

281285

Received at London Office

Dec 4/90 Last Survey *Alia* 18 92

Book.

Tons } Net 34 09

By whom built *Sir W. G. Armstrong & Co.*

When built 1892

By whom made *R & W. Hawthorn Leslie & Co Am -* when made *1892*

been made R. W. Hawthorn Leslie & Co Lim^d when made 1872

North German Lloyd Port belonging to Bremen

Horse Power as per Section 28 592

Horse Power as per Section 28	392
INES, &c.—	Description of Engines <i>Twin, Inverted, Direct acting, Triple Expansion</i> No. of Cylinders <i>three</i> as per rule 12.23 Revolutions per minute <i>75</i> Diameter of Screw shaft <i>13</i> as fitted 13

Length of Stroke 45 Revolutions per minute 75 Diameter of Crank pin 13 Size of Crank webs 24 1/2" x 8"

as per rule 11.61 Diameter of Crank shaft journals 1 1/8 Diameter of Crank pin 7/8
Diameter of Tunnel shaft as fitted 12 1/2 No. of blades 4 State whether moveable yes Total surface 75 sq

Diameter of screw 15'-6" Pitch of screw 19-0 No. of blades 7
 Stroke 25"- Can one be overhauled while the other is at work yes

of Feed pumps 2 ✓ Diameter of into 5 1/4 Stroke 25" ✓ Can one be overhauled while the other is at work yes ✓

of Donkey Engines *two* Sizes of Pumps *5 1/4" x 10" x 9" & 2 3/4" x 4" x 4 1/2"* No. and size of Suctions connected to both Barges *No. 1. P. 3. S. 3. No. 2. P. 3. S. 3.*

Engine Room *Pat 3' C. 4' S. 3' 3" Straddle 1' 3' 3" In Holes, 9 c. 100' 1' 3" 3"*
13' 8' 3" App. hole 3" Tunnel well 3"

Is a separate donkey suction fitted in Engine room & size yes
connected ~~to circulating pump~~ to circulating pump yes

all the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the stances on Engine room accessible *yes*

all connections with the sea direct on the skin of the ship yes Are they valves or cocks yes

Are the discharge pipes above or below the deep water line above

Are they fixed sufficiently high on the ship's side to be seen without lifting the stowenout plates? *yes*

How are they protected *Wood ceiling*

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

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the engine room? *merg* Is the screw shaft tunnel watertight? *yes*

Then were stern tube, propeller, screw shaft, and all connections examined in dry dock *Dec 1/92*
 and removed from *Job platform*

it fitted with a watertight door yes worked from top

for record (S) Total Heating Surface of Boilers 9000 ft²

Pressure to 32

WILERS, &c. — (Letter in pencil) *Three 1 1/2" Multi Double Ended Working Pressure 160 lbs Tested by hydraulic pressure*

Can each boiler be worked separately yes Area of fire grate in each boiler 119 sq No. and description of test 12-7-20 Are they 16 5/16

Each boiler *Two Spring* Area of each valve *12.36* Pressure to which they are set *18" to ship's side* diameter of boilers *13'-7"*

with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or *15"* Description of riveting: circum. seams *Lap. D. Riv* long. seams *Row's J*

Length $17'-3"$ Material of shell plates *Steel* Thickness $\frac{1}{16}$ Pitch of rivets $9" \& 6"$ Lap of plates or width of butt straps $24 \& 12 \frac{1}{2}$

diameter of rivet holes in long. seams 16.18 90.0
rivets 189 lbs
Strength of longitudinal joint 84.1
Working pressure of shell by rules 189 lbs
Size of manhole in shell 10.12
Outside diameter 39

Size of compensating ring 7" x 1 1/4" No. and Description of Furnaces in each boiler Six Ribbed Material Iron

Length of plain part top $\frac{15}{32}$ Thickness of plates bottom $\frac{23}{32}$ Description of longitudinal joint *Welded* $\frac{23}{32}$ " Back $\frac{23}{32}$ " Bottom $\frac{23}{32}$ "

Working pressure of furnace by the rules 161

" " " "6

" " " "10 x 9" If studs are fitted with nuts or riveted heads nuts

Combustion chamber plates: Material mild steel

Working pressure by rules _____

Pitch of stays to ditto: Sides $10\frac{1}{8} \times 9\frac{3}{4}$ Back \checkmark Top $10 \times 9\frac{3}{4}$ Stay \checkmark
 Smallest part $1\frac{1}{2}$ " Area supported by each stay 98.6 Working pressure by rules 160 End plates in steam \checkmark

Material of stays Steel Diameter at smallest part 1 1/2 Working pressure by rules 170 Material of stay-plates Steel
 Thickness 1" Pitch of stays 15 1/4 x 15 1/4 How are stays secured S. nuts Material of Front plates at bottom Steel

Diameter at smallest part $2\frac{5}{16}$ " Area supported by each stay 233 in^2 Working pressure by rules 162 Working pressure of plate by rules 162

Thickness $\frac{31}{32}$ Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays 1" 13" Material of tube plates Steel Thickness Front $\frac{31}{32}$ Back $1\frac{1}{16}$ Mean pitch of stays 1"

Diameter of tubes $3\frac{1}{2}$ " Pitch of tubes $4\frac{1}{16}$ " Material of tube plates iron
Working pressures by rules 171 lbs Girders to Chamber tops: Material iron Dep

Pitch across wide water spaces 142 Working P
 Length as per rule 43" Distance apart 9" Number and pitch of Stays in each 11 in
 14" x 1 1/4" Water be shut off and the boiler

Working pressure by rules 173 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be taken off ✓
Material ✓ Description of longitudinal joint ✓ Diam

separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of ✓
 Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓

If stiffened with rings ☒ Distance between rings ☐ Are they fitted with easing gear ☒

Working pressure of end plate

Report Received 20/12/08, nil L3 London 20/12/08

joint ✓ Diam. of neck
Thickness ✓
stayed ✓
Lloyd's Register
008472-008420-0150
Foundation

Auxiliary

DONKEY BOILER—

Description *Steel Cylindrical, Multi Single Ended*

Made at *Newcastle* By whom made *R & W Hawthorn Leslie & Co Lim* When made *7.5.91* Where fixed *Stoke Newington*

Working pressure *160* tested by hydraulic pressure to *320* No. of Certificate *3576* Fire grate area *34.8* Description of safety valves *Spring*

No. of safety valves *2* Area of each *4.9* Pressure to which they are adjusted *165* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes* Diameter of donkey boiler *10'-0"* Length *9'-6"* Material of shell plates *Steel* Thickness *3/4"*

Description of riveting long seams *Row's Joint* Diameter of rivet holes *1 1/8"* Whether punched or drilled *Drilled* Pitch of rivets *6 3/4" x 4 1/2"*

Lap of plating *7 3/4" x 11 3/4"* Per centage of strength of joint *85* Thickness of *end* plates *1"* Radius of do. *pitch* Stays to do. *154*

Dia. of stays *2 3/8"* effect Diameter of furnace *36"* *Bottom* No. 2 Length of furnace *6'-6"* Thickness of furnace plates *7/8"* Description of

Ribbed Thickness of *com. cham* plates *5/8"* Stayed by *1 1/4" eff. steel stays* *8 1/8" pitch* Working pressure of shell by rules *165*

Working pressure of furnace by rules *161 lbs* Diameter of *tubes* *3"* Thickness of *tube* plates *3/4" x 15/16"* Thickness of *water* tubes

SPARE GEAR. State the articles supplied:— *As per rule and 1/3 crank shaft, one propeller sh, propeller blades, one slide valve spindle complete, one air-pump rod and bucket, one circum rod and bucket, 2 pair top end and 2 pair bottom end brasses, 4 safety valve springs, 0 sheave complete, one HP and one MP piston packing ring, one set L.P. piston springs*

The foregoing is a correct description,

R. & W. HAWTHORN, LESLIE & CO., LIMITED.

Manufacturer.

J. Marshall

DIRECTOR.

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel is*

Constructed under Special Survey the materials and workmanship are sound and good and eligible in our opinion to be classed + L.M.C. 12.92 in the Society's Register Book.

The centre and starboard main bulks of this vessel were damaged at the first moving trial, which necessitated the removal of these bulks and the renewal of six furnaces together with the necessary repairs and renewals to the comb. ch. and tube plates. On completion bulks tested by water to 320 lbs and also steam pipe retorted. Subsequently slight defects were found in some of the furnaces at the flanges and the owners decided to renew the whole of the furnaces together with certain of the comb. ch. sides and which has now been done. A hydraulic test of 320 lbs was applied on completion of this when the boiler was found tight and satisfactory.

Engines & bulks tried at sea when all worked well. Vessel fitted with electric light & report will be forwarded on completion.

Certificate (if required) to be sent to *Newcastle office*

The amount of Entry Fee. £ *3 : 0 : 0* When applied for, *20 DEC 92*

Special £ *19 : 12 : 0*

Donkey Boiler Fee £ *2 : 2 : 0* When received, *23 DEC 92*

Travelling Expenses (if any) £ *— : — : —*

Wm Morrison & John Wallis
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

FRI 23 DEC 1892

+ LMC 12.92

+ LMC-12-92
21-12-92



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