

REPORT ON MACHINERY.

Port of Glasgow.

SEP 17 1901

Received at London Office 19
 Date, first Survey 23 Oct 00 Last Survey 7 Sept 01
 (Number of Visits 52)
 No. in Survey held at Glasgow
 Range Reg. Book.
 Pitch of rive on the Seren Steamer Kumano Maru
 Stays to do Master Built at Glasgow By whom built Fairfield Shipbldg Co Ltd When built 1901
 Desc Engines made at Glasgow By whom made Fairfield Shipbldg Co Ltd when made 1901
 shell by rules Boilers made at Glasgow By whom made Fairfield Shipbldg Co Ltd when made 1901
 tubes Registered Horse Power Owners Nippon Yusen Kaisha Port belonging to Tokio
 Nom. Horse Power as per Section 28 788 Is Refrigerating Machinery fitted Yes Is Electric Light fitted Yes

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 as fitted Lgth. 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 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 S.) Total Heating Surface of Boilers Is forced draft fitted ho.
 No. and Description of Boilers 2: Cylind. hull: Single ended Working Pressure 185 lbs Tested by hydraulic pressure to 370 lbs
 Date of test 6/14/01 Can each boiler be worked separately Yes Area of fire grate in each boiler 68 sq. ft No. and Description of safety valves to each boiler 2: Direct Spring Area of each valve 4.67" Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork About 7' Mean dia. of boilers 15' 6" Length 10' 6" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 27-32 tons Are they welded or flanged ho. Descrip. of riveting: cir. seams Lap Riveted long. seams Double Butt Straps
 Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Top of plates 20" width of butt straps 20"
 Per centages of strength of longitudinal joint rivets 84 Working pressure of shell by rules 212 lbs Size of manhole in shell 16" x 12"
 plate 85
 Size of compensating ring Flange Ring No. and Description of Furnaces in each boiler 3: Monson's Material Steel Outside diameter 50 1/2"
 Length of plain part top 4' 0" Thickness of plates crown 5/8" Description of longitudinal joint Weld. No. of strengthening rings partial
 bottom 4' 0" bottom 5/8"
 Working pressure of furnace by the rules 200 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 7/4" x 7/4" Back 7/4" x 7/4" Top 8" x 7/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184 lbs
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 62 1/4" Working pressure by rules 185 lbs End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 15" x 15" How are stays secured Double nuts Working pressure by rules 252 lbs Material of stays Steel
 Diameter at smallest part 2 7/8" Area supported by each stay 225" Working pressure by rules 213 lbs Material of Front plates at bottom Steel
 Thickness 5/8" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 12" Working pressure of plate by rules 200 lbs
 Diameter of tubes 3/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 9 1/2"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 223 lbs 238 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/4" x 1 1/2" Length as per rule 30" Distance apart 8" Number and pitch of Stays in each 3: 7 1/2"
 Working pressure by rules 192 lbs Superheater or Steam chest; ho. 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 boiler

enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of te

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 Descripti

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 FAIRFIELD SHIPBUILDING AND
ENGINEERING CO., LIMITED.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of visits

Is the approved plan of main boiler forwarded herewith

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

See other sheet.

Material of 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 non-corrosive

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

Certificate (if required) to be sent to

The amount of Entry Fee. . . £ : : When applied for, . . . 19 . . .

Special £ : : When received, . . . 19 . . .

Donkey Boiler Fee £ : : . . .

Travelling Expenses (if any) £ : : . . .

Wm R. Austin

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

Committee's Minute Glasgow, 16 SEP. 1901

Assigned See accompanying report

Port

No. of Reg. B

Owner

Yard

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RCUITS.

Saloon.

Stateroom

Amidships

Port.

Amidships

Starboard

Poop.

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Cargo Clus

Cargo Clus

Engine Room.

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2 Venti

2 Venti

1 Venti

2 Venti

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