 7/8"

Pitch of stays 15" x 15"

How are stays secured on w. 4" x 1/2"

Working pressure by rules 161 lbs

Material of stays S

Diameter at smallest part 2 5/16"

Area supported by each stay 225 sq in

Working pressure by rules 195 lbs

Material of Front plates at bottom S

Thickness 7/8"

Diameter of tubes 3"

Pitch of tubes 4 3/8" + 5/8"

Material of tube plates S

Thickness: Front 7/8"

Back 13/16"

Mean pitch of stays 9"

Pitch across wide water spaces 14"

Working pressures by rules 160 lbs

Girders to Chamber tops: Material S

Depth and thickness of girder at centre 7 1/4" x 1 1/2"

Length as per rule 2' - 3 1/2"

Distance apart 7 1/2"

Number and pitch of stays in each 2 - 9"

Working pressure by rules 225 lbs

Superheater or Steam chest; how connected to boiler riveted

Can the superheater be shut off and the boiler worked

separately No

Diameter 30"

Length 30"

Thickness of shell plates 5/8"

Material S

Description of longitudinal joint L.O.R.

Diam. of rivets 1"

Pitch of rivets 3 1/4"

Working pressure of shell by rules 370 lbs

Diameter of flue

Material of flue plates

Thickness

Stiffened with rings

Distance between rings

Working pressure of end plates 160 lbs

Area of safety valves to superheater

Are they fitted with easing gear

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Working pressure of end plates 160 lbs

Area of safety valves to superheater

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air, circulating feed bilge pump valves, iron various sizes, and a quantity of assorted bolts and nuts etc etc*

The foregoing is a correct description, *F. J. Palethorpe* Manufacturer.

Dates of Survey while building: During progress of work in shops - - - - - SECRETARY: 1911 - Apr 5, 7, 13, 20, 21, 24, May 1, 4, 9, 16, 19, 22, 25, 27, 30, 31, Jun 1, 5, 12, 15. During erection on board vessel - - - - - 14, 21, 26, 28, July 3, 11, 19, 22, 25, 29, Aug 14, 24, 25, Sep 6, 8, 14, Oct 4, 5, 6, 13, 16, 20, 21. Total No. of visits 43.

Is the approved plan of main boiler forwarded herewith *No. it was sent on with Hull Rpt 7023946*

Dates of Examination of principal parts—Cylinders 3, 7, 11 Slides 11, 7, 11 Covers 11, 7, 11 Pistons 11, 7, 11 Rods 16, 5, 11

Connecting rods 11, 7, 11 Crank shaft 19, 5, 11 Thrust shaft 19, 5, 11 Tunnel shafts _____ Screw shaft 25, 8, 11 Propeller 25, 8, 11

Stern tube 25, 8, 11 Steam pipes tested 4, 10, 11 Engine and boiler seatings 14, 9, 11 Engines holding down bolts 6, 10, 11

Completion of pumping arrangements 21, 10, 11 Boilers fixed 6, 10, 11 Engines tried under steam 21, 10, 11

Main boiler safety valves adjusted 21, 10, 11 Thickness of adjusting washers $\frac{12}{32}$ $\frac{14}{32}$

Material of Crank shaft *S* Identification Mark on Do. 2756 YDH Material of Thrust shaft *S* Identification Mark on Do. 2756 YDH

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *S* Identification Marks on Do. 2756 YDH

Material of Steam Pipes *Solid drawn Copper* Test pressure *400 lbs per sq. inch*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound and good. The boiler tested by hydraulic pressure, and with the engines secured on board, and tested under steam. They are now in good order, and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of L.M.C. 10.11 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + LMC 10.11.

J.W.D. 17/7/11. J.P.R.

The amount of Entry Fee .. £ 1 : : When applied for, 1-11-1911

Special .. £ 8 5 : : When received, 7-11-1911

Donkey Boiler Fee .. £ : : _____

Travelling Expenses (if any) £ : 9 6 : : _____

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

Committee's Minute
Assigned

FBI NOV 3 - 1911
+ LMC 10.11



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MAINTENANCE CERTIFICATE WRITTEN

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)