

REPORT ON MACHINERY.

Port of Newcastle

THUR. 26 JUL 1900

No. in Survey held at South Shields Date, first Survey 29. 9. 99 Last Survey 18. 7. 1900
 Reg. Book. 903 on the \$.\$ "MONARCH" (Number of Visits 51)
 Master Svensen Built at Newcastle By whom built Wigham Richardson When built 1878
 Engines made at Newcastle By whom made J. Shaw & Co. when made 1878
 Boilers made at S. Shields By whom made Jos. T. Ettringham & Co. when made 1900
 Registered Horse Power 143 Owners H. Svensen Port belonging to Christiania
 Nom. Horse Power as per Section 28 157 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines

No. of Cylinders 30 No. of Cranks 10
 Dia. of Cylinders 30 Length of Stroke 36 Revs. per minute 10.467 Dia. of Screw shaft 10 Lgth. of stern bush
 Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin as fitted Size of Crank webs as fitted Dia. of thrust shaft under
 collars as fitted Dia. of screw as fitted Pitch of screw as fitted No. of blades as fitted State whether moveable as per 1st entry Total surface
 No. of Feed pumps as fitted Diameter of ditto as fitted Stroke as fitted Can one be overhauled while the other is at work
 No. of Bilge pumps as fitted Diameter of ditto as fitted Stroke as fitted Can one be overhauled while the other is at work
 No. of Donkey Engines as fitted Sizes of Pumps as fitted No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room as fitted In Holds, &c. as fitted

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

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

Are all connections with the sea direct on the skin of the ship as fitted Are they Valves or Cocks as fitted

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates as fitted Are the discharge pipes above or below the deep water line as fitted

Are they each fitted with a discharge valve always accessible on the plating of the vessel as fitted Are the blow off cocks fitted with a spigot and brass covering plate as fitted

What pipes are carried through the bunkers as fitted How are they protected as fitted

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

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

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

Is it fitted with a watertight door as fitted worked from as fitted

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 2118 Is forced draft fitted No

No. and Description of Boilers One Ling. End. Multitubular Working Pressure 100 Tested by hydraulic pressure to 200

Date of test 27.2.00 Can each boiler be worked separately Yes Area of fire grate in each boiler 600 No. and Description of safety valves to as fitted

each boiler 28/32 Area of each valve 11.04 Pressure to which they are adjusted 100 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 1' 6" Mean dia. of boilers 15' 7" Length 10' 6" Material of shell plates St

Thickness 9/32 Range of tensile strength 29/32 Are they welded or flanged No Descrip. of riveting: cir. seams lap J.R. long. seams lap 4 R

Diameter of rivet holes in long. seams 1' 1/16" Pitch of rivets 4' 4" Lap of plates or width of butt straps 99/16"

Per centages of strength of longitudinal joint 75 Working pressure of shell by rules 102 Size of manhole in shell 16x12"

Size of compensating ring 7x9/32 No. and Description of Furnaces in each boiler 3 plain Material St Outside diameter 48"

Length of plain part 6' 6" Thickness of plates 5/8" Description of longitudinal joint lap S.R. No. of strengthening rings as fitted

Working pressure of furnace by the rules 111 Combustion chamber plates: Material St Thickness: Sides 17/32 Back 9/16 Top 9/16 Bottom 23/32

Pitch of stays to ditto: Sides 9/4 x 9/4 Back 10 x 10 3/4 Top Palen If stays are fitted with nuts or riveted heads as fitted Working pressure by rules 105

Material of stays St Diameter at smallest part 1 1/32" Area supported by each stay 103 Working pressure by rules 108 End plates in steam space: as fitted

Material St Thickness 1" Pitch of stays 21 3/4" How are stays secured J.N. & Co. Working pressure by rules 100 Material of stays St

Diameter at smallest part 2 1/32" Area supported by each stay 473 Working pressure by rules 106 Material of Front plates at bottom St

Thickness 13/16" Material of Lower back plate St Thickness 3/4" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 122

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 3/4" Material of tube plates St Thickness: Front 1 1/4 Back 25/32 Mean pitch of stays 11-8"

Pitch across wide water spaces 14 3/4" Working pressures by rules 108 Girders to Chamber tops: Material as fitted Depth and as fitted

thickness of girder at centre as fitted Length as per rule as fitted Distance apart as fitted Number and pitch of Stays in each as fitted

Working pressure by rules as fitted Superheater or Steam chest: how connected to boiler as fitted Can the superheater be shut off and the boiler worked as fitted

separately as fitted Diameter as fitted Length as fitted Thickness of shell plates as fitted Material as fitted Description of longitudinal joint as fitted Diam. of rivet as fitted

holes as fitted Pitch of rivets as fitted Working pressure of shell by rules as fitted Diameter of flue as fitted Material of flue plates as fitted Thickness as fitted

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

Working pressure of end plates as fitted Area of safety valves to superheater as fitted Are they fitted with easing gear as fitted

DONKEY BOILER— No. _____ 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 _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____

Descrip. of riveting long. seams _____ Dia. 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:—

The foregoing is a correct description,

Manufacturers

Jos. J. Cullingham & Co.
Sofman Boks

Dates of Survey while building { During progress of work in shops— 1899 Sep 29 Oct 6, 10, 12, 17, 26 Nov 1, 9, 10, 21, 24 Dec 7, 12, 15, 1900 Jan 7, 9, 12, 24, 29 Feb 1, 5, 9, 12, 22, 27 Apr 2
During erection on board vessel— May 2, 7, 8, 15, 17, 28, 30 June 6, 7, 8, 11, 12, 14, 15, 19 July 2, 3, 6, 10, 12, 13, 16, 18
Total No. of visits 51

Is the approved plan of main boiler forwarded herewith

yes

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

This boiler has been built under special survey, the material and workmanship being good, has been tested to double the working pressure and found in every way satisfactory. It is eligible in my opinion to be classed and to have record of $\frac{1}{2}$ N.B.T. 00 in the Register Book

The amount of Entry Fee.. £ : : When applied for, 25 JUL 1900
Special £ 7. 17 : :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : : When received, 13. 9. 00

Committee's Minute

Assigned

TUES. 14 AUG 1900

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



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