

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office TUES. 28 JUN 1893

No. in Survey held at Glasgow Date, first Survey 25. March Last Survey 27. May 1898
Reg. Book. (Number of Visits 10)

on the Steamer Standard Master _____ Built at _____ By whom built _____
When built _____ Tons { Gross _____ Net _____

Engines made at _____ By whom made _____ when made _____

Boilers made at Glasgow By whom made Ross & Dunnean when made 1898.

Registered Horse Power _____ Owners _____ Port belonging to _____

Nom. Horse Power as per Section 28 _____ Is Electric Light fitted _____

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

Diameter of Cylinders _____ Length of Stroke _____ Revolutions per minute _____ Diameter of Screw shaft ^{as per rule} _____
_{as fitted} _____ Diameter of Crank shaft journals _____ Diameter of Crank pin _____ Size of Crank webs _____

Diameter of Tunnel shaft _____ Diameter of Crank shaft journals _____ Diameter of Crank pin _____ Size of Crank webs _____

Diameter 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 59159 ft² Is forced draft fitted no.

No. and Description of Boilers one: by Lind & Co. Superheater Working Pressure 160 lb Tested by hydraulic pressure to 320 lb.

Date of test 6/6/98 Can each boiler be worked separately _____ Area of fire grate in each boiler 2509 ft² No. and Description of safety valves to each boiler _____ Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean diameter of boilers 8' 3"

Length 8' 6" Material of shell plates Steel Thickness 7/16" Description of riveting: circum. seams Lap Double long. seams D'Almeida Butt Strap

Diameter of rivet holes in long. seams 13/16" Pitch of rivets 5 1/4" 2 5/8" Lap of plates or width of butt straps 13"

Per centages of strength of longitudinal joint _____ Working pressure of shell by rules 164 lb: Size of manhole in shell 15" x 11 1/2"

Size of compensating ring 6' x 7/16" No. and Description of Furnaces in each boiler 2: plain Material Steel Outside diameter 31 1/16"

Length of plain part _____ Thickness of plates _____ Description of longitudinal joint Welded No. of strengthening rings partial at bottom

Working pressure of furnace by the rules 176 lb Combustion chamber plates: Material Steel Thickness: Sides 1 1/2" Back 1 1/2" Top 1 1/2" Bottom 1 1/2"

Pitch of stays to ditto: Sides 4 x 4 1/2" Back 4 1/2 x 4 1/2" Top 4 x 6 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 165 lb.

Material of stays Steel Diameter at smallest part 1 1/4" Area supported by each stay 52 1/2 ft² Working pressure by rules 187 lb End plates in steam space: Material Steel Thickness 3/32" Pitch of stays 11 x 12" How are stays secured Double nuts Working pressure by rules 185 lb Material of stays Steel

Diameter at smallest part 1 1/16" Area supported by each stay 132 ft² Working pressure by rules 196 lb Material of Front plates at bottom Steel

Thickness 23/32" Material of Lower back plate Steel Thickness 23/32" Greatest pitch of stays 10 1/2" Working pressure of plate by rules 218 lb

Diameter of tubes 3" Pitch of tubes 4' x 4" Material of tube plates Steel Thickness: Front 23/32" Back 7/16" Mean pitch of stays 9.06"

Pitch across wide water spaces 12 1/2" Working pressures by rules 185 lb 265 lb Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 5' x 1 1/2" Length as per rule 21" Distance apart 6 1/2" Number and pitch of Stays in each 2: 4"

Working pressure by rules 207 lb Superheater or Steam chest: how connected to boiler Can the superheater be shut off and the boiler worked separately _____ Diameter 24" Length 24" Thickness of shell plates 7/8" Material Steel Description of longitudinal joint Lap Diam. of rivet holes 3/4" Pitch of rivets 2 1/4" Working pressure of shell by rules 228 lb Diameter of flue _____ Material of flue plates _____ Thickness _____

If stiffened with rings _____ Distance between rings _____ Working pressure by rules _____ End plates: Thickness 7/16" How stayed Arched

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

No. _____ Is a Report also sent on _____



16192 gls

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 casing 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 _____ Plates _____ 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,
Ross & Duncan Manufacturer.

Dates of Survey while building

During progress of work in shops - -	} 1898: - Mar. 25 31 Apr. 6 20 24 May 4 11 20 24 24
During erection on board vessel - -	
Total No. of visits	Yen

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

The Boiler of this vessel has been built under special survey and the materials and workmanship are good. When completed it was tested by hydraulic pressure to 4 1/2 lbs per sq. inch and found tight and sound. The approved plan is sent herewith. This boiler has been shipped to Rio Janeiro.

This Boiler has been constructed under special survey, but as it does not appear to be intended for a classed vessel it is submitted that no further action need be taken.

W. R. Austin
28/6/98

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	3	3	27-6-98
Donkey Boiler Fee	£	:	:	Received, 5-7-98
Travelling Expenses (if any) £	:	:	:	4-7-98

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

Committee's Minute

Assigned

Not for classing Committee



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