

REPORT ON MACHINERY

No. 15042

SAT. DEC. 19. 1914

Received at London Office

Date of writing Report 9 Dec 1914 When handed in at Local Office 17/12/14 Port of Newcastle
 No. in Survey held at Newcastle Date, First Survey 19th March Last Survey 8th Dec 1914
 Reg. Book. on the SS Steamer Northwestern Miller (Number of Visits 75) Gross 5046
 Master Built at Newcastle By whom built Northumbrian I. & C. When built 1914
 Engines made at Newcastle By whom made Richardson Wigham & Co. when made 1914
 Boilers made at Newcastle By whom made Richardson Wigham & Co. when made 1914
 Registered Horse Power Owner: Norfolk & North American S. & C. Co. Ltd. Port belonging to Newcastle
 Nom. Horse Power as per Section 28 682 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 29: 49: 80 Length of Stroke 54 Revs. per minute 65 Dia. of Screw shaft as per rule 15.99 Material of as fitted 16 5/8 screw shaft
 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 5.6 1/2
 Dia. of Tunnel shaft as per rule 14.66 Dia. of Crank shaft journals as per rule 15.19 Dia. of Crank pin 16 1/4 Size of Crank webs 25.10 1/2 Dia. of thrust shaft under
 collars 16 7/8 Dia. of screw 18.9 Pitch of Screw 19.0 No. of Blades 4 State whether moveable Yes Total surface 115.94
 No. of Feed pumps Two Diameter of ditto 9 Stroke 21 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 4 Stroke 30 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps 11 & 10 6 & 8 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3 1/2 by tank in 2 1/2 In Holds, &c. Two 3 1/2 in each hold Two 1
Separate Circulating Pump
 No. of Bilge Injections Two size 9 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Two 3 1/2
 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 Yes
 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 Yes 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 12/10/14 of Stern Tube 4/11/14 Screw shaft and Propeller 1/12/14
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top of the room

OILERS, &c.—(Letter for record S) Manufacturers of Steel J. Brown & Sons, Leeds & Co.
 Total Heating Surface of Boilers 10800 Is Forced Draft fitted Yes No. and Description of Boilers Three Single Ended
 Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 2/10/14 No. of Certificate 3385
 Can each boiler be worked separately Yes Area of fire grate in each boiler 77.94 No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 15.9 Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 17 Mean dia. of boilers 17.6 Length 12.0 Material of shell plates Steel
 Thickness 1 9/16 Range of tensile strength 28 1/2 32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams all in 64
 ing. seams all in 64 Diameter of rivet holes in long. seams 19/16 Pitch of rivets 10 1/4 Lap of plates or width of butt straps 22 5/8
 per centages of strength of longitudinal joint 89.1 Working pressure of shell by rules 190 lb Size of manhole in shell 16 1/2 18
 size of compensating ring 8 1/2 19 1/16 No. and Description of Furnaces in each boiler 4 Union Material Steel Outside diameter 46 1/2
 length of plain part top Thickness of plates bottom 19/16 Description of longitudinal joint Welded No. of strengthening rings Eight
 Working pressure of furnace by the rules 216 lb Combustion chamber plates: Material Steel Thickness: Sides 19/16 Back 19/16 Top 19/16 Bottom 14/16
 Pitch of stays to ditto: Sides 7 1/4 8 1/4 Back 7 1/4 8 1/4 Top 7 1/4 8 1/4 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 211 lb
 Material of stays Steel Diameter at smallest part 1 3/8 Area supported by each stay 8 1/2 7 1/4 Working pressure by rules 185 lb End plates in steam space
 Material Steel Thickness 1 9/16 Pitch of stays 19 1/2 17 1/4 How are stays secured all nut Working pressure by rules 207 lb Material of stays Steel
 diameter at smallest part 3 5/8 Area supported by each stay 19 1/2 17 1/4 Working pressure by rules 230 lb Material of Front plates at bottom Steel
 Thickness 3 1/2 Material of Lower back plate Steel Thickness 13/16 Greatest pitch of stays 13 1/2 8 1/2 Working pressure of plate by rules 192 lb
 Diameter of tubes 2 1/2 Pitch of tubes 3 1/4 Material of tube plates Steel Thickness: Front 3 1/2 Back 13/16 Mean pitch of stays 8 1/2
 Pitch across wide water spaces 13 1/2 Working pressures by rules 185 lb Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 1/4 14 1/4 Length as per rule 22 1/2 Distance apart 8 1/2 Number and pitch of stays in each Three 7 1/4
 Working pressure by rules 190 lb Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 separately Yes 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 Yes
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear Yes

IS A DONKEY BOILER FITTED? *None*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, 1 set of H.P. piston rings, a quantity of assorted bolts nuts & iron, 1 propeller shaft, 1 impeller & minor details.

The foregoing is a correct description,

For RICHARDSON, WESTGARTH & Co. LIMITED

L. H. Hingst

ASSISTANT GENERAL MANAGER

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1914. Mar 19. April 1. 16. 28. May 22. June 9. 24. 25. 30. July 3. 8. 10. 13. 15. 17. 20. 22. 23. 24. 28. Aug 10. 11. 18. 19. 24. 26. 28. 31. Sep 1. 2. 3. 4. 7. 9. 10. 11. 14. 15. 16. 17. 21. 22. 23. 24. 25. 28. 29. 30. Oct 1. 2. 5. 6. 7. 8. 9. 12. 13. 20. 21. 22. 23. 31. Nov 2. 4. 9. 10. 16. 18. 26. 29. 30. Dec 1. 2. 3. 8. *Int: 1914 Rpt 15. 1915 Feb 1. 25.*

45 + 3 Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *17/7/14* Slides *22/9/14* Covers *22/9/14* Pistons *19/8/14* Rods *14/9/14*
Connecting rods *19/8/14* Crank shaft *24/7/14* Thrust shaft *10/11/14* Tunnel shafts *16/11/14* Screw shaft *16/9/14* Propeller *18/11/14*
Stern tube *23/9/14* Steam pipes tested *27/11/14* Engine and boiler seatings *16/11/14* Engines holding down bolts *16/11/14*
Completion of pumping arrangements *3/12/14* Boilers fixed *3/12/14* Engines tried under steam *3/12/14*
Main boiler safety valves adjusted *3/12/14* Thickness of adjusting washers *P 17/12 S 1/2 - P 17/12 S 17/32 - F 7/12 S 23/32.*
Material of Crank shaft *Steel* Identification Mark on Do. *5596* Material of Thrust shaft *Steel* Identification Mark on Do. *5596*
Material of Tunnel shafts *Steel* Identification Marks on Do. *5596* Material of Screw shafts *Steel* Identification Marks on Do. *5596*
Material of Steam Pipes *Steel* Test pressure *540 lbs*

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *—*

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

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. *Workmanship good.*)

Exhaust coils tested to 400 lbs and body to 50 lbs.

Exhaust and heater headers tested to 400 lbs and body to 50 lbs.

The Machinery and Fitters of this Steamer have been constructed under special survey and placed on board in accordance with the Society's Rules. They are now in our opinion in safe working condition and the case is respectfully submitted for the Notification + LMC-12-14 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 3.15. F.D.

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 54 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 18/12/14
When received, as per letter from 1/1/15

Committee's Minute TUE. MAR. 23. 1915

Assigned

+ LMC 3.15

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



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Lloyd's Register Foundation

Rpt. 13.

Port of *N*

No. in Reg. Book *on B*

Owners

Yard No. *22*

DESCRIPTION

7 1/2 x 6

Compo

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Positions of an

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If vessel is w

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C. Truini P.

D. M. S. P.

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