

Rpt. 4.

REPORT ON MACHINERY

No. 494

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. STEEL SS "LORENZO" (Number of Visits 35)
Master J. O. Foss Built at NEWPORT NEWS By whom built NEWPORT NEWS S+II CO Tons Gross 3063 Net 1942
Engines made at NEWPORT NEWS By whom made NEWPORT NEWS S+II CO when made 1913
Boilers made at " By whom made " when made 1913
Registered Horse Power 309 Owners NEW YORK + PORTO RICO SS 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 12.78 Material of 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 11.76 Dia. of Crank shaft journals 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 75.4
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
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; (CATESVILLE 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 Nov 27 1912 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" Out 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 butt 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 96 Working pressure of shell by rules 194 Size of manhole in shell 16x12
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 9.6 Thickness of plates 9.6 Description of longitudinal joint WELD No. of strengthening rings ✓
Working pressure of furnace by the rules 195 Combustion chamber plates: Material S. Thickness: Sides 9.6 Back 9.6 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 1.76 Pitch of stays 16x15 How are stays secured DR Working pressure by rules 210 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 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 ✓ 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 ✓

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 bolts, 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.*

During erection on board vessel— *Jan. 9, 1913, 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 *8.23.12* Slides *Jan 9* Covers *Jan 9* Pistons *Dec 23* Rods *Dec 23*

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

Stern tube *Jan 11* Steam pipes tested *F 6-7* Engine and boiler seatings *# 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 *CHS.* Identification Mark on Do. *27.27.12* Material of Thrust shaft *CHS.* Identification Mark on Do. *27.27.12*

Material of Tunnel shafts *CHS.* Identification Marks on Do. *27.26.12* Material of Screw shafts *CHS.* Identification Marks on Do. *27.27.13*

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

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 are good. Engines have been tested and found to run well. The vessel is eligible in my opinion to have the notation LMC 2.13, W.T. 190 lb.*

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 *#14.25* : When received, *21-1-13*

Donkey Boiler Fee *£* : *21-1-13*

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

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

Assigned

+ LMC 2.13

MACHINERY CERTIFICATE WRITTEN

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



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