

REPORT ON MACHINERY.

Port of Newcastle-on-Tyne Received at London Office MUN. 17 AUG 1903

Survey held at Newcastle Date, first Survey Feb 24 03 Last Survey August 8 1903
Book. (Number of Visits 22)

App. on the S/S "Carol 1st" Tons { Gross 3223
Net 2094

ter J Ancelin Built at Middlesbrough By whom built Mr Rayton Dixon & Co When built 1903

ines made at Newcastle By whom made Mr North Eastern Mar. Eng. Co when made 1903

ers made at Newcastle By whom made Mr North Eastern Mar. Eng. Co when made 1903

istered Horse Power 356 Owners J Dreyfus & Co Port belonging to Taris

Is Refrigerating Machinery fitted No Is Electric Light fitted Yes

INES, &c.—Description of Engines Trip No. of Cylinders 3 No. of Cranks 3

of Cylinders 26' 4 1/2" 69 1/2" Length of Stroke 45' Revs. per minute 70 Dia. of Screw shaft as per rule 14.64" as fitted 14 1/4" Lgth. of stern bush 5'-6"

of Tunnel shaft as per rule 12.69" Dia. of Crank shaft journals as per rule 13.32" Dia. of Crank pin 13 1/2" Size of Crank webs 26 1/2 x 8 1/2" Dia. of thrust shaft under 13 1/2" Dia. of screw 16.9" Pitch of screw 17-6" No. of blades 4 State whether moveable No Total surface 98 1/2'

of Feed pumps 2 Diameter of ditto 4" Stroke 22" Can one be overhauled while the other is at work No

of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 22" Can one be overhauled while the other is at work No

of Donkey Engines 2 Sizes of Pumps 7-9 x 9, 7 1/2 x 4 1/2 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room For 3 1/2" In Holds, &c. In Nos 1, 2, 3 holds two of 3 1/2"

each, in after hold well one of 3 1/2", in tunnel one of 3 1/2"

of bilge injections 1 sizes 5" Connected to condensers or to circulating pump No Is a separate donkey suction fitted in Engine room & size No 3 1/2"

all the bilge suction pipes fitted with roses No Are the roses in Engine room always accessible No Are the sluices on Engine room bulkheads always accessible Yes

all connections with the sea direct on the skin of the ship No Are they Valves or Cocks Both

they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates No Are the discharge pipes above or below the deep water line Above

they each fitted with a discharge valve always accessible on the plating of the vessel No Are the blow off cocks fitted with a spigot and brass covering plate No

at pipes are carried through the bunkers Yes How are they protected ✓

all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times No

the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges No

when were stern tube, propeller, screw shaft, and all connections examined in dry dock Yes Is the screw shaft tunnel watertight No

it fitted with a watertight door No worked from Upper Platform

ILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 5622 1/2 Is forced draft fitted No

and Description of Boilers Three single end Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

date of test 28/5/03 Can each boiler be worked separately No Area of fire grate in each boiler 159 1/2 No. and Description of safety valves to Two spring valves

Area of each valve 12.56" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear No

greatest distance between boilers or uptakes and bunkers or woodwork No bunkers in way of boilers Mean dia. of boilers 13-6 1/2" Length 11-0" Material of shell plates S

Thickness 1 1/2" Range of tensile strength 29-32 Are they welded or flanged No Descrip. of riveting: cir. seams Lap 1/4" long. seams N. 1/4" N. 1/4" cir.

Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 15 1/2"

Percentages of strength of longitudinal joint rivets 82 Working pressure of shell by rules 182 Size of manhole in 12 x 16

of compensating ring flanged in No. and Description of Furnaces in each boiler 3 daylight Material S Outside diameter 4 1/2"

Length of plain part top 3 1/2" Thickness of plates crown 3 1/2" Description of longitudinal joint Welded No. of strengthening rings —

Working pressure of furnace by the rules 182 Combustion chamber plates: Material S Thickness: Sides 1/4" Back 1/4" Top 1/4" Bottom 3/8"

Pitch of stays to ditto: Sides 8 1/2 x 10 Back 8 1/2 x 10 Top 8 1/2 x 10 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 183

Material of stays S Diameter at smallest part 1 1/2" Area supported by each stay 88 3/4" Working pressure by rules 181 End plates in steam space:

Material S Thickness 1 3/8" Pitch of stays 25 x 2 1/2 How are stays secured A.N.S.W. Working pressure by rules 180 Material of stays S

at smallest part 9.82" Area supported by each stay 537" Working pressure by rules 183 Material of Front plates at bottom S

Thickness 3/8" Material of Lower back plate S Thickness 3/8" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 183

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates S Thickness: Front 3/4" Back 3/4" Mean pitch of stays 9"

Pitch across wide water spaces 14 1/2" Working pressures by rules 216 Girders to Chamber tops: Material S Depth and

Thickness of girder at centre 8 1/4 x 1 1/2 Length as per rule 30" Distance apart 8 1/2" Number and pitch of Stays in each 2, 10"

Working pressure by rules 189 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 — Diam. of rivet

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

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 —

DONKEY BOILER— No. Description *None*

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 casing 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 and nuts, two main bearing bolts, one set coupling bolts, one set fuel & high pump valves, assorted bolts & nuts, 2mm of various sizes.*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD. Manufacturer.

J. J. Harrison **ASSIST. SECRETARY** *New: 1900. Feb. 24. Mar. 18. 22. 27. 31. Apr. 1. 2. 16. 29. May 13. 28. June 6. 11. July 8. 11. Aug. 1903. June 22. July 13. 24. 28. 31. Aug. 5. 8.*

Dates of Survey while building _____

During progress of work in shops _____

During erection on board vessel _____

Total No. of visits *22*

Is the approved plan of main boiler forwarded herewith *no*

“ “ “ donkey “ “ “

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

The machinery is not placed aft

Material of screw shaft *2mm* 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 *✓* If two liners are fitted, is the shaft lapped or protected between the liners *no*

*This vessel's machinery has been built under special survey. The materials and workmanship are good and efficient. The machinery has been tried under steam and is now in good and safe working condition and eligible, in our opinion to have the record **L M C 8.03**.*

An electric light installation has been fitted for cargo purposes only. The report will be forwarded when received back from the electrician.

It is submitted that this vessel is eligible for **THE RECORD. L M C. 8.03 ELEC LIGHT.**

Bale
17. 8. 03

The amount of Entry Fee. . . £ *3* : . . . When applied for, **25 JUL 1903**

Special £ *34 16* : 19

Donkey Boiler Fee £

Travelling Expenses (if any) £ *4 Aug 1903*

HULL CERTIFICATE WRITTEN. *J. A. Hake & R. D. Shilston.*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 18 AUG 1903.

Assigned

L M C 8.03



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Certificates (if required) to be sent to Newcastle-on-Tyne