

REPORT ON MACHINERY

MON. MAR. 10. 1913

Received at London Office

Date of writing Report FEB 24 1913 When handed in at Local Office FEB 24 1913 Port of NEWPORT NEWS

No. in Survey held at NEWPORT NEWS Date, First Survey JULY 5 '12 Last Survey FEB 19 1913
Reg. Book. (Number of Visits 35)

on the STEEL SS "LORENZO" Tons { Gross 3063
Net 1942

Master J. O. Foss Built at NEWPORT NEWS By whom built NEWPORT NEWS S+T I Co When built 1913

Engines made at NEWPORT NEWS By whom made NEWPORT NEWS S+T I Co when made 1913

Boilers made at " " By whom made " " " " " when made 1913

Registered Horse Power 309 Owners NEW YORK + PORTO RICO S S Co Port belonging to NEW YORK

Nom. Horse Power as per Section 28 309 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

ENGINES, &c.—Description of Engines TRIPLE EXPANSION No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 24-36-63 Length of Stroke 42 Revs. per minute 75 Dia. of Screw shaft as per rule 12.78 Material of screw shaft as fitted 13.5 8

Is the screw shaft fitted with a continuous liner the whole length of the stern tube YES 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 YES 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 YES If two liners are fitted, is the shaft lapped or protected between the liners YES Length of stern bush 54"

Dia. of Tunnel shaft as per rule 11.76 Dia. of Crank shaft journals as per rule 11.75 Dia. of Crank pin 12 Size of Crank webs 84 Dia. of thrust shaft under collars 12 Dia. of screw 15.6 Pitch of Screw 15.9 No. of Blades 4 State whether moceable YES Total surface 75

No. of Feed pumps 2 Diameter of ditto 3.5 Stroke 21 Can one be overhauled while the other is at work YES

No. of Bilge pumps 2 Diameter of ditto 4.5 Stroke 21 Can one be overhauled while the other is at work YES

No. of Donkey Engines FIVE Sizes of Pumps 10x14x12-10x10x12 No. and size of Suctions connected to both Bilge and Donkey pumps 7x5x10-1/2x7x6

In Engine Room TWO 3" ONE 3.5" In Holds, &c. NO 1:- 2-3" NO 2:- 2-3"

NO 3:- 2-2.5" + 1-3.5" TUNNEL:- 1-3"

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump YES Is a separate Donkey Suction fitted in Engine room & size YES 3.5"

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 VALVES (EXCEPT BLOW-DOWN)

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Discharge Pipes above and below the deep water line YES

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 BILGE SUCTIONS How are they protected IRON COVERS

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 Jan 22 of Stern Tube Jan 11 Screw shaft and Propeller Jan 22

Is the Screw Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from U. I. K.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel WORTH BROS; (CATEVILLE PA)

Total Heating Surface of Boilers 5040 Is Forced Draft fitted NO No. and Description of Boilers 3 SCOTCH-MULTITUBULAR

Working Pressure 190 Tested by hydraulic pressure to 285 Date of test N. 27 II 2+4 No. of Certificate 80-81-82

Can each boiler be worked separately YES Area of fire grate in each boiler 61.5 No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 4.9 Pressure to which they are adjusted 190 Are they fitted with easing gear YES

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 13.3 Length 11.3 Material of shell plates S.

Thickness 1.32 Range of tensile strength 28-32 Are the shell plates welded or flanged NO Descrip. of riveting: cir. seams DR lap

long. seams DR Diameter of rivet holes in long. seams 1.96 Pitch of rivets 6.58 Lap of plates or width of butt straps 21"

Per centages of strength of longitudinal joint rivets 96 Working pressure of shell by rules 194 Size of manhole in shell 16x12

plate 80 Size of compensating ring 31x27 No. and Description of Furnaces in each boiler 3 MORISON Material S. Outside diameter 45.8

Length of plain part top 9" bottom 7.6 Thickness of plates crown 9.6 bottom 9.6 Description of longitudinal joint WELDED No. of strengthening rings 1

Working pressure of furnace by the rules 195 Combustion chamber plates: Material S. Thickness: Sides 9/16 Back 9/16 Top 5/8 Bottom 5/8

Pitch of stays to ditto: Sides 6.5x6.5 Back 6.5x6 Top 7.4x7 If stays are fitted with nuts or riveted heads NUTS Working pressure by rules 200

Material of stays S. Diameter at smallest part 1.25 Area supported by each stay 42 Working pressure by rules 231 End plates in steam space:

Material S. Thickness 1/16 Pitch of stays 16x15 How are stays secured DR. Working pressure by rules 200 Material of stays S.

Diameter at smallest part 2.5 Area supported by each stay 240 Working pressure by rules 203 Material of Front plates at bottom S.

Thickness 3/4 Material of Lower back plate S. Thickness 3/4 Greatest pitch of stays 13.5 Working pressure of plate by rules 200

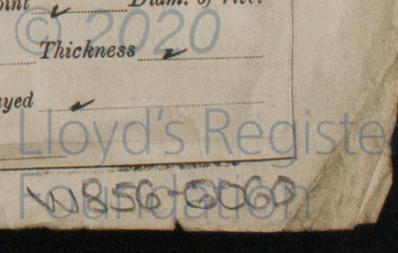
Diameter of tubes 3 Pitch of tubes 4.5x4 Material of tube plates S. Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10.38

Pitch across wide water spaces 13 Working pressures by rules 268 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 2-9x13/16 Length as per rule 32 Distance apart 7.4 Number and pitch of stays in each 3-7"

Working pressure by rules 204 Superheater or Steam chest; how connected to boiler NONE Can the superheater be shut off and the boiler worked separately YES Diameter YES Length YES Thickness of shell plates YES Material YES Description of longitudinal joint YES Diam. of rivet holes YES Pitch of rivets YES Working pressure of shell by rules YES Diameter of flue YES Material of flue plates YES Thickness YES

If stiffened with rings YES Distance between rings YES Working pressure by rules YES End plates: Thickness YES How stayed YES

Working pressure of end plates YES Area of safety valves to superheater YES Are they fitted with easing gear YES



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:— *Sail shaft; two bronze blades, two top + two bottom end bolts, 2 main bearing bolts, 1 set coupling bolts, 1 set feed & helix pump valves, 2 eccentric straps, slide valve spindle, piston springs, 50 condenser tubes, 50 boiler tubes, Nuts, bolts iron of various sizes, etc. Brasses, etc.*

The foregoing is a correct description, **Newport News Shipbuilding & Dry Dock Co.,**

Manufacturer. **By** *H. L. Ferguson* General Manager

Dates of Survey while building: During progress of work in shops— *July 5, 30, 31, Aug. 1, 10, 13, 19, 21, 27, 30, Sep. 5, 23, Oct. 3, 16, Nov. 1, 11, 27, Dec. 2, 4, 10, 20, 23, 26, 27, Jan. 9, 1913.*

During erection on board vessel— *Jan. 11, 17, 20, 21, 22, Feb. 6, 7, 15, 18, 19.*

Total No. of visits *35* Is the approved plan of main boiler forwarded herewith *Yes.*

Dates of Examination of principal parts—Cylinders *8.5.23/19* Slides *Jan 9* Covers *Jan 9* Pistons *Dec 23* Rods *Dec 23*

Connecting rods *Dec 23* Crank shaft *II 27* Thrust shaft *II 27* Tunnel shafts *II 26* Screw shaft *Jan 9* Propeller *Jan 22*

Stern tube *Jan 11* Steam pipes tested *F 6-7* Engine and boiler seatings *F 6-7* Engines holding down bolts *# 7*

Completion of pumping arrangements *Feb 18* Boilers fixed *# 6* Engines tried under steam *Feb 19*

Main boiler safety valves adjusted *Feb 19* Thickness of adjusting washers *lock nuts*

Material of Crank shaft *OHS* Identification Mark on Do. *F. 27/212* Material of Thrust shaft *II 27/212* Identification Mark on Do. *DH Steel*

Material of Tunnel shaft *OHS* Identification Marks on Do. *F. 26/212* Material of Screw shafts *OHS* Identification Marks on Do. *F. 22-1-13*

Material of Steam Pipes *COPPER* Test pressure *380 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been built under special survey in accordance with approved plans. The materials and workmanship all good. Engines have been tested and found to run well. The vessel is eligible in my opinion to have the notation $\frac{1}{2}$ LMC 2.13, W.T. 190 lbs.*)

It is submitted that this vessel is eligible for THE RECORD. + LMC 2.13.

The amount of Entry Fee. *#15.00* : When applied for. *20-1-13*

Special *#17.25* : *MM*

Donkey Boiler Fee *£* : When received. *21-1-13*

Travelling Expenses (if any) *£ 5.00* : *21-1-13*

J.W.D. 19/3/13

G.P.R.R.

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

Committee's Minute *WED. MAR. 26, 1913*

Assigned *+ LMC 2.13*

MACHINERY CERTIFICATE WRITTEN



N. 115 of 1913

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.