

REPORT ON MACHINERY.

Port of Hull

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No. in Survey held at Burton Stather & Hull Date, first Survey July 11th '98 Last Survey 2nd March 1899
(Number of Visits 18)

Reg. Book. No 16 on the Screw Steamer "Walrus" Tons ^{Gross} 39 _{Net} 9

Master Hull Built at Hull By whom built Dry & Bradley When built 189

Engines made at Burton Stather By whom made W.M. Escreet when made 189

Boilers made at Hull By whom made J. Snowden when made

Registered Horse Power 17 Owners W. Fieldgate & Son Port belonging to Colchester

Nom. Horse Power as per Section 28 17 Is Electric Light fitted no

ENGINES, &c.—Description of Engines 2 cyl. compound No. of Cylinders 2 No. of Cranks 2

Diameter of Cylinders 10" x 20" Length of Stroke 14" Revolutions per minute 180 Diameter of Screw shaft 3.59
as per rule 3.52 as fitted 4 1/2

Diameter of Tunnel shaft 4 1/4 Diameter of Crank shaft journals 4 1/4 Diameter of Crank pin 4 1/4 Size of Crank webs 5 1/2 x 2 1/4
as per rule 4 1/4 as fitted 4 1/4

Diameter of screw 5:3 Pitch of screw 6:0 No. of blades 4 State whether moveable no Total surface 11 sq ft

No. of Feed pumps one Diameter of ditto 2" Stroke 7" Can one be overhauled while the other is at work ✓

No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 7" Can one be overhauled while the other is at work ✓

No. of Donkey Engines two Sizes of Pumps 3 1/2" x 2 1/4" x 3 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room one 2" In Holds, &c. two 2"

No. of bilge injections 1 sizes 2" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size 3/4" 2"

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 yes

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves & 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 no 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock never Is the screw shaft tunnel watertight no tunnel

Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record no) Total Heating Surface of Boilers 4154 sq ft Is forced draft fitted no

No. and Description of Boilers one Cyl. of 10" Working Pressure 100 lb Tested by hydraulic pressure to 200 lb

Date of test 14/1/98 Can each boiler be worked separately ✓ Area of fire grate in each boiler 18 sq ft No. and Description of safety valves to
each boiler one spring loaded Area of each valve 3 1/4" Pressure to which they are adjusted 105 lb Are they fitted

with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean diameter of boilers 8:6"

Length 8:0" Material of shell plates steel Thickness 9/16" Description of riveting: circum. seams lap long. seams 3/4" lap

Diameter of rivet holes in long. seams 15/16" Pitch of rivets 3:7:7" Lap of plates or width of butt straps 6"

Per centages of strength of longitudinal joint 82% Working pressure of shell by rules 108 lb Size of manhole in shell 15" x 11"

Size of compensating ring 27:25 x 9/16" No. and Description of Furnaces in each boiler one plain Material steel Outside diameter 42"

Length of plain part 5:0" Thickness of plates 1/2" Description of longitudinal joint all lap No. of strengthening rings ✓

Working pressure of furnace by the rules 107 lb Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/2"

Pitch of stays to ditto: Sides 8 1/4" Back 8 5/8" Top 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 116 lb

Material of stays steel Diameter at smallest part 1 1/8" Area supported by each stay 8 5/8" Working pressure by rules 106 lb End plates in steam space:

Material steel Thickness 1 1/16" Pitch of stays 14 7/8" How are stays secured all nuts Working pressure by rules 102 lb Material of stays steel

Diameter at smallest part 1 23/32" Area supported by each stay 14 7/8" Working pressure by rules 113 lb Material of Front plates at bottom steel

Thickness 1 1/16" Material of Lower back plate steel Thickness 1 1/16" Greatest pitch of stays 8 5/8" Working pressure of plate by rules 100 lb

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates steel Thickness: Front 1 1/16" Back 1 1/16" Mean pitch of stays 13 1/2" x 9"

Pitch across wide water spaces 13" Working pressures by rules 100 lb Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 6 1/2" x 1 1/4" Length as per rule 21 9/16" Distance apart 7 1/2" Number and pitch of Stays in each one 7 1/2"

Working pressure by rules 157 lb Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet

holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

if stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no



DONKEY BOILER— Description

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long. seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____

Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *See top and bottom. Two bottom end bolts. Two main bearing bolts. One set Coupling bolts. One set Dead pump valves. One set Bilge pump valves. Bolts and nuts. Saw of various sizes*

The foregoing is a correct description,
Manufacturer.

W. M. Everett

Dates of Survey while building

During progress of work in shops—	1898: July 11. 24. Aug 4. 10. 12. Sept 1. 7. Oct 19. Nov 16. 21. 24. Dec 2	1899: Jan 7. 20. Feb 27. 28		
			During erection on board vessel—	Mar 1. 2.
			Total No. of visits	18.

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

ENGINES—Length of stern bush *15 1/2* Diameter of crank shaft journals *as per rule 3.71* Diameter of thrust shaft under collars *4 1/4*

BOILERS—Range of tensile strength *275-320* Are they welded or flanged *flanged* **DONKEY BOILERS**—No. — Range of tensile strength —

Is the approved plan of main boiler forwarded herewith Is the approved plan of donkey boiler forwarded herewith

The machinery of this vessel has been constructed under Special Purview and placed on board in accordance with the Society's Rules and is eligible in our opinion for the notification L.M.C. 3.99 in the Register Book —

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 3.99

A.C.H.
21.3.99.

J.S.
21.3.99

Certificate (if required) to be sent to Hull

The amount of Entry Fee	£ 1 : 0	When applied for	8/3/99
Special	£ 0 : 0	When received	28.7.99
Donkey Boiler Fee	£ - : -		25.3.99
Travelling Expenses (if any)	£ 1 : 4		

Samuel Lewis & H. Cornish
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

MACHINERY CO. WRITTEN. TUES. 21 MAR 1899

Assigned

L.M.C. 3.99