

REPORT ON MACHINERY.

23135

No. 23135

Port of *Newcastle*

WED 14

AUGUST 1889

No. in Survey held at *Newcastle*

Date, first Survey *16 Augt 1888*

Last Survey *July 27th 1889*

Reg. Book.

on the

S.S. Holpens

(Number of Visits *49*)

Tons *2307*
1519

Master *J. Rice*

Built at *Newcastle*

By whom built *R. Stephenson of L3*

When built *1889*

Engines made at *Newcastle*

By whom made *R. Stephenson of L2*

when made *1889*

Boilers made at *Newcastle*

By whom made

when made *1889*

Registered Horse Power *200*

Owners *J. Wilson Sons Co*

Port belonging to *Hull*

ENGINES, &c.

Description of Engines

Triple expansion on three cranks

Diameter of Cylinders

22.35.39 Length of Stroke *39* No. of Rev. per minute *70* Point of Cut off, High Pressure *.6* Low Pressure *.6*

Diameter of Screw shaft

10 3/4 Diam. of Tunnel shaft *10 3/4* Diam. of Crank shaft journals *10 3/4* Diam. of Crank pin *10 3/4* size of Crank webs *13 x 8*

Diameter of screw

15.9 Pitch of screw *16.0 to 17.0* No. of blades *4* state whether moveable *Y* total surface *60 sq*

No. of Feed pumps

2 diameter of ditto *3* Stroke *21* Can one be overhauled while the other is at work *Y*

No. of Bilge pumps

2 diameter of ditto *4* Stroke *21* Can one be overhauled while the other is at work *Y*

Where do they pump from

Port from sea - bilge (13) tanks, hold well - Star? Same except sea

No. of Donkey Engines

Two 9 Size of Pumps *10 x 10 + 6 x 8* Where do they pump from *Ballast from all tanks, hold*

Are all the bilge suction pipes fitted with roses

Y Are the roses always accessible *Y* Are the sluices on Engine room bulkheads always accessible *Y*

No. of bilge injections

5 and sizes *5* Are they connected to condenser for circulating pump *Y*

How are the pumps worked

by lines over condenser from after engine

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

Y Are they Valves or Cocks *both*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Y 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

Y Are the blow off cocks fitted with a spigot and brass covering plate *Y*

What pipes are carried through the bunkers

none How are they protected *Y*

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

Y

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

Y

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Y

Is the screw shaft tunnel watertight

Y and fitted with a sluice door *Y* worked from *top platform*

OILERS, &c.

Number of Boilers

Two

Description

Cyl. Single ended

Whether Steel or Iron

Steel

Working Pressure

160 lb

Tested by hydraulic pressure to

320 lb

Date of test

May 31st 1889 No 2857

Description of superheating apparatus or steam chest

none

Can each boiler be worked separately

Y Can the superheater be shut off and the boiler worked separately *Y*

No. of square feet of fire grate surface in each boiler

94.5 sq Description of safety valves *sprung* No. to each boiler *two*

Area of each valve

7.66 sq Are they fitted with casing gear *Y* No. of safety valves to superheater *Y* area of each valve *Y*

Are they fitted with casing gear

Y Smallest distance between boilers and bunkers or woodwork *13* Diameter of boilers *13.3*

Length of boilers

10.3 description of riveting of shell long. seams *d b t 20* circum. seams *d l t lap* Thickness of shell plates *13/16*

Diameter of rivet holes

1 3/8 + 1 1/2 whether punched or drilled *dulled* pitch of rivets *5 1/2 + 8 5/16* Lap of plating *23 + 16 straps*

Percentage of strength of longitudinal joint

83.45 working pressure of shell by rules *162* size of manholes in shell *16 x 12*

Size of compensating rings

7 x 1 1/4 No. of Furnaces in each boiler *Three*

Outside diameter

38 length, top *70 x 3* bottom *flue* thickness of plates *17/32* description of joint *Y* if rings are fitted *Y*

Greatest length between rings

Y working pressure of furnace by the rules *171* combustion chamber plating, thickness, sides *9/16* back *9/16* top *9/16*

Pitch of stays to ditto, sides

Y 1/2 back *Y 1/2* top *Y 1/2* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *172* Diameter of stays at smallest part *1 1/4* working pressure of ditto by rules *174* end plates in steam space, thickness *176*

Pitch of stays to ditto

15 1/2 how stays are secured *d u o w* working pressure by rules *174* diameter of stays at smallest part *2 1/2* working pressure by rules *190* Front plates at bottom, thickness *3/4* Back plates, thickness *25/32*

Greatest pitch of stays

11 working pressure by rules *160* Diameter of tubes *3 3/8* pitch of tubes *4 3/4* thickness of tube plates, front *3/4* back *3/4* how stayed *tubes* pitch of stays *as per plan* width of water spaces *10 1/2*

Diameter of Superheater or Steam chest

Y length *Y* thickness of plates *Y* description of longitudinal joint *Y* diam. of rivet holes *Y*

Pitch of rivets

Y working pressure of shell by rules *Y* diameter of flue *Y* thickness of plates *Y* If stiffened with rings *Y*

Distance between rings

Y working pressure by rules *Y* end plates of superheater, or steam chest; thickness *Y* how stayed *Y*

Superheater or steam chest; how connected to boiler

Y

Report recd 3/17/89 from Lm 19889

free's corrugated furnace

DONKEY BOILER— Description *Cyl. Single ended - Steel -*
 Made at *Newcastle* by whom made *Nicholson Bros* when made *17.5.89* where fixed *etc etc holds*
 Working pressure *90 lb* tested by hydraulic pressure to *180 lb* No. of Certificate *284 5* fire grate area *26 sq* description of safe
 valves *spring* No. of safety valves *two* area of each *4.910* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *8.0* length *8.6* description of riveting *lap t 2 1/2*
 Thickness of shell plates *3/16* diameter of rivet holes *3/8* whether punched or drilled *a* pitch of rivets *3 1/4* lap of plating *5 1/2*
 per centage of strength of joint *73* thickness of *end* plates *3/8* stayed by *1 1/8 iron stays 12" pitch*
 Diameter of furnace, top *2.4* bottom *v* length of furnace *7.6* thickness of plates *1/2 3/16* description of joint *butt straps*
 Thickness of furnace *end* plates *3/16* stayed by *stays* working pressure of shell by rules *91.9*
 Working pressure of furnace by rules *103* diameter of uptake *v* thickness of plates *v* thickness of water tubes *v*

SPARE GEAR. State the articles supplied:— *Screw shaft, 3 propeller blades, air pump bucket, rod
 head valve, eccentric rod, 2 valve spindles, 2 eccentric straps, pair bottom end bases,
 shaft & fan for air pump - 2 top end bolts, 2 bottom end bolts, 2 main bearing bolts, 8
 coupling bolts, valve of ad valves, piston springs, packing rings for HP & water cyl, safety
 valve springs (2), 6 studs for propeller blades, bolts & nuts
 and ordinary engine room outfit.*
 The foregoing is a correct description,
 FOR ROBERT STEPHENSON & CO. L^{td} Manufacturer.
George Stephenson MANAGING DIRECTOR

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has
 been constructed under special survey, the materials & workmanship are
 sound and good & eligible in my opinion to have the certification
 + L.M.C. 7.89 in the Register Book.*

*Owing to an accident to a joint the safety valves of the
 donkey boiler were not adjusted, arrangements were made to have
 this done in Hamburg on the vessel's arrival & the local surveyor
 has been advised.*

Heating surface 3000 sq

*It is submitted that this vessel is
 eligible to have + L.M.C. 7.89.
 recorded: n.d*

The amount of Entry Fee . . . £ 2 . . . received by me.
 Special . . . £ 30 . . .
 Donkey Boiler Fee . . . £ . . .
 Certificate (if required) . . . £ . . .
 To be sent as per margin.
 (Travelling Expenses if any, £ . . .)

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

Committee's Minute

FRIDAY 23 AUGUST 1889

+ L.M.C. 7.89



Lloyd's Register
 Foundation