

REPORT ON MACHINERY.

Port of Newcastle

Received at London Office 31 JUL 1899

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No. in Survey held at Newcastle

Date, first Survey Feb 25 1899 Last Survey June 2nd 1899

(Number of Visits 5)

Reg. Book. 7/16 on the

Tons { Gross
Net

Master Lindhohren Built at Newcastle By whom built Lindhohren (No 370) When built 6-1899

Engines made at Newcastle By whom made The North Eastern Marine Eng^t Co when made 6-1899

Boilers made at Newcastle By whom made The North Eastern Marine Eng^t Co when made 6-1899

Registered Horse Power 90.5 Owners The North Eastern Marine Eng^t Co Port belonging to Newcastle

Net Horse Power as per Section 28 90.5 Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

Diameter of Cylinders 13 1/2, 22 1/2, 36 Length of Stroke 24 Revolutions per minute 100 Diameter of Screw shaft 4 1/2

Diameter of Tunnel shaft 7 Diameter of Crank shaft journals 7 Diameter of Crank pin 7 Size of Crank webs 4 1/2 x 13 1/2

Diameter of screw 13 1/2 Pitch of screw 2 1/2 No. of blades 2 State whether moveable No Total surface 138

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 12 No. and size of Suctions connected to both Bilge and Donkey pumps 1 1/2

Engine Room 1 In Holds, &c. No

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

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 Yes

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 Yes

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 1 1/2 How are they protected By covers

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 1899 Is the screw shaft tunnel watertight Yes

Is it fitted with a watertight door Yes worked from Deck

BOILERS, &c.— (Letter for record No) Total Heating Surface of Boilers 1700 Is forced draft fitted No

No. and Description of Boilers 1 Working Pressure 170 lb Tested by hydraulic pressure to 200 lb

Date of test 1899 Can each boiler be worked separately Yes Area of fire grate in each boiler 170 No. and Description of safety valves to 1

Each boiler 1 Area of each valve 170 Pressure to which they are adjusted 170 lb Are they fitted Yes

With casing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 12 Mean diameter of boilers 170

Length 170 Material of shell plates Iron Thickness 1/2 Description of riveting: circum. seams 1/2 long. seams 1/2

Diameter of rivet holes in long. seams 1/2 Pitch of rivets 1 1/2 Lap of plates or width of butt straps 1 1/2

Percentages of strength of longitudinal joint 100 Working pressure of shell by rules 170 Size of manhole in shell 170

No. and Description of Furnaces in each boiler 1 Material Iron Outside diameter 170

Length of plain part 170 Thickness of plates 1/2 Description of longitudinal joint 1/2 No. of strengthening rings 170

Working pressure of furnace by the rules 170 Combustion chamber plates: Material Iron Thickness: Sides 1/2 Back 1/2 Top 1/2 Bottom 1/2

Pitch of stays to ditto: Sides 170 Back 170 Top 170 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 170

Material of stays Iron Diameter at smallest part 170 Area supported by each stay 170 Working pressure by rules 170 End plates in steam space: 170

Material Iron Thickness 1/2 Pitch of stays 170 How are stays secured By nuts Working pressure by rules 170 Material of stays Iron

Diameter at smallest part 170 Area supported by each stay 170 Working pressure by rules 170 Material of Front plates at bottom 170

Thickness 1/2 Material of Lower back plate Iron Thickness 1/2 Greatest pitch of stays 170 Working pressure of plate by rules 170

Diameter of tubes 170 Pitch of tubes 170 Material of tube plates Iron Thickness: Front 1/2 Back 1/2 Mean pitch of stays 170

Pitch across wide water spaces 170 Working pressures by rules 170 Girders to Chamber tops: Material Iron Depth and 170

Thickness of girder at centre 170 Length as per rule 170 Distance apart 170 Number and pitch of Stays in each 170

Working pressure by rules 170 Superheater or Steam chest; how connected to boiler By pipes Can the superheater be shut off and the boiler worked Yes

separately Yes Diameter 170 Length 170 Thickness of shell plates 1/2 Material Iron Description of longitudinal joint 1/2 Diam. of rivet 170

holes 170 Pitch of rivets 1 1/2 Working pressure of shell by rules 170 Diameter of flue 170 Material of flue plates Iron Thickness 1/2

If stiffened with rings Yes Distance between rings 170 Working pressure by rules 170 End plates: Thickness 1/2 How stayed By stays

Working pressure of end plates 170 Area of safety valves to superheater 170 Are they fitted with casing gear Yes



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:—

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. (Manufacturer. of main engines only)

Dates of Survey while building
 During progress of work in shops - - - 1899 - Feb. 23. May 24. 30. June 1. 2
 During erection on board vessel - - -
 Total No. of visits 5

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

ENGINES—Length of stern bush _____ Diameter of crank shaft journals ^{as per rule} _____ ^{as fitted} _____ Diameter of thrust shaft under collars _____

BOILERS—Range of tensile strength _____ Are they welded or 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 main engines have been built under special survey, the workmanship is sound & good throughout. The engines have been despatched to Gothenburg to be fitted on board.

Certificate (if required) to be sent to

The amount of Entry Fee. . . £ : : When applied for.
 No. Special for engines 1/3 £ 3 : 4 : 24.6.1899
 Donkey Boiler Fee . . . £ : : When received.
 Travelling Expenses (if any) £ : : 27.6.1899

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

TUES. 22 AUG 1899

Committee's Minute
 Assigned

