

REPORT ON MACHINERY.

No. 1165

REC'D NEW YORK

April 21, 1917

Received at London Office

MAY 14 1917

Date of writing Report April 21, 1917 When handed in at Local Office April 21, 1917 Port of Newport News Va
No. in Survey held at Newport News Va Date, First Survey May 4, 1916 Last Survey April 17, 1917
Reg. Book. (NEW) on the STEEL S.S. "DELTA" (Number of Visits 59) Gross 5288 Tons
Master N.A. NELSEN Built at Newport News By whom built Newport News S.D.D.C. When built 1914
Engines made at Newport News By whom made Newport News S.D.D.C. when made 1917-18
Boilers made at Newport News By whom made Newport News S.D.D.C. when made 1917
Registered Horse Power 471 Owners Mission S.S. Lines Port belonging to NEW YORK
Nom. Horse Power as per Section 28 471 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 1/2" 41 1/2" 72" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 14 1/8" Material of screw shaft OH.S
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 60"
Dia. of Tunnel shaft 13 1/2" Dia. of Crank shaft journals 13 1/2" Dia. of Crank pin 14 3/8" Size of Crank webs 9 1/2" Dia. of thrust shaft under collars 14" Dia. of screw 16 9/16" Pitch of Screw 16 9/16" No. of Blades 4 State whether moveable No Total surface 92.3 sq ft
No. of Feed pumps 2 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 5" Stroke 21" Can one be overhauled while the other is at work yes
No. of Donkey Engines 2 Sizes of Pumps 10x12x12-9x6x10 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Four 3 1/2" Tunnel One 3 1/2" In Holds, &c. No 1—Two 3 1/2" No 2—Two 3 1/2" No 3—Two 3 1/2" No 4—Two 3 1/2"
No. of Bilge Injections 1 sizes 9" Connected to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes
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 Valves
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 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 None How are they protected yes
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 26.2.17 of Stern Tube 26.2.17 Screw shaft and Propeller 7.4.17
Is the Screw Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from UPPER DECK

BOILERS, &c.—(Letter for record S) Manufacturers of Steel LORAIN & S CO + NORTH BROS.
Total Heating Surface of Boilers 6564 Is Forced Draft fitted yes No. and Description of Boilers 2 S.E. Scotch
Working Pressure 190 lb. Tested by hydraulic pressure to 285 lb. Date of test 14.9.17 No. of Certificate 157-158
Can each boiler be worked separately yes Area of fire grate in each boiler OIL FUEL No. and Description of Safety Valves to each boiler Two 3 1/2" Area of each valve 9.62" Pressure to which they are adjusted 190 Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 1'6" Mean dia. of boilers 16'6" Length 11'6" Material of shell plates S
Thickness 1 3/32" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR
Long. seams IBSTR Diameter of rivet holes in long. seams 1 9/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 23"
Per centages of strength of longitudinal joint 103.6 Working pressure of shell by rules 203 Size of manhole in shell 16x12
Size of compensating ring 39x35 No. and Description of Furnaces in each boiler 4 MORISON Material S Outside diameter 47 3/16"
Length of plain part top 19 1/2" bottom 19 1/2" Thickness of plates 19 1/2" Description of longitudinal joint WELD No. of strengthening rings yes
Working pressure of furnace by the rules 200 Combustion chamber plates: Material S Thickness: Sides 7/8" Back 7/8" Top 7/8" Bottom 7/8"
Pitch of stays to ditto: Sides 7x7 Back 7 1/4x7 Top 8x7 If stays are fitted with nuts or riveted heads NUTS Working pressure by rules 197
Material of stays S Diameter at smallest part 1 3/8" Area supported by each stay 56 Working pressure by rules 210 End plates in steam space: Material S Thickness 1 1/8" Pitch of stays 16x16 How are stays secured I.N. Working pressure by rules 197.5 Material of stays S
Diameter at smallest part 2 3/4" Area supported by each stay 256 Working pressure by rules 241 Material of Front plates at bottom S
Thickness 3/4" Material of Lower back plate S Thickness 3/4" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 280
Diameter of tubes 2 3/4" Pitch of tubes 4x3 3/4" Material of tube plates S Thickness: Front 3/4" Back 3/4" Mean pitch of stays 12 1/2"
Pitch across wide water spaces 12 3/4" Working pressures by rules 279 Girders to Chamber tops: Material S Depth and thickness of girder at centre Two 10x9 1/4" Length as per rule 30 1/2" Distance apart 8 1/2" Number and pitch of stays in each Four - 7"
Working pressure by rules 210 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked separately yes
Diameter 12 1/2" Length 12 1/2" Thickness of shell plates 3/4" Material S Description of longitudinal joint WELD Diam. of rivet holes 1 1/8" Pitch of rivets 8 3/4" Working pressure of shell by rules 203 Diameter of flue 12 1/2" Material of flue plates S Thickness 3/4"
If stiffened with rings yes Distance between rings 12 1/2" Working pressure by rules 210 End plates: Thickness 1 1/8" How stayed yes
Working pressure of end plates 210 Area of safety valves to superheater yes Are they fitted with easing gear yes

IS A DONKEY BOILER FITTED?

YES.

Is so, is a report now forwarded?

YES.

SPARE GEAR.

State the articles supplied:-

Iron Shaft, eccentric straps, valve rods, Top and bottom end braces and bolts - Main bearing bolts, 6 Coupling bolts, Piston rings - Head, helix and air pump valves, Condenser and boiler tubes, Nuts, bolts and iron of various sizes -

The foregoing is a correct description,

Newport News Shipbuilding & Dry Dock Co.,

By

L. Wood
Assistant to the President.

Dates of Survey while building
During progress of work in shops - M. 4. 29. J. 10. 20. 28. J. 5. 11. 12. 18. 21. A. 7. 14. 16. 22. S. 13. 14. 26. 29. O. 9. 23. 27. N. 16. D. 5. 14
During erection on board vessel - M. 17. 20. 22. 24. 26. 29. A. 2. 6. 7. 11. 12. 16. 17
Total No. of visits 59

Is the approved plan of main boiler forwarded herewith

YES.

" " " donkey " " "

YES.

Dates of Examination of principal parts - Cylinders O. 9. N. 16. Slides F. 1. 21. Covers F. 21. 28. Pistons O. 27. F. 21. Rods F. 21. 28.

Connecting rods V. 16. F. 21. Crank shaft V. 29. Thrust shaft M. 3. Tunnel shafts F. 5. N. 3. F. 27. Screw shaft F. 28. Propeller F. 27.

Stern tube D. 21. Steam pipes tested M. 23. 29. Engine and boiler seatings D. 21. Engines holding down bolts M. 20.

Completion of pumping arrangements A. 6 - 16. Boilers fixed A. 12. Engines tried under steam A. 12.

Main boiler safety valves adjusted A. 12. Thickness of adjusting washers LOCK NUTS.

Material of Crank shaft O. H. S. Identification Mark on Do. M. 29. 1. Material of Thrust shaft O. H. S. Identification Mark on Do. M. 3. 3. 17.

Material of Tunnel shafts O. H. S. Identification Marks on Do. M. 27. 2. 17. Material of Screw shafts O. H. S. Identification Marks on Do. 28. 2. 17.

Material of Steam Pipes STEEL & COPPER. Test pressure S. 600 lb. Cop. 400 lb.

Is an installation fitted for burning oil fuel

YES.

Is the flash point of the oil to be used over 150° F.

YES.

Have the requirements of Section 49 of the Rules been complied with

YES.

Is this machinery duplicate of a previous case

No.

If so, state name of vessel

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

built under special survey in accordance with the

approved plans and Rules for the intended service.

The workmanship and materials are good and the

engines have been taken under steam and found to work

well, rendering the vessel eligible in my opinion to have

the records of LMC 4. 17 - MB 190 lb. IB 120 lb.

"Fitted for oil fuel & Pressure 150° F."

The furnaces of the main boilers burn oil fuel - The oil

is carried in the double bottom and side fuel

bunker tank and is pumped to the furnaces by special

fuel pump in the stokehold. The oil is stored by

mechanical burners - The pumping arrangements are

separate from other systems and the requirements of

Sec 49 are complied with -

The amount of Entry Fee ... \$15.00

Special ... \$218.00

Donkey Boiler Fee ... 4

Travelling Expenses (if any) £ -

When applied for,

21. 4. 1917

When received,

21. 4. 1917

John A. Bracken

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

Committee's Minute

New York APR 26 1917

Assigned + Lmb 4. 17 Fitted for oil fuel 4. 17

Elec. Light 150° F.

MACHINERY CERTIFICATE

WRITTEN 14. 6. 17

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Foundation