

REPORT ON MACHINERY.

Port of *Newcastle*

THUR, 2 FEB 1899

No. in Survey held at
g. Book.*Wallsend*Date, first Survey *4 May 1898*Last Survey *Jan 24 1899*

(Number of Visits)

on the

*% Politician*Gross *7214*
Net *4738*When built *1-99*

ister

Built at *Wallsend*By whom built *Swan & Hunter*

gines made at

Wallsend

By whom made

The Wallsend Shipway & Eng^{rs} Co when made *1-99*

ilers made at

Wallsend

By whom made

The Wallsend Shipway & Eng^{rs} Co when made *1-99*

gistered Horse Power

Owners

J. J. Harrison

Port belonging to

Liverpool

m. Horse Power as per Section 28

571

Is Electric Light fitted

yes

GINES, &c.—Description of Engines

*Triple*No. of Cylinders *3*No. of Cranks *3*

iameter of Cylinders

*27½, 45½, 75"*Length of Stroke *60"*Revolutions per minute *70*

Diameter of Screw shaft

as per rule *14½"*
as fitted *16"*

iameter of Tunnel shaft

as per rule *18"*
as fitted *18"*Diameter of Crank shaft journals *15½"*Diameter of Crank pin *16½"*Size of Crank webs *24" x 10½"*

iameter of screw

*19'0"*Pitch of screw *20'0"*No. of blades *4 large*

State whether moveable

*yes*Total surface *94 ft*

No. of Feed pumps

*2*Diameter of ditto *4½"*Stroke *30"*

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

*2*Diameter of ditto *5"*Stroke *30"*

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

Sizes of Pumps

Ballast 10" x 10½" x 10"
Do 6" x 4" x 6"
Two Hairs feed pumps 10" x 8" x 24"

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room

*Line 3½" dia*In Holds, &c. *After peak, tunnel & hold wells one 3½" suction*

No. of bilge injections

*1*sizes *10½"*Connected to *condenser, on to circulating pump**yes*Is a separate donkey suction fitted in Engine room & size *yes 3½"*

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

none

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

both

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

below

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

Are all pipes carried through the bunkers

none

How are they protected

—

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*Were stern tube, propeller, screw shaft, and all connections examined *in dry dock before launch*

Is the screw shaft tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

*upper platform**18th*
6-1-99

BOILERS, &c.—

(Letter for record *3*)

Total Heating Surface of Boilers

10150 ft

Is forced draft fitted

no

and Description of Boilers

2 Double ended & 1 Single ended

Working Pressure

180 lb

Tested by hydraulic pressure to

*360 lb*Date of test *10-8-98* Can each boiler be worked separately*yes*

Area of fire grate in each boiler

No. and Description of safety valves to

each boiler

*2 spring loaded*Area of each valve *2.5 ft*

Pressure to which they are adjusted

182 lb

Are they fitted

with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

24"

Mean diameter of boilers

15-9"

Length

14'6"

Material of shell plates

steel

Thickness

1½"

Description of riveting: circum. seams

DRTR lap

long. seams

DBS field rivet

Diameter of rivet holes in long. seams

1½"

Pitch of rivets

9½"

Lap of plates or width of butt straps

20½"

Percentage of strength of longitudinal joint

rivets *89.6*
plate *85.3*

Working pressure of shell by rules

206 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

8" x 1½"

No. and Description of Furnaces in each boiler

6 Morrison

Material

steel

Outside diameter

48"

Length of plain part

top *—*
bottom *—*

Thickness of plates

crown *43"*
bottom *64"*

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

229

Combustion chamber plates: Material

steel

Thickness: Sides

½"

Back

—

Top

½"

Bottom

½"

Pitch of stays to ditto: Sides

9½" x 9½"

Back

—

Top

9½" x 9½"

If stays are fitted with nuts or riveted heads

9 nuts

Working pressure by rules

191 lb

Material of stays

steel

Diameter at smallest part

1½" = 16"

Area supported by each stay

85.5"

Working pressure by rules

213 lb

End plates in steam space:

Material

steel

Thickness

1½"

Pitch of stays

18½" x 15½"

How are stays secured

DN+W

Working pressure by rules

246 lb

Material of stays

steel

Diameter at smallest part

3½" = 27"

Area supported by each stay

299"

Working pressure by rules

184 lb

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

Thickness

—

Greatest pitch of stays

—

Working pressure of plate by rules

—

Diameter of tubes

3½"

Pitch of tubes

4½" x 4½"

Material of tube plates

steel

Thickness: Front

1"

Back

3/32"

Mean pitch of stays

9½"

Pitch across wide water spaces

14"

Working pressures by rules

195 lb

Girders to Chamber tops: Material

steel

Depth and

Thickness of girder at centre

2 plates 11½" x 3"

Length as per rule

44½"

Distance apart

9½"

Number and pitch of Stays in each

3 off - 9½"

Working pressure by rules

194 lb

Superheater or Steam chest; how connected to boiler

none

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

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

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~~Donkey~~ BOILER— Description *Single ended one boiler*

Made at *Wallsend* By whom made *The Wallsend Slipway & Engineering Co* When made *1-99* Where fixed *and stakeholder*
Working pressure *180* tested by hydraulic pressure to *360* No. of Certificate *5337* Fire grate area *56 sq ft* Description of safety valves *(2) Spring loaded*
No. of safety valves *two* Area of each *7.07 sq ft* Pressure to which they are adjusted *182 1/2* If fitted with easing gear *yes* If steam from main boilers can enter this ~~donkey~~ boiler *yes* Diameter of ~~donkey~~ boiler *14-0"* Length *10-6"* Material of shell plates *steel* Thickness *1 5/32"*

Description of riveting long seams *lap double shell riveted* Diameter of rivet holes *1 1/2"* Whether punched or drilled *drilled* Pitch of rivets *8 1/2"*
Width of straps *1 1/8"* Per centage of strength of joint *88.7* Rivets *88.7* Thickness of shell ~~end~~ plates *1 1/2"* Radius of do. *Pitch* of Stays to do. *17 1/2 x 18 1/2*
Dia. of stays *3 1/4" = 3.03"* Diameter of furnace *43* Bottom *—* Length of furnace *19"* Thickness of furnace plates *3/32"* Description of joint *welded* Thickness of ~~furnace~~ *back* plates *1 1/2"* Stayed by *steel stays 1 3/4" dia. pitch sides 8 1/2" x 9 1/2"* Working pressure of shell by rules *203 1/2*

Working pressure of furnace by rules *219 1/2* Diameter of ~~water~~ *tubes* *3 1/2"* Thickness of ~~water~~ *plates* *1 1/2"* Thickness of ~~water~~ *tubes* *4 5/8" x 4 5/8"*
circles 2 plates 8 1/2" x 1/2" length 33 1/2" Stay tubes mean pitch *9 1/4"*

SPARE GEAR. State the articles supplied:— *1 crank shaft, 1 propeller shaft, 2 propeller blades, 1 valve spindle, 3 sets of coupling bolts, 1 set of crosshead bolts, 1 set of bottom end bolts & 2 main bearing bolts, 1 set of top & 1 set of bottom end brasses, 1 air pump rod, bucket & head valve, 1 eccentric sheave & strap, 1 shaft for centrifugal pump & 1 set of piston springs & 1 set of feed valve pump valves & 1 main & 1 donkey feed check*

The foregoing is a correct description,

THE WALLSEND SLIPWAY & ENGINEERING CO., LIMITED.

Manufacturer.

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

Propy 4th 1898 First Survey
Jan'y 24th 1899 Last
33

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

ENGINES—Length of stern bush *5-6"* Diameter of crank shaft journals *as per rule 14-6"* Diameter of thrust shaft under collars *15 1/2"*

BOILERS—Range of tensile strength *31-34 tons* Are they welded or flanged *Hungar* ~~Donkey~~ BOILERS—No *one* Range of tensile strength *31-34 tons*

Is the approved plan of ~~main~~ *DE* boiler forwarded herewith *yes* Is the approved plan of ~~donkey~~ *S.E.* boiler forwarded herewith *yes*

This vessel is fitted with a Weirs evaporator, Weirs feed pumps & feed heater also Brown's condenser for distilling purposes.

The machinery of this vessel has been constructed and fitted on board under special survey the workmanship being sound & good throughout. The engines & boilers have been tried under steam & found satisfactory, which in my opinion renders the vessel eligible for the record of
+ L.M.C 1-99 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. L.M.C. 199. Electric Light.

A.C.H.

2.2.99.

2.2.99.

The amount of Entry Fee. £ *3*
Special £ *48*
Donkey Boiler Fee £ *2*
Travelling Expenses (if any) £ *2*

When applied for.

1/31-99

When received.

1.2.99

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

Robert Haig

Committee's Minute

FRI. 3 FEB 1899

Assigned

+ L.M.C 1.99



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