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No. 19838

REPORT ON MACHINERY.

Port of Glasgow.Received at London Office THUR. 8 MAY 1902Date, first Survey 19th Sept 1901 Last Survey 22-4 1902No. in Survey held at
Reg. Book.

41 on the

Glasgow
S. S. Kathleen(Number of Visits 29)Gross 737.90
Tons Net 316.01When built 1902Master J. PaddenBuilt at Ayr.By whom built Ailsa S. B. Co.Engines made at GlasgowBy whom made Ross + Duncan.when made 1902Boilers made at GlasgowBy whom made Ross + Duncanwhen made 1902

Registered Horse Power

Owners John Milligan & Co. Ltd.Port belonging to Belfast.Nom. Horse Power as per Section 28 123.5Is Refrigerating Machinery fitted No.Is Electric Light fitted No.

ENGINES, &c.—Description of Engines

Triple ExpansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 17-27-44Length of Stroke 33Revs. per minute 100Dia. of Screw shaft 9 1/2as per rule 9 1/2Lgth. of stern bush 3-1 1/2Dia. of Tunnel shaft 8 3/4as per rule 8 3/4Dia. of Crank shaft journals 8 3/4as per rule 8 3/4Dia. of Crank pin 8 3/4Size of Crank webs 5 1/2 x 12 1/2

Dia. of thrust shaft under

collars 8 3/4Dia. of screw 11-3Pitch of screw 12-9No. of blades 4State whether moveable NoTotal surface 44 sq ftNo. of Feed pumps 2Diameter of ditto 3Stroke 16 1/2Can one be overhauled while the other is at work yes.No. of Bilge pumps 2Diameter of ditto 3 1/2Stroke 16 1/2Can one be overhauled while the other is at work yes.No. of Donkey Engines 3Sizes of Pumps 6 x 4 x 6, 6 x 6 x 6, 3 x 2 x 3

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

In Engine Room 1-2 1/41-2 1/2S.B. 2 1/4In Holds, &c. 4-2No. of bilge injections 1sizes 4 1/2Connected to condenser, or to circulating pump C.P.Is a separate donkey suction fitted in Engine room & size 1-2 1/4Are all the bilge suction pipes fitted with roses yesAre the roses in Engine room always accessible yesAre the sluices on Engine room bulkheads always accessible yesAre 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 yes.Are the discharge pipes above or below the deep water line aboveAre they each fitted with a discharge valve always accessible on the plating of the vessel yes.Are the blow off cocks fitted with a spigot and brass covering plate yes.What pipes are carried through the bunkers none.How are they protected yes.Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes.Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes.When were stern tube, propeller, screw shaft, and all connections examined in dry dock 15-3-02 Building shipIs it fitted with a watertight door yesworked from yes

BOILERS, &c.—

(Letter for record S) Total Heating Surface of Boilers 2039 sq ftIs forced draft fitted NoNo. and Description of Boilers 1 Cyl. Mult. S. E.Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbsDate of test 14-3-02Can each boiler be worked separately yesArea of fire grate in each boiler 60 sq ft

No. and Description of safety valves to

each boiler 2 Direct SpringArea of each valve 6-4-9Pressure to which they are adjusted 165 lbsAre they fitted with easing gear yes.Smallest distance between boilers or uptakes and bunkers or woodwork 8 ftMean dia. of boilers 15-0Length 10-6Material of shell plates steelThickness 3/16Range of tensile strength 27-37Are they welded or flanged NoDescrip. of riveting: cir. seams Lap D.R. long. seams S.B. straps & shells.Diameter of rivet holes in long. seams 1 3/16Pitch of rivets 8Lap of plates or width of butt straps 17

Per centages of strength of longitudinal joint

rivets 87plate 85.5Working pressure of shell by rules 170 lbsSize of manhole in shell 16" x 12"Size of compensating ring R-RailsNo. and Description of Furnaces in each boiler 3 RibbedMaterial steelOutside diameter 45 1/2Length of plain part 7-1Thickness of plates 1 1/2Description of longitudinal joint weldNo. of strengthening rings noneWorking pressure of furnace by the rules 167 lbsCombustion chamber plates: Material steelThickness: Sides 19Back 19Top 19Bottom 5Pitch of stays to ditto: Sides 8 1/2 x 8 1/2Back 8 1/2 x 8 1/2Top 8 1/2 x 8If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 160 lbs

End plates in steam space:

Material of stays steelDiameter at smallest part 1 3/8Area supported by each stay 72Working pressure by rules 160 lbsMaterial of stays steelPitch of stays 17 1/2 x 16How are stays secured Nuts + Riv washersWorking pressure by rules 169 lbsMaterial of Front plates at bottom steelDiameter at smallest part 2 1/8Area supported by each stay 280Working pressure of plate by rules 323 lbsThickness 3/4Material of Lower back plates steelThickness 3/2Greatest pitch of stays 13Working pressure of plate by rules 323 lbsMean pitch of stays 8 1/2Diameter of tubes 3 1/4Pitch of tubes 4 1/2 x 4 1/2Material of tube plates steelThickness: Front 3/4Back 3/4Mean pitch of stays 8 1/2Pitch across wide water spaces 13 1/2Working pressures by rules 146, 278Girders to Chamber tops: Material iron

Depth and

thickness of girder at centre 7-2Length as per rule 30Distance apart 8Number and pitch of Stays in each 2-8 1/2Working pressure by rules 170 lbsSuperheater 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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

End plates: Thickness

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

Area of safety valves to superheater

Are they fitted with easing gear

Working pressure of end plates

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DONKEY BOILER— No. 1 Description Vertical.
 Made at Motherwell By whom made J. Marshall & Co When made 1902 Where fixed Stakehold.
 Working pressure 75 lbs tested by hydraulic pressure to 150 lbs No. of Certificate 6087 Fire grate area 11½ ft Description of safety valves Direct spring
 No. of safety valves 1 Area of each 4.9 Pressure to which they are adjusted 75 lbs If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no Dia. of donkey boiler 11-6 Length 11-0 Material of shell plates steel Thickness 3/8 Range of tensile strength 27-32 Descrip. of riveting long. seams triple lap Dia. of rivet holes 13/16 Whether punched or drilled drilled Pitch of rivets 3-4
 Lap of plating 5-4 Per centage of strength of joint Rivets 168 Plates 75 Thickness of shell crown plates 1/2 Radius of do. 4-0 No. of Stays to do. 4
 Dia. of stays. 1-5 Diameter of furnace Top 3-7 Bottom 3-11/2 Length of furnace 4-10 Thickness of furnace plates 7/16 Description of joint weld Thickness of furnace crown plates 1/2 Stayed by as above Working pressure of shell by rules 105 lbs
 Working pressure of furnace by rules 102 lbs Diameter of uptake 12 Thickness of uptake plates 1/2 Thickness of water tubes 3/8

SPARE GEAR. State the articles supplied: 2 Top end bolts, 2 bottom end bolts, 2 main bearing bolts set coupling bolts set feed pump valves, set bilge pump valves, set some bottom rings for H.P. & M.P. quantity of assorted bolts, nuts, iron, various sizes, 2 valves for main & 1 for donkey check valves, 6 piston bolts, 20 fire bars, 6 bondinas tubes, 3 boiler tubes.
 The foregoing is a correct description,
 J. Marshall & Co Manufacturer.

Dates During progress of work in shops— 1901:— Sep. 19 Oct. 10, 14, 17, 23, 31 Nov. 11, 25 Dec. 4, 9 1902:— Jan. 9, 16, 20, 23, 27, 29 Feb. 3, 11, 14, 18, 19, 21, 24
 of Survey During erection on board vessel— Mar. 4, 10, 14 Apr. 4, 11, 22
 while building Total No. of visits 29

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

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

Material of screw shaft Scrap iron Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes.
 Is the after end of the liner made water tight in the propeller boss yes. 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

The machinery of this vessel has been constructed under special survey, the material and workmanship are of good quality, it has been securely fitted on board and tried under steam.

In my opinion it is eligible to be entered in the Register Book with the record of + L.M.C. 4.02.

It is submitted that this vessel is eligible for THE RECORD - L M C 4:02

The amount of Entry Fee. £ 2 : : When applied for, 6/5/02. Paid 28/2/02
 Special £ 18 : 12 :
 Donkey Boiler Fee £ 2 : 2 :
 Travelling Expenses (if any) £ : :
 When received, £ 20.12/- Paid 13/5/02 J. Barrett. J.W. Dimmock
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow. 7-MAY 1902

Assigned

+ L.M.C. 4.02.

WHEN FEE PAID MACHINERY CERTIFICATE WRITTEN. 23.5.02



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