

REPORT ON MACHINERY.

No. 13653

Port of Greenock

RECEIVED 28 JUL 1903

No. in Survey held at Greenock

Date, first Survey 14th June

Last Survey 14th June 1903

on the Screw Steamer Hawthorn

(Number of Visits 2)

Master Built at Greenock

By whom built Geo. Brown & Co

Tons } Gross
 } Net
When built 1900

Engines made at Glasgow

By whom made Muir Houston Ltd when made 1900

Boilers made at

By whom made " " when made 1900

Registered Horse Power

Owners

Port belonging to

nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted

Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders	No. of Cranks	Description of Engines	
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft
			as per rule / as fitted
			Material of screw shaft
			Is the after end of the liner made water tight
			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 / as fitted
			Dia. of Crank shaft journals as per rule / as fitted
			Dia. of Crank pin
			Size of Crank webs
			Dia. of thrust shaft under rollers
			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
			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 Yes Are they Valves or Cocks Both

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 Yes

That 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	Tested by hydraulic pressure to
Date of test	Can each boiler be worked separately	Area of fire grate in each boiler
No. of each boiler	Area of each valve	Pressure to which they are adjusted
Smallest distance between boilers or uptakes and bunkers or woodwork	Mean dia. of boilers	Length
Thickness	Range of tensile strength	Are they welded or flanged
Diameter of rivet holes in long. seams	Pitch of rivets	Descrip. of riveting: cir. seams / long. seams
Percentages of strength of longitudinal joint	Working pressure of shell by rules	Size of manhole in shell
No. of compensating ring	No. and Description of Furnaces in each boiler	Material
Length of plain part top / bottom	Thickness of plates crown / bottom	Description of longitudinal joint
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
Material	Thickness	Pitch of stays
Diameter at smallest part	Area supported by each stay	Working pressure by rules
Thickness	Material of Lower back plate	Thickness
Diameter of tubes	Pitch of tubes	Material of tube plates
Thickness: Front / Back	Mean pitch of stays	
Working pressures by rules	Girders to Chamber tops: Material	Depth and
Thickness of girder at centre	Length as per rule	Distance apart
Working pressure by rules	Superheater or Steam chest; how connected to boiler	Can the superheater be shut off and the boiler worked
Material	Diameter	Length
Thickness of shell plates	Material	Description of longitudinal joint
Diam. of rivet	Pitch of rivets	Working pressure of shell by rules
Diameter of flue	Material of flue plates	Thickness
End plates: Thickness	How stayed	
Working pressure of end plates	Area of safety valves to superheater	Are they fitted with easing gear

Lloyd's Register Foundation

1720-1801M

DONKEY BOILER— No. _____ Description _____

Made at _____ By whom made _____ When made _____ ere 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,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1903. June 4. 9. 14
 { During erection on board vessel - - } 3.
 Total No. of s _____

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

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

The fastenings of the propeller, Stern Bush tube and all sea cocks and valves were reexamined before launching and found in good condition.

Certificate (if required) to be sent to _____ (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee..	£	:	When applied for,
Special	£	:19.....
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any) £	:	:19.....

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

Committee's Minute *Glasgow 27 JUL 1903*

Assigned *See accompanying G.S. Report No 21021.*

