

Port of Newcastle

Received at London Office JUN 20 1905

No. in Survey held at Newcastle & Shields Date, first Survey 13th March Last Survey 6th June 1905.

Reg. Book. S. 124 on the Steel S.S. Cornbrook (Number of Visits) Tons { Gross 140 Net 5

Master S. Shields Built at S. Shields By whom built J. P. Remoldson & Sons When built 1905

Engines made at S. Shields By whom made J. P. Remoldson & Sons when made 1905

Boilers made at Newcastle By whom made Palmer's Co. Ltd. when made 1905

Registered Horse Power 106 Owners Manchester Ship Canal Co. Ltd. Port belonging to Manchester

Nom. Horse Power as per Section 28 106 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c. — Description of Engines Vertical Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 15 1/2 - 25 - 41 Length of Stroke 27 Revs. per minute 140 Dia. of Screw shaft 8.6 Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners Is the after end of the liner made water tight in the propeller boss ✓

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 ✓

If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3'-0"

Dia. of Tunnel shaft 7 1/2 Dia. of Crank shaft journals 7.96 Dia. of Crank pin 8 Size of Crank webs 4 1/2 x 11 1/2 Dia. of thrust shaft under collars 8

Dia. of screw 9-8 Pitch of screw 12-9 No. of blades 4 State whether moveable no Total surface 31.65

No. of Feed pumps 2 Diameter of ditto 2 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 5/8 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Donkey Engines 1 Sizes of Pumps 5 1/4 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps 1 x 2" dia Fore hold. 1 x 2" aft hold.

In Engine Room 2 x 2" dia. In Holds, &c. 1 x 2" dia Fore hold. 1 x 2" aft hold.

No. of bilge injections 1 sizes 3 dia Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & 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 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 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 Steam & feed How are they protected Steel 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock ✓ Is the screw shaft tunnel watertight ✓

Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 1800 sq Is forced draft fitted no

No. and Description of Boilers one multitubular single ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 8/5/05 Can each boiler be worked separately ✓ Area of fire grate in each boiler 54 sq No. and Description of safety valves to each boiler 2 Spring loaded

Area of each valve 4.9 sq 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 6 ft. Mean dia. of boilers 13'-4 1/2" Length 10'-10" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams 8. Lap. long. seams S.S. Y. Riv.

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 3/8" Lap of plates or width of butt straps 16 1/2"

Per centages of strength of longitudinal joint rivets 91.5 Working pressure of shell by rules 193 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 31 x 27 x 1 3/8" No. and Description of Furnaces in each boiler 3 - sightones Material Steel Outside diameter 3'-4 1/2"

Length of plain part top Thickness of plates bottom Description of longitudinal joint Welded No. of strengthening rings ✓

Working pressure of furnace by the rules 187 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1 1/8"

Pitch of stays to ditto: Sides 8 3/4 x 8 1/4 Back 9 1/2 x 8 Top 9 x 8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 193 lbs

Material of stays Steel Diameter at smallest part 1.79" Area supported by each stay 73 sq Working pressure by rules 220 lbs End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 18 1/2 to 14 1/8" How are stays secured S. R. W. Working pressure by rules 200 lbs Material of stays Steel

Diameter at smallest part 5.27" Area supported by each stay 297 sq Working pressure by rules 180 lbs Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 15" Working pressure of plate by rules 193 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 27/32" Mean pitch of stays 11 1/2"

Pitch across wide water spaces 14 1/2" Working pressures by rules 192 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2 x 1 3/4

Length as per rule 32" Distance apart 9" Number and pitch of Stays in each 3-8"

Working pressure by rules 226 lbs Superheater or Steam chest; how connected to boiler none 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 ✓

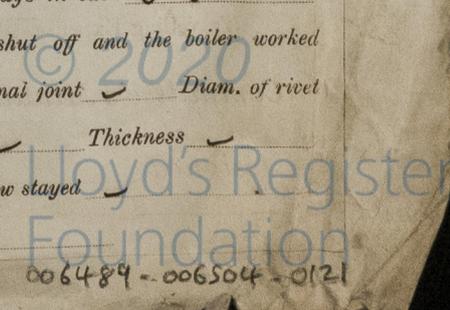
Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

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?

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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 Plates 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:— 2 Each bolts + nuts for main bearings, top + bottom ends, 6 Coupling bolts + nuts also spare valves for all pumps etc.

J. H. Arnoldson Sons Manufacturer of Engines
 The foregoing is a correct description,
 Manufacturer of Boilers

Dates of Survey while building

During progress of work in shops - - - - -

During erection on board vessel - - - - -

Total No. of visits

1905 March 13 22 31 April 5 6 11 19 28 30 May 1 2 19 15 25

June 5 6 18

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

" " " donkey " " "

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

The boiler of this vessel has been constructed under special survey + the materials + workmanship are found good

The machinery of this vessel has been constructed under special survey the material + workmanship found good + eligible in our opinion for classification with record of + L.M.C 6.05.

It is submitted that this vessel is eligible for THE RECORD L.M.C 6.05.

J. H. Arnoldson
 20. 6. 05

The amount of Entry Fee. £ 2 : - : -

Special £ 15 : 18 : -

Donkey Boiler Fee £ - : - : -

Travelling Expenses (if any) £ - : - : -

When applied for, 17/6/1905

When received, 22/6/1905

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

E. J. Stoddart

Committee's Minute

Assigned

FRI. 23 JUN 1905

+ L.M.C 6.05

MACHINERY CERTIFICATE WRITTEN.

Lloyd's Register Foundation

Certificate (if registered) to be sent to

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