

REPORT ON MACHINERY.

No. 362

(Received in London Office)

No. in Survey held at *Newcastle*
Reg. Book.

Date, first Survey *5th Jan'y* Last Survey *24th July 1880*

405 on the *Screw steamer Pickwick*

Tons *1141*
431

Master *J. Rhoades*

Built at *Sunderland*

When built *1871*

Engines made at *Sunderland*

By whom made *N.E. Marine Co. Ltd.* when made *1871*

Boilers made at *Newcastle*

By whom made *The Wallsend Shipyard* when made *1880*

Registered Horse Power *100*

Owners *J. Bell & Co.*

Port belonging to *N. Shields*

ENGINES, &c.—

Description of Engines *Inverted Compound Surface Condensing*

Diameter of Cylinders *27" & 50"* Length of Stroke *30"* No. of Rev. per minute *65* Point of Cut off, High Pressure *.5* Low Pressure *.5*

Diameter of Screw shaft *8½"* Diameter of Tunnel shaft *8½"* Diameter of Crank shaft journals *8½"* Diameter of Crank pin *8½"* size of Crank webs *6x10"*

Diameter of screw *12" 0"* Pitch of screw *15" 6"* No. of blades *4* state whether moveable *solid* total surface

No. of Feed pumps *2* diameter of ditto *3"* Stroke *30"* Can one be overhauled while the other is at work *yes.*

No. of Bilge pumps *2* diameter of ditto *3"* Stroke *30"* Can one be overhauled while the other is at work *yes.*

Where do they pump from *fore hold, engine room, tunnel well and after hold*

No. of Donkey Engines *two* Size of Pumps *5¼ x 7 stroke* Where do they pump from *fore hold, engine room*

tunnel well, after hold & sea

Are all the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes.*

No. of bilge injections *1* and sizes *3½"* Are they connected to condenser, or to circulating pump *circulating.*

How are the pumps worked *from engine crossheads (direct)*

Are all connections with the sea direct on the skin of the ship *yes.* Are they Valves or Cocks *screw valves and 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

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

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *July 1880*

Is the screw shaft tunnel watertight *—* and fitted with a sluice door *yes.* worked from *engine room top platform*

BOILERS, &c.—

Number of Boilers *2* Description *Cylindrical & Multitubular.*

Working Pressure *75 lbs.* Tested by hydraulic pressure to *150 lbs.* Date of test *24.2.80.*

Description of ~~upper~~ steam chest *vertical dome contracted neck.*

Can each boiler be worked separately *yes.* Can the superheater be shut off and the boiler worked separately

No. of square feet of fire grate surface in each boiler *36 sq. ft.* Description of safety valves *spring.*

No. to each boiler *2* area of each valve *9.6 sq. in.* Are they fitted with easing gear *yes.*

No. of safety valves to superheater *—* area of each valve *—* are they fitted with easing gear *—*

Smallest distance between boilers and bunkers or woodwork *12"*

Diameter of boilers *10" 6"* Length of boilers *9-7"* description of riveting of shell long. seams *double butt* circum. seams *lap. double riveted.*

Thickness of shell plates *11/16"* diameter of rivet holes *15/16"* whether punched or drilled *drilled* pitch of rivets *4"*

Lap of plating *10"* per centage of strength of longitudinal joint *78* working pressure of shell by rules *86*

Size of manholes in shell *11½" x 15"* size of compensating rings *6 x 1"*

No. of Furnaces in each boiler *2* outside diameter *36"* length, top *6" 6"* bottom *8" 3"*

Thickness of plates *½"* description of joint *double butt* if rings are fitted *one* greatest length between rings *6" 0"*

Working pressure of furnace by the rules *100 lbs.*

Combustion chamber plating, thickness, sides *½"* back *½"* top *½"*

Pitch of stays to ditto *✓* sides *8¾"* back *8¾"* top *21" Radins*

If stays are fitted with nuts or riveted heads *riveted heads* working pressure of plating by rules *84 lbs.*

Diameter of stays at smallest part *1¾"* working pressure of ditto by rules *116 lbs.*

End plates in steam space, thickness *¾"* pitch of stays to ditto *17½" x 16¾"* how stays are secured *double nut & washer*

Working pressure by rules *75 lbs.* diameter of stays at smallest part *2¾"* working pressure by rules *91 lbs.*

Front plates at bottom, thickness *5/8"* Back plates, thickness *5/8"* greatest pitch of stays *12"* working pressure by rules *83 lbs.*

2787.1 Jan

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{1}{2}$ " thickness of tube plates, front $\frac{3}{4}$ " back $\frac{3}{4}$ "
How stayed Tube Stays pitch of stays $13\frac{1}{2} \times 9$ " width of water spaces $1\frac{1}{4}$ "
Diameter of ~~Superheater~~ Steam chest $3\frac{1}{2}$ " length $5\frac{1}{2}$ "
Thickness of plates $\frac{1}{2}$ " description of longitudinal joint lap double riveted diameter of rivet holes $\frac{3}{4}$ " pitch of rivets $2\frac{1}{2}$ "
Working pressure of shell by rules 120 lbs. Diameter of flue — thickness of plates —
If stiffened with rings — distance between rings — Working pressure by rules —
End plates ~~of steam chest~~ steam chest; thickness $\frac{5}{8}$ " How stayed $3\frac{1}{2}$ " radius
Superheater ~~of steam chest~~; how connected to boiler contracted neck 16 " diam. $\frac{5}{8}$ " thick

DONKEY BOILER— Description Vertical and cylindrical
Made at Newcastle By whom made Clarke, Chapman & Gurney when made July 1880
Where fixed Stokehold working pressure 50 lbs. Tested by hydraulic pressure to 100 lbs. No. of Certificate 387.
Fire grate area 18 sq. ft. Description of safety valves spring No. of safety valves 1 area of each 7 sq. ins.
If fitted with easing gear y.w. If steam from main boilers can enter the donkey boiler ✓
Diameter of donkey boiler $5\frac{1}{2}$ " length $12\frac{1}{2}$ " description of riveting long seams double riveted
thickness of shell plates $\frac{3}{8}$ " diameter of rivet holes $\frac{3}{4}$ " whether punched or drilled punched
pitch of rivets 3" lap of plating $4\frac{1}{4}$ " per centage of strength of joint 70
thickness of crown plates $\frac{7}{16}$ " stayed by 5, $1\frac{1}{4}$ " Stays
Diameter of furnace, top $4\frac{1}{2}$ " bottom $4\frac{1}{2}$ " length of furnace $5\frac{1}{2}$ "
thickness of plates $\frac{7}{16}$ " description of joint lap single riveted
thickness of furnace crown plates $\frac{7}{16}$ " stayed by 5, $1\frac{1}{4}$ " Stays
Working pressure of shell by rules 61 lbs. working pressure of furnace by rules 54 lbs.
diameter of uptake 15 " thickness of plates $\frac{3}{8}$ " thickness of water tubes $\frac{3}{8}$ "

Aug 2/80
The foregoing is a correct description
for the Wallend Slipway & Engineering Co. Ltd.
Manufacturers.
W. Lloyd Smith

General Remarks (State quality of workmanship, opinions as to class, &c. Particulars of repairs and examination of)
engines in accordance with the requirements of the Rules for Special Surveys No. 2 and new main
boilers and donkey boiler being fitted, vessel was placed on the Wallend Slip, a new propeller
shaft fitted and stern bush relined; engine shaft examined and found good; blow off cocks
removed from flat of bottom up to turn of bilge; high and low pressure cylinders overhauled
slide valves freed and adjusted, condenser examined & overhauled; all pumps, valves,
pipe connections and donkey engines & pumps examined & repaired.
Two new main boilers supplied by The Wallend Slipway & Engineering Co. Ltd.
and fitted on board; the tracing of which was approved by the Committee for a working
pressure of 75 lbs. per square inch. Two new spring safety valves fitted and adjusted
on each boiler. A new Donkey boiler fitted on board by The Wallend Slipway Co. Ltd.
and manufactured by Clarke Chapman & Gurney. a new spring safety valve fitted & adjusted

The machinery of this vessel is now in good order and safe working
condition and eligible in my opinion to have the notification
Lloyd's M.B. in red recorded in the Register Book.

This submitted that this
vessel is eligible to have the
notification NB 80. Lloyd's M.B. 2-80
recorded in the Register Book
M 21/10/80

The amount of Entry Fee £ 2 : — : — received by me,
Special £ 4 : 4 : —
Certificate (if required) £ — : — : — 30th Sept 1880
To be sent as per margin.
(Travelling Expenses, if any, £ —)

Committee's Minute

Tuesday, October, 5th 1880.

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

David Surves.
North Shields