

REPORT ON MACHINERY.

No. 22430

Port of Glasgow

Received at London Office

JAN. 17 1905

No. in Survey held at Panama
Reg. Book.Date, first Survey 2nd DecLast Survey 16th Dec 1904(Number of Visits 5)on the Turn Linn Sandpump Dragger PioneerTons {
Gross
Net
When builtMaster _____ Built at Port Glasgow By whom built Hagson BrosEngines made at Port Glasgow By whom made Hagson Bros No 161 when made _____Boilers made at Panama By whom made Babcock & Wilcox No 101 when made _____

Registered Horse Power _____ Owners _____ Port belonging to _____

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders

Length of Stroke

Revs. per minute

Dia. of Screw shaft

as per rule

Material of

as fitted

screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in the propeller boss If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars

Dia. of screw

Pitch of screw

No. of blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

In 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 1930 sq. ft.

Is forced draft fitted

No. and Description of Boilers 2 Water Tube (Babcock & Wilcox) Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbsDate of test 16.12.04 Can each boiler be worked separately yes Area of fire grate in each boiler 33 1/2 sq. ft. No. and Description of safety valves toeach boiler one pair direct spring area of each valve 3.98 sq. in. Pressure to which they are adjusted 200 lbs Are they fitted with easing gear noSmallest distance between boilers or uptakes and bunkers or woodwork 12 in.Mean dia. of boilers 3-6 in.Length 7-8 in. Material of shell plates steelThickness 1/2 in.Range of tensile strength 24/30Are they welded or flanged noDescrip. of riveting: cir. seams lap doublelong. seams doubleDiameter of rivet holes in long. seams 7/8Pitch of rivets 3 in.

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets 106Working pressure of shell by rules 220 lbsSize of manhole in shell 18 x 11Size of compensating ring flanged

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

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 steelThickness 1/2 in.Pitch of stays 2 in.

How are stays secured

Working pressure by rules 34 1/2 lbs

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 none

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 easing gear

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 enter the donkey boiler _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tens 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 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,
Babcock & Wilcox Limited. Manufacturer.
R.M. Gair

Dates of Survey while building { During progress of work in shops - - } 1904: Dec. 2 6 8 13 16
 { During erection on board vessel - - }
 Total No. of visits 5

Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)
These boilers have been built under special survey, the materials and workmanship are of good description, they have now been forwarded to Port Glasgow to be fitted on board.
This Report has been forwarded to Greenock for the information of the Surveyors.

Certificate (if required) to be sent to _____

The amount of Entry Fee. . £ :
 Special £ *1/3 40 fee* When applied for, 19--
 Donkey Boiler Fee £ *due* When received, 19--
 Travelling Expenses (if any) £ : 19--

Committee's Minute *Glasgow 16 JAN 1905*
 Assigned *Deferred for completion*

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