

# REPORT ON MACHINERY.

No. 52639

Port of Newcastle on Tyne

Received at London 11.06 APR 1907

No. in Survey held at Wallsend & Antwerp. Date, first Survey Nov 4 '06 Last Survey 12 March 1907.

Reg. Book. 48 on the S.S.S. Neuenstein

(Number of Visits 13) Gross 2564 Tons Net 1641

Master C. Hollers Built at Antwerp. By whom built Antwerp S.B. Co.

When built 1907

Engines made at Newcastle. By whom made N.E.M. Eng Co. Ltd.

when made 1906-7

Boilers made at ". By whom made " when made 1907.

Registered Horse Power J Owners See Transport Gesellschaft Port belonging to Hamburg

Nom. Horse Power as per Section 28 198 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Tri C pd. No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 22 1/2" 37" 61" Length of Stroke 42 Revs. per minute 64 Dia. of Screw shaft as per rule 12.85 Material of screw shaft St

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 4' 7"

Dia. of Tunnel shaft as per rule 11.9 Dia. of Crank shaft journals as per rule 11.9 Dia. of Crank pin 12" Size of Crank web 23 1/2 x 7 1/2 Dia. of thrust shaft under collars 12"

Dia. of screw 16 ft. Pitch of Screw 16 ft. No. of Blades 4 State whether moceable f Total surface 80 sq

No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 21" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 21" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 8 x 9 x 10 7/8 8 x 5 1/2 x 5 1/2 4 1/2 x 2 1/2 x 4 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3" In Holds, &c. Two in each hold 3"

One in tunnel well 3 1/2" Suctions to ballast tanks 3 1/2" 2 1/2"

No. of Bilge Injections 1 sizes 4 Connected to condenser, or to circulating pump 6" 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 & cocks

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 above

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 13-3-07 of Stern Tube 13-3-07 Screw shaft and Propeller 24.1.07

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel J. Spence & Sons Ltd.

Total Heating Surface of Boilers 2185 sq Is Forced Draft fitted No No. and Description of Boilers 2, S.E.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15.2.07 No. of Certificate 7432

Can each boiler be worked separately Yes Area of fire grate in each boiler 57.6 sq No. and Description of Safety Valves to each boiler 2, Spring

Area of each valve 9.6 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15' 3" Length 10' 6" Material of shell plates St

Thickness 1 1/2" Range of tensile strength 28 1/2-32 Are the shell plates welded or flanged ends Descrip. of riveting: cir. seams 27 lap

long. seams 2 butt strps Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 98.7 Working pressure of shell by rules 186.5 lbs Size of manhole in shell End 16 x 12

plate 8 1/2 x 6 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 deign Material St Outside diameter 3' 11 1/2"

Length of plain part top 19 Thickness of plates crown 19 Description of longitudinal joint weld No. of strengthening rings Yes

bottom 3 1/2 Working pressure of furnace by the rules 198 Combustion chamber plates: Material St Thickness: Sides 1 1/2" Back 5/8" Top 1 1/2" Bottom 1"

Pitch of stays to ditto: Sides 8 x 7" Back 8 x 8" Top 8 x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 210

Material of stays St Diameter at smallest part 1.44 Area supported by each stay 64 Working pressure by rules 180 End plates in steam space:

Material St Thickness 1" Pitch of stays 16 x 16" How are stays secured nuts Working pressure by rules 185 Material of stays St

Diameter at smallest part 6' 09" Area supported by each stay 256 Working pressure by rules 237 Material of Front plates at bottom St

Thickness 1" Material of Lower back plate 32 Thickness 32 Greatest pitch of stays 14 1/2" Working pressure of plate by rules 206

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2 x 4 1/2" Material of tube plates St Thickness: Front 1" Back 3/4" Mean pitch of stays 9 x 8 3/4"

Pitch across wide water spaces 14 1/2" Working pressures by rules 195 Girders to Chamber tops: Material St Depth and

thickness of girder at centre 8 1/2 x 1 1/2" Length as per rule 29 1/2" Distance apart 8" Number and pitch of stays in each 3 of 7"

Working pressure by rules 202 Superheater or Steam chest; how connected to boiler Yes 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

Lloyd's Register Foundation

9800-812

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:— 1 set connecting rod bolts & nuts. two main bearing bolts & nuts. 1 set of coupling bolts. 2 set feed and helge pump valves. propeller & shaft. 1 valve spindle for each valve complete. one pair top & bottom end brass. 1 cir and air pump rod. Check valves & assorted iron. boiler tubes 16

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING Co., LTD.

Manufacturers.

*J. J. Findlay* Secretary. 1906. Nov. 7. 22. Dec. 5. 7. 20. 1907. Jan. 24. 31. Feb. 11. 13. 15. 19. March 1. 12

Dates of Survey while building: During progress of work in shops \_\_\_\_\_ During erection on board vessel \_\_\_\_\_

March 20, 22, 27, 28 April 3, 11, 13, 16

Total No. of visits 13 + 8 = 21

Is the approved plan of main boiler forwarded herewith 408.

" " " donkey " " " 70

Dates of Examination of principal parts—Cylinders 24.1.07. Slides 24.1.07. Covers 31.1.07. Pistons 31.1.07. Rods 24.1.07.

Connecting rods 24.1.07. Crank shaft 22.11.06. Thrust shaft 22.11.06. Tunnel shafts 13/12.06. Screw shaft 24.1.07. Propeller 24.1.07.

Stern tube 24.1.07. Steam pipes tested 9.2.07. Engine and boiler seatings 27.2.07. Engines holding down bolts 28.3.07.

Completion of pumping arrangements 13-4-07. Boilers fixed 13-4-07. Engines tried under steam 13-4-07.

Main boiler safety valves adjusted 13-4-07. Thickness of adjusting washers Port. P 1/2" S. 1/2" S. 1/2" S. 1/2" S. 1/2"

Material of Crank shaft S. Identification Mark on Do. JTF 11-06. Material of Thrust shaft S. Identification Mark on Do. JTF 11-06.

Material of Tunnel shafts J. Identification Marks on Do. JTF 11-06. Material of Screw shafts J. Identification Marks on Do. JTF 11-06.

Material of Steam Pipes W. J. Test pressure 54.0 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery and boilers constructed under special survey. Materials and workmanship good and efficient. The machinery &c. has been shipped to Antwerp to be fitted on board. The machinery & boilers have been fitted on board in accordance with the Rules. The safety valves have been adjusted under steam to blow off at 185 lbs per sq. The engines worked well under steam. For report upon Donkey Boilers see other forms.

This vessel is eligible in our opinion for the notation + L.M.C. 4.07 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 4.07

See light. J.S.M. 19/4/07

The amount of Entry Fee..	£ 2 :	When applied for.
Special 1/3 to Gen. to Antwerp.	£ 29. 14 :	5 APR 1907
Donkey Boiler Fee ..	£ . :	When received.
Travelling Expenses (if any) £	. :	12/4/07

J. J. Findlay H. P. Cornish  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

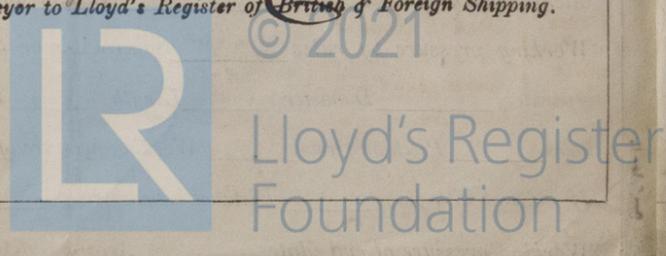
Committee's Minute

FRI. APR 19 1907

Assigned

+ L.M.C. 4.07

MACHINERY CERTIFICATE WRITTEN.



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