

REPORT ON MACHINERY.

Port of *Newcastle*

Received at London Office

JUL 31 1899

No. in Survey held at *Newcastle*Date, first Survey *Feb 25 1899* Last Survey *June 2nd 1899*(Number of Visits *5*)Tons ^{Gross}
_{Net}

on the

When built

Built at

By whom built *Lindholm & Co (1/2 N° 370)*Engines made at *Newcastle*By whom made *The North Eastern Marine Eng^t Co* when made *6-1899*

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to

Horse Power as per Section 28

Is Electric Light fitted

GINES, &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

Diameter of Screw shaft ^{as per rule}
_{as fitted}Diameter of Tunnel shaft ^{as per rule}
_{as fitted}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

Pitch of screw

No. of blades

State whether moveable

Total surface

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

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room

In Holds, &c.

No. of bilge injections

sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

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

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—

(Letter for record

Total Heating Surface of Boilers

Is forced draft fitted

No. and Description of Boilers

Working Pressure *170 lb*

Tested by hydraulic pressure to

Date of test

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of safety valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted

with casing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean diameter of boilers

Length

Material of shell plates

Thickness

Description of riveting: circum. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

^{ribs}
_{plate}

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

^{top}
_{bottom}

Thickness of plates

^{crown}
_{bottom}

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of Stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with casing gear

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 _____

Description of riveting long. seams _____ 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. L Manufacturer. of main engines only

Dates { During progress of work in shops - - - 1899- Feb. 23. May 24. 30. June 1. 2
of Survey { During erection on board vessel - - -
while building { 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 _____ 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, _____
Special for engines 1/3 £ 3 : 4 : 24.6.18.99
Donkey Boiler Fee . . . £ : : When received, _____
Travelling Expenses (if any) £ : : 27.6.99

Committee's Minute

Assigned

Robert Haig

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

TUES. 22 AUG. 1899



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