

REPORT ON MACHINERY.

No. 431

No. in Survey held at South Shields
Reg. Book.

Date, first Survey 29th July 1880 Last Survey 12th Jan^y 1881
(Received in London Office 17/1/81)

on the Screw Steamer "Homer"

Master J. W. Jones Built at South Shields When built 1881
Tons 892

Engines made at South Shields By whom made J. Readhead when made 1881

Boilers made at Do By whom made Do when made 1881

Registered Horse Power 145 Owners Dick & Page Port belonging to London

GINES, &c.—

Description of Engines Inverted Compound Surface Condensing

Diameter of Cylinders 30 & 57 Length of Stroke 36" No. of Rev. per minute 58 Point of Cut off, High Pressure 9/16 Low Pressure 9/16

Diameter of Screw shaft 9 1/2" Diameter of Tunnel shaft 9 Diameter of Crank shaft journals 9 1/2" Diameter of Crank pin 9 1/2" size of Crank webs 6 1/2" x 11 1/2"

Diameter of screw 14" 0" Pitch of screw 15 to 18 feet No. of blades 4 state whether moveable solid total surface 46.5 sq. feet.

No. of Feed pumps 2 diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work yes.

No. of Bilge pumps 2 diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work yes.

Where do they pump from fore hold, engine space, tunnel well and all tanks

No. of Donkey Engines 2 Size of Pumps 8" x 10" & 3" x 8" Where do they pump from fore hold, engine

space, tunnel well and all tanks & 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 3 1/2" Are they connected to condenser, or to circulating pump circulating

How are the pumps worked levers over condenser.

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 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.

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 now

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

BOILERS, &c.—

Number of Boilers 2 Description Cylindrical & multitubular

Working Pressure 70 lbs. Tested by hydraulic pressure to 140 lbs. Date of test 16. 11. 80 No. of Certificate 502

Description of superheating apparatus steam chest dome on top of boiler

Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately none

No. of square feet of fire grate surface in each boiler 33 sq. ft. Description of safety valves Spring

No. to each boiler 2 area of each valve 7 sq. ins. 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 9"

Diameter of boilers 11' 6" Length of boilers 10' 4" description of riveting of shell long. seams lap. treble riv? circum. seams lap. double riv?

Thickness of shell plates 3/4" diameter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 4 1/8"

Percentage of plating 7 1/2 per centage of strength of longitudinal joint 74 working pressure of shell by rules 72

No. of manholes in shell 16 diam. size of compensating rings 6 x 3/4

No. of Furnaces in each boiler 2 outside diameter 3' 4" length, top 7' 4" bottom 9' 9"

Thickness of plates 1/2 & 9/16 description of joint lap, single riv? if rings are fitted na. greatest length between rings —

Working pressure of furnace by the rules 73 lbs.

Thickness of combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"

Thickness of stays to ditto 9 x 8 3/4 sides back 8 3/4 x 8 3/4 top curved

Are stays fitted with nuts or riveted heads riveted heads working pressure of plating by rules 76 lbs.

Diameter of stays at smallest part 1 1/8 working pressure of ditto by rules 78 lbs.

Thickness of plates in steam space, thickness 2 1/32 pitch of stays to ditto 15 x 12 1/4 how stays are secured d. nuts & wash?

Working pressure by rules 70 lbs. diameter of stays at smallest part 1 3/4 working pressure by rules 78 lbs.

Thickness of front plates at bottom, thickness 5/8 Back plates, thickness 5/8 greatest pitch of stays 14 1/2 working pressure by rules 67 lbs.

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Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{3}{4} \times 4\frac{5}{8}$ thickness of tube plates, front $\frac{3}{4}$ " back $\frac{3}{4}$ "
 How stayed tube stays pitch of stays $23\frac{1}{2} \times 14\frac{1}{2}$ ^{central} width of water spaces $11\frac{1}{2}$ "
 Diameter of ~~Superheater~~ Steam chest $3"6$ length $5"6$
 Thickness of plates $\frac{1}{2}$ description of longitudinal joint lap d. riv diameter of rivet holes $\frac{3}{4}$ " pitch of rivets $2\frac{1}{2}$ "
 Working pressure of shell by rules 140 lbs. Diameter of flue — thickness of plates —
 If stiffened with rings — distance between rings — Working pressure by rules —
 End plates of ~~superheater~~ steam chest; thickness $\frac{5}{8}$ " How stayed dished to 3"5 radius
~~Superheater~~ steam chest; how connected to boiler contracted neck

DONKEY BOILER— Description Vertical and cylindrical
 Made at Newcastle By whom made Blaise Chapman & Co. Furness when made January 1881
 Where fixed Stockholm working pressure 70 lbs. Tested by hydraulic pressure to 140 lbs. No. of Certificate 491
 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 yes If steam from main boilers can enter the donkey boiler no
 Diameter of donkey boiler 5"6 length 11"0 description of riveting long seams d. riveted
 thickness of shell plates $\frac{7}{16}$ " diameter of rivet holes $\frac{13}{16}$ " whether punched or drilled punched
 pitch of rivets $3\frac{1}{4}$ " lap of plating $4\frac{1}{4}$ " per centage of strength of joint 75
 thickness of crown plates $\frac{1}{2}$ " stayed by 5 - $1\frac{1}{2}$ " stays
 Diameter of furnace, top 4"2 bottom 4"11 length of furnace 4"11
 thickness of plates $\frac{1}{2}$ " description of joint lap, angle riveted
 thickness of furnace crown plates $\frac{1}{2}$ " stayed by 5, $1\frac{1}{2}$ " stays
 Working pressure of shell by rules 77 lbs. working pressure of furnace by rules 79 lbs.
 diameter of uptake 14" thickness of plates $\frac{3}{8}$ " thickness of water tubes $\frac{3}{8}$ "

The foregoing is a correct description,
Wm. Headhead Manufacturer.

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

The machinery of this vessel has been constructed under ordinary survey, the materials and workmanship good and under the vessel eligible in my opinion to have the notification Lloyd's M.C. recorded in the Society's Register Book, without the distinguishing mark ✕

*It is submitted that this vessel is eligible to have the notification Lloyd's M.C. recorded in the Register Book.
 M 17/1/81*

The amount of Entry Fee .. £ 2 : - : - received by me,
 Special .. £ 18 : 2 : 6 } *W.L.P.*
 Certificate (if required) .. £ - : 2 : 6 14th Jan 1881
 To be sent as per margin.
 (Travelling Expenses, if any, £ —)

Committee's Minute Tuesday January 18th 1881.
W.L.P.

David James.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Wm. Headhead

