

REPORT ON MACHINERY.

Sl. Rep 16646

No. 7052

Port of Newcastle

Received at London Office

No. in Survey held at Newcastle & Sunderland
Reg. Book.

Date, first Survey 1st Feb'y

Last Survey 15 August 1892

73 on the S.S. Warranboro

(Number of Visits 29)

Master J. E. Selberg

Built at Sunderland

By whom built Sunderland Ship Bldg Co

Tons { Gross 3513
Net 2204

Engines made at Newcastle

By whom made Wigham Richardson & Co

When built 1892

Boilers made at do

By whom made do

when made 1892

Registered Horse Power 500

Owners W. Lund

Port belonging to London

Nom. Horse Power as per Section 28 448

ENGINES, &c.— Description of Engines Triple expansion in 3 cranks No. of Cylinders Three

Diameter of Cylinders 28.46.73 Length of Stroke 54 Revolutions per minute 65 Diameter of Screw shaft 13.4

Diameter of Tunnel shaft 12.8 as fitted 13.4 Diameter of Crank shaft journals 13.3/4 Diameter of Crank pin 13.3/4 Size of Crank webs 8 7/8 x 20

Diameter of screw 17.0 Pitch of screw 21.0 No. of blades 4 State whether moveable Y Total surface 86.9

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

No. of Bilge pumps 2 Diameter of ditto 4 1/4 Stroke 28" Can one be overhauled while the other is at work Y

No. of Donkey Engines Two Sizes of Pumps 4 x 9 x 9 ft No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Star: 2 1/2 Centre 3" Port 2 1/2 In Holds, &c. Fore hold Port 2 1/2 Star 2 1/2 Mean hold Port 2 1/2 Star 2 1/2 After hold 2 1/2 Small hold 2 1/2

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

Are all the bilge suction pipes fitted with roses Y Are the roses in Engine room always accessible Y Are the sluices on Engine room bulkheads always accessible Y

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 Main steam &c How are they protected wrot. iron tubing

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

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Y

When were stern tube, propeller, screw shaft, and all connections examined in dry dock new Is the screw shaft tunnel watertight Y

Is it fitted with a watertight door Y worked from top platform

BOILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 7604.9

No. and Description of Boilers Two - cyl. dbl ended Working Pressure 133lb Tested by hydraulic pressure to 310lb

Date of test 5.7.92 Can each boiler be worked separately Y Area of fire grate in each boiler 110.9 No. and Description of safety valves to each boiler two - spring

Area of each valve 12.50 Pressure to which they are adjusted 158lb Are they fitted with casing gear Y Smallest distance between boilers or uptakes and bunkers or woodwork about 3 feet Mean diameter of boilers 14.11

Length 16.0 Material of shell plates slut Thickness 1 1/16 Description of riveting: circum. seams d & the lap long. seams d b strap

Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 7 7/8 x 3 1/2 Lap of plates or width of butt straps 21

Per centages of strength of longitudinal joint 85 Working pressure of shell by rules 157 Size of manhole in shell 16 x 12

Size of compensating ring 32 x 27 x 1 1/4 No. and Description of Furnaces in each boiler eight - plain Material slut Outside diameter 36 1/4

Length of plain part 5.9 Thickness of plates 1 1/16 Description of longitudinal joint d b strap No. of strengthening rings Y

Working pressure of furnace by the rules 135 Combustion chamber plates: Material slut Thickness: Sides 3/8 Back Y Top 3/8 Bottom 1 1/16

Pitch of stays to ditto: Sides 8 x 8 3/4 Back Y Top 8 3/4 If stays are fitted with nuts or riveted heads nut Working pressure by rules 176

Material of stays slut Diameter at smallest part 1 3/8 Area supported by each stay 60 Working pressure by rules 169 End plates in steam space:

Material slut Thickness 1 Pitch of stays 15 3/16 How are stays secured d nut Working pressure by rules 200 Material of stays slut

Diameter at smallest part 2 1/4 Area supported by each stay 232.0 Working pressure by rules 155 Material of Front plates at bottom slut

Thickness 1 1/16 Material of Lower back plate Y Thickness Y Greatest pitch of stays Y Working pressure of plate by rules Y

Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 x 4 3/8 Material of tube plates slut Thickness: Front 1 3/16 Back 2 7/32 Mean pitch of stays as plain

Pitch across wide water spaces 14 1/2 Working pressures by rules 155 Girders to Chamber tops: Material slut Depth and thickness of girder at centre 9 1/2 x 7 1/2 Length as per rule 36 Distance apart 8 3/4 Number and pitch of Stays in each 5. 8"

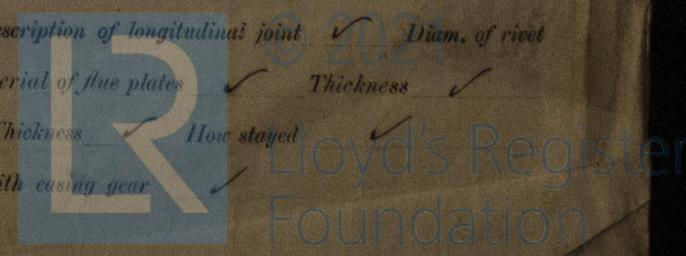
Working pressure by rules 155 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately Y

Diameter Y Length Y Thickness of shell plates Y Material 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 Material of flue plates Y Thickness Y

If stiffened with rings Y Distance between rings Y Working pressure by rules Y End plates: Thickness Y How stayed Y

Working pressure of end plates Y Area of safety valves to superheater Y Are they fitted with casing gear Y

SLD982 - 0046



DONKEY BOILER—

Description "Cetus" (steel)

Made at Guteshead By whom made Clark Chapman & Co When made 13/5/92 Where fixed stockhold

Working pressure 80 lbs tested by hydraulic pressure to 160 No. of Certificate 3876 Fire grate area 28 sq ft Description of safety valves spray

No. of safety valves two Area of each 5.9 sq ft Pressure to which they are adjusted 80 lbs If fitted with casing gear No If steam from mach boilers can enter the donkey boiler No

Diameter of donkey boiler 7.0 Length 14.0 Material of shell plates Ldr? Thickness 15/32

Description of riveting long seams lap dth riv? Diameter of rivet holes 7/8 Whether punched or drilled d Pitch of rivets 3 7/16

Lap of plating 4 1/4 Per centage of strength of joint Rivets } 68 Plates } Thickness of shell crown plates 7/8 Radius of do. 5.0 No. of Stays to do. 9

Dia. of stays. 2 Diameter of furnace Top 3.6 Bottom 6.4 Length of furnace 4.3 Thickness of furnace plates 7/8 Description of joint sl Thickness of furnace crown plates 9/16 Stayed by as shell crown Working pressure of shell by rules 80

Working pressure of furnace by rules 80 + stayed } Diameter of uptake 16 1/2 x 12 Thickness of uptake plates 3/16 Thickness of water tubes 7/16

SPARE GEAR. State the articles supplied:— Air pump rod bucket & head valve, circulator

jump rod & bucket, 2 cast steel propeller blades, pan crank pin brake

main bearing bolts, 2 top end bolts, 2 bottom end bolts, 8 coupling

bolts, feed & help pump valves, safety valve spring, piston springs

The foregoing is a correct description, nuts & bolts both plain & bar iron & ordinary

Lynch & Richardson & Co Manufacturer. Engine room outfit

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has

been constructed under Special Survey the materials and work-

manship are sound and good and eligible in my opinion on

completion to be classed + L M C 8.92 in the Local Register

Book.

The vessel proceeded to Sunderland to complete and the

following remained to be done viz, sections to after hold stumps

well coupled up and the donkey roller examined in place safety

valves adjusted.

The above mentioned work has been satisfactorily completed

Paul Salmon.

The Surveyors are required not to write on or before the space for Committee's Minute.

MACHINERY CERTIFICATE

Certificate (if required) to be sent to

The amount of Entry Fee..	£ 3 : 0 : 0	When applied for,
Special	£ 112 : 0 : 0	27/7/92
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any)	£	2/9/92

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

Committee's Minute

TUES. 6 SEP 1892

Assigned

+ L M C 8.92



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