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No. 5324

410

REPORT ON MACHINERY.

MON. OCT 7 1901

Port of Belfast Received at London Office 19

No. in Survey held at Belfast Date, first Survey 24th June 1899 Last Survey 3 Oct 1901
Book. (Number of Visits 139)

on the S.S. Rijndam Tons Gross 12302 Net 7887

ster F. H. Bonser Built at Belfast By whom built Harland & Wolff Ltd When built 1901

gines made at Belfast By whom made Harland & Wolff Ltd when made 1901

lers made at " By whom made " " when made 1901

istered Horse Power ✓ Owners Netherland American S.N. Co Port belonging to Rotterdam

n. Horse Power as per Section 28 1265 ✓ Is Refrigerating Machinery fitted No Is Electric Light fitted Yes

GINES, &c.—Description of Engines Twin Screw Triple Expans No. of Cylinders 6 No. of Cranks 6

. of Cylinders 28½ - 47½ - 78" Length of Stroke 54 Revs. per minute 75 Dia. of Screw shaft as per rule 15·7 as fitted 16·0 Lgth. of stern bush 5'-3

. of Tunnel shaft as per rule 14·7 as fitted 15·1 Dia. of Crank shaft journals as per rule 15·48 as fitted 16·0 Dia. of Crank pin 16½ Size of Crank web 29¾ x 11½ Dia. of thrust shaft under

urs 15¾ Dia. of screws 17'-6 Pitch of screw 22'-6 No. of blades 3 each State whether moveable Yes Total surface 75½ sq ft.

of Feed pumps / each 1 pump Diameter of ditto 5¼ Stroke 30 Can one be overhauled while the other is at work Yes

of Bilge pumps / each 1 pump Diameter of ditto 5 Stroke 30 Can one be overhauled while the other is at work Yes

of Donkey Engines Eight Sizes of Pumps Feed 10½ x 7 x 12 Duplex Ballast 8 x 9 x 9 " Engine Room Five - 32 Wash 12½ x 9½ x 12 (Two) Fire 8 x 9 x 9 " (Two) Water 5¼ x 4 x 5 " No. and size of Suctions connected to both Bilge and Donkey pumps Holds, &c. Thirteen - 32 and Two - 24

of bilge injections Two sizes 10 Connected to condenser, or to circulating pump Pumps Is a separate donkey suction fitted in Engine room & size Yes - 4

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 Valve

all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

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

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

t pipes are carried through the bunkers Fore hold suctions How are they protected Wood casings

all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes

n were stern tube, propeller, screw shaft, and all connections examined in dry dock Before Launching the screw shaft tunnel watertight Stated to be

fitted with a watertight door Yes worked from Upper Deck

LERS, &c.— (Letter for record D) Total Heating Surface of Boilers 23199 sq ft Is forced draft fitted No

and Description of Boilers 3 Double Ended 3 Single Ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

of test 21-2-01 Can each boiler be worked separately Yes Area of fire grate in each boiler 98.42 Sq ft No. and Description of safety valves to

boiler Two Dead Weight Spring Two Area of each valve 16·8 sq 12·56 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

lest distance between boilers or uptakes and bunkers or woodwork About 3 ft. Mean dia. of boilers 16'-4 Length 16'-6 Material of shell plates Steel

ness 1½ Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams Lap Treble Riveted long. seams Butt Treble

eter of rivet holes in long. seams 1½ Pitch of rivets 10 ~~Lap of plates or~~ width of butt straps 22¼

entages of strength of longitudinal joint rivets 84·4 plate 85·0 Working pressure of shell by rules 207 lbs Size of manhole in shell 16" x 12"

f compensating ring ½ Neils No. and Description of Furnaces in each boiler 8 Morrisons 4 Material Steel Outside diameter 44⅞

h of plain part top ½ bottom 6 Thickness of plates crown 29/32 bottom 29/32 Description of longitudinal joint Welded No. of strengthening rings 3 Ts and C Bottom 2 T 3/8 Bottom

ing pressure of furnace by the rules 196 lbs Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 5/8 Top 4/16 Bottom 3/4

of stays to ditto: Sides 8¼ x 8 8¼ x 7⅞ Back 8¼ x 8 Top 10½ x 8¼ 9⅛ x 8¼ If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 183 lbs

ial of stays Steel Diameter at smallest part 1⅜ x 1½ 1⅜ x 1⅝ Area supported by ~~each~~ stay 86 5/8 sq 74⅞ Working pressure by rules 180 lbs 205 lbs End plates in steam space:

ial Steel Thickness 1/16 Pitch of stays 18¾ x 18 How are stays secured Double Nuts & 2 Washers Working pressure by rules 189 lbs Material of stays Steel

ter at smallest part 3 Area supported by ~~each~~ stay 337½ sq Working pressure by rules 207 lbs Material of Front plates at bottom Steel

ness 45/16 Material of Lower back plate Steel Thickness 15/16 Greatest pitch of stays 12 Working pressure of plate by rules 219 lbs

ter of tubes 2¼ Pitch of tubes 4" x 4" Material of tube plates Steel Thickness: Front 15/16 x 7/8 Back ¾ Mean pitch of stays 8

across wide water spaces 13" Working pressures by rules 256 lbs with ½ Gaubler 305 lbs Girders to Chamber tops: Material Iron Depth and

ess of girder at centre 6½ x (⅝ x 2) 8⅞ x ½ x 1 Length as per rule 42¾ 30 Distance apart 10½ 9⅜ Number and pitch of Stays in each 4 - 8¼ 3 - 8¼

ing pressure by rules 228 lbs 220 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked

ely Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

ened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

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

WS83-0013

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DONKEY BOILER— None Description

Made at ____ By whom made ____ When made ____ Where fixed ____

Working pressure ____ tested by hydraulic pressure to ____ No. of Certificate ____ Fire grate area ____ Description of safety valves ____

No. of safety valves ____ Area of each ____ Pressure to which they are adjusted ____ 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 ____ 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 ____ Thickness of furnace crown plates ____ Stayed by ____ Working pressure of shell by rules ____

Working pressure of furnace by rules ____ Diameter of uptake ____ Thickness of uptake plates ____ Thickness of water tubes ____

SPARE GEAR. State the articles supplied Two Propeller shafts; 2 propeller bosses & blades complete 1 boss crank shaft; 2 sets crank pin brasses; air pump rod & nut; air pump bucket, guards; Lead & pad valves; centrifugal pump impeller & spindle; H.P. & L.P. valves spindles & neck bushes; eccentric strap; brasses & all other gear & connecting rod, and as Requirements.

The foregoing is a correct description,
Harland & Wolff Ltd Manufacturer.

Dates of Survey while building — During progress of work in shops - - 1899. June 27. July 4. 16. 25. 31 Sept 5. 28. Oct 5. 9. 20. 26. Nov. 1. 3. 9. 16. 21. 23. 28. 29. Dec. 1. 7. 12. 15. 19
During erection on board vessel - - 1900. Jan 4. 8. 19. 22. 25. 30. Feby 2. 8. 13. 22. 27. March 2. 7. 15. 19. 23. 27. April 3. 5. 18. 27. and other dates up to Oct 3, 1901
Total No. of visits 139.

Is the approved plan of main boiler forwarded herewith Yes ✓

" " " donkey " " " ____

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

Material of screw shaft Ingot Steel 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 ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓

The machinery of this vessel has been constructed under Special Survey, and is of good material and workmanship. It has been securely fitted on board, and on trial, it worked satisfactorily. In my opinion, it is eligible to have record + L.M.C. 10-01, "Electric Light" in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 10.01 Elec. light.

C.M. 7.10.01

J.G.S. 7.10.01

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Certificate (if required) to be sent to ____

The amount of Entry Fee.. £ 3 : — :
Special .. .. .. £ 83-5 :
Donkey Boiler Fee .. .. £ : :
Travelling Expenses (if any) £ : :

When applied for, 7-10-1901.
When received. 9.10.1901

G.P. 10.01

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

Committee's Minute TUES. OCT 8 1901

Assigned + LMC 10.01

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