

## REPORT ON MACHINERY.

No. 16460

Port of Hull

Received at London Office

SAT. 10 DEC 1904

No. in Survey held at Hull

Date, first Survey July 5<sup>th</sup>Last Survey Nov. 10<sup>th</sup> 1904

Reg. Book.

59 built on the Screw Trawler "City of York"

(Number of Visits 17)

Gross 202

Net 65

When built 1904

Master

Built at Gool

By whom built Gool &amp; R. Co. Ltd

Engines made at Hull

By whom made Charles S. B. &amp; Co. Ltd

when made 1904

Boilers made at do

By whom made do

when made 1904

Registered Horse Power

Owners Fred. Kelsall

Port belonging to Hull &amp; Helwood.

Nom. Horse Power as per Section 28 62

Is Refrigerating Machinery fitted No

Is Electric Light fitted No

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

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 12" 20" 32"

Length of Stroke 23"

Revs. per minute 120

Dia. of Screw shaft as per rule 7.28

as fitted 7.28

Material of screw shaft Iron

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

in the propeller boss yes If the liner is in more than one length are the joints burned ✓

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 ✓

liners are fitted, is the shaft lapped or protected between the liners yes

Length of stern bush 2.72"

Dia. of Tunnel shaft as per rule 6.1"

as fitted 6.4"

Dia. of Crank shaft journals as per rule 6.4"

as fitted 6.2"

Dia. of Crank pin 6.2"

Size of Crank webs 8x4.25"

Dia. of thrust shaft under

collars 6.25"

Dia. of screw 8.6"

Pitch of screw 11.0"

No. of blades 4

State whether moveable No

Total surface 24 sq. ft.

No. of Feed pumps 1

Diameter of ditto 2.25"

Stroke 10"

Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1

Diameter of ditto 2.25"

Stroke 10"

Can one be overhauled while the other is at work ✓

No. of Donkey Engines 1

Sizes of Pumps 4.25x2.25x4"

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

In Engine Room One 2"

In Holds, &amp;c. Two 2"

Ejector suction in engine bilge &amp; hold &amp; discharge on deck

No. of bilge injections 1

size 3.25"

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room &amp; size 2.25" 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 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 None

How are they protected ✓

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launch Is the screw shaft tunnel watertight none

Is it fitted with a watertight door ✓

worked from ✓

## BOILERS, &amp;c.—

(Letter for record (S))

Total Heating Surface of Boilers 1075 sq. ft.

Is forced draft fitted No

No. and Description of Boilers One S.E. Cyl. Mult.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 18.10.04 Can each boiler be worked separately ✓

Area of fire grate in each boiler 28 sq. ft.

No. and Description of safety valves to

each boiler Two direct spring

Area of each valve 3.14"

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 8"

Mean dia. of boilers 11.6"

Length 9.6"

Material of shell plates Steel

Thickness 3/32"

Range of tensile strength 28-32

Are they welded or flanged ✓

Descrip. of riveting: cir. seams S. R. Lap

long. seams S. R. 5 Rivets

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

Pitch of rivets 7.8"

Lap of plates or width of butt straps 16"

Per centages of strength of longitudinal joint

rivets 93.5%

plate 85.5%

Working pressure of shell by rules 183 lbs

Size of manhole in shell 16 x 12"

Size of compensating ring 2.75x2.4x3/32"

No. and Description of Furnaces in each boiler Two plain

Material Steel

Outside diameter 3.3"

Length of plain part top 5.8"

Thickness of plates crown 2.3/32"

bottom 3/32"

Description of longitudinal joint Welded

No. of strengthening rings ✓

Working pressure of furnace by the rules 181 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 7/16"

Back 7/16"

Top 7/16"

Bottom 7/16"

Pitch of stays to ditto: Sides 9.25x9"

Back 9.25x9"

Top 9.25x9"

If stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 191 lbs

Material of stays Steel

Diameter at smallest part 1.5"

Area supported by each stay 85.2"

Working pressure by rules 218 lbs

Material Steel

Thickness 1.3/32"

Pitch of stays 16x16"

How are stays secured Nuts

Working pressure by rules 186 lbs

Material of stays Steel

Area at smallest part 5.10"

Area supported by each stay 256"

Working pressure by rules 202 lbs

Material of Front plates at bottom Steel

Thickness 7/8"

Material of Lower back plate Steel

Thickness 7/8 + 3/4"

Greatest pitch of stays 12x16.25"

Working pressure of plate by rules 260 lbs

Diameter of tubes 3"

Pitch of tubes 4.25x4.25"

Material of tube plates Steel

Thickness: Front 7/8"

Back 13/16"

Mean pitch of stays 8.5"

Pitch across wide water spaces 13.25"

Working pressures by rules 183 lbs

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 7.25x1.25"

Length as per rule 2.4"

Distance apart 9.25"

Number and pitch of Stays in each 20 9"

Working pressure by rules 192 lbs

Superheater or Steam chest; how connected to boiler Riveted

Can the superheater be shut off and the boiler worked

separately No

Diameter 2.6"

Length 2.10"

Thickness of shell plates 1/2"

Material Steel

Description of longitudinal joint S. R. L

Diam. of rivet

holes 15/16"

Pitch of rivets 3.5"

Working pressure of shell by rules 273 lbs

Diameter of flue ✓

Material of flue plates ✓

Thickness ✓

How stayed Disked

If stiffened with rings ✓

Distance between rings ✓

Working pressure by rules ✓

End plates: Thickness 7/2"

How stayed Disked

Working pressure of end plates 180 lbs

Area of safety valves to superheater ✓

Are they fitted with easing gear ✓

Working pressure by rules ✓

End plates: Thickness 7/2"

How stayed Disked

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Working pressure of end plates 180 lbs

Area of safety valves to superheater ✓

Are they fitted with easing gear ✓

Working pressure by rules ✓

End plates: Thickness 7/2"

How stayed Disked

W1213-0067



**DONKEY BOILER—** No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted 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 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

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

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

**SPARE GEAR.** State the articles supplied:— *Two top-end & two bottom-end connecting rod bolts & nuts. Two main bearing bolts & nuts. One set coupling bolts & nuts. One set feed & bilge pump valves. One set feed check valves. Assorted bolts & nuts &c.*

The foregoing is a correct description,

*F. J. Palethorpe* Manufacturer.

Dates During progress of work in shops - - - 1904: July 5. 29. Aug 4. 6. 19. 31 Sep 6. 14. 22. 27 Oct 3. 10. 14. 18 Nov 3

of Survey while building During erection on board vessel - - - Nov 7. 10

Total No. of visits 17

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " *✓*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

*The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in my opinion in good condition and eligible to have the notation of + L M C 11. 04 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + L M C 11. 04

*10. 12. 04*  
*10. 12. 04*

The amount of Entry Fee, £ 1 : . . . When applied for, 2/12/04

Special . . . . . £ 9 : 6 : . . . . . 19. 04

Donkey Boiler Fee . . . . . £ . : . . . . . When received, 22. 2. 05

Travelling Expenses (if any) £ . : 3 2

Committee's Minute

Assigned

TUES. 13 DEC 1904

+ L M C 11. 04

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



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MACHINE CERTIFICATE  
WRITTEN