

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 *Midwest*By whom built *Mr Raylton 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

Owners *L Dreyfus & Co*Port belonging to *Tunis*

Horse Power as per Section 28

*356*Is Refrigerating Machinery fitted *No*Is Electric Light fitted *Yes*

INES, &c.—Description of Engines

*Triple*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 1/4"* as fitted *14 1/4"* Lgth. of stern bush *5' 6"*
 of Tunnel shaft as per rule *12 3/4"* Dia. of Crank shaft journals as per rule *13 1/2"* as fitted *13 1/2"* Dia. of Crank pin *13 1/2"* Size of Crank webs *26 1/2" x 8 1/2"* Dia. of thrust shaft under
 of screws *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 pumpsEngine Room *Four 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 *No*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 *No* 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 *No* Is the screw shaft tunnel watertight *No*it fitted with a watertight door *No* worked from *Upper Platform*

ILERS, &c.—

(Letter for record *S*)

Total Heating Surface of Boilers

*5622 1/2*Is forced draft fitted *No*and Description of Boilers *Three single ended*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 1/4"* 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 4H* long. seams *At 1 1/2" at air*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 *82* Working pressure of shell by rules *182* Size of manhole in *12 x 16*Use of compensating ring *flanged in* No. and Description of Furnaces in each boiler *3 daylighters* Material *S* Outside diameter *4 1/2"*Length of plain part *top 3 1/2"* Thickness of plates *bottom 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 *At 2.5"* Working pressure by rules *180* Material of stays *S*Diameter 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 andThickness 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 workedseparately *✓* Diameter *✓* Length *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *—* Diam. of rivetPitch 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 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
and nuts, two main bearing bolts, one set coupling bolts, one set
fuel & high pump valves, assorted bolts & nuts, 20m of various sizes.*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer.

J. J. Harrison *Surveyor* *Feb. 1903. Feb. 22. Mar. 1. 2. 27. 28. Apr. 1. 2. 16. 29. May 12. 28. June 5. 11. July 8. 11.*
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 *Yes*

" " " donkey " " "

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

The machinery is not placed aft

Material of screw shaft *20m* 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 *Yes*

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* : : :
Donkey Boiler Fee .. £ : : :
Travelling Expenses (if any) £ : : : When received, *4 Aug 1903*

HULL CERTIFICATE
WRITTEN.

S. 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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Foundation