

REPORT ON MACHINERY.

No. 25009

TUES. MAR 26 1907

1907 MAR 26 1907

Port of Glasgow

Received at London Office

No. in Survey held at Glasgow
Reg. Book. S/S "Kasama"Date, first Survey 12th July 06 Last Survey 14th March 1907

(Number of Visits)

Master Built at Dumbarton By whom built A McMillan & Son
Engines made at Glasgow By whom made Dewson & Jackson Ltd when made 1907
Boilers made at ditto By whom made ditto when made 1907
Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 478 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26 - 44 - 73 Length of Stroke 48 Revs. per minute 74 Dia. of Screw shaft as per rule 14.43 as fitted 15.53 Material of screw shaft 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 Yes 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 Yes

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5'-0 1/2"

Dia. of Tunnel shaft as per rule 13.12 as fitted 13.18 Dia. of Crank shaft journals as per rule 13.77 as fitted 14 1/4 Dia. of Crank pin 4 1/4 Size of Crank webs 9 1/4 Dia. of thrust shaft under collars 4 1/4 Dia. of screw 17.3 Pitch of Screw 17.3 No. of Blades 4 State whether moveable Yes Total surface 92 sq

No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 5 Sizes of Pumps 11 x 11 1/2, 8 x 8 1/2, 6 x 4 3/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four 3 1/2 dia In Holds, &c. Two 3 1/2 dia in each No. 1, 2 & 3

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

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 Yes Are the Discharge Pipes above or below the deep water line above

Are 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

Dates of examination of completion of fitting of Sea Connections 9-1-07 of Stern Tube 9-1-07 Screw shaft and Propeller 9-1-07

Is the Screw Shaft Tunnel watertight apparently Is it fitted with a watertight door Yes worked from Upper Engine Room platform

BOILERS, &c.—(Letter for record \$) Manufacturers of Steel Galdubank & Colville & Sons

Total Heating Surface of Boilers 6442^{sq} Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15-10-07, 11-1-07 No. of Certificate 8303, 8302, 8434

Can each boiler be worked separately Yes Area of fire grate in each boiler 64-6 No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 9.62 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 16-6" Length 12-0" Material of shell plates S

Thickness 1/32 Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR.

long. seams True Diameter of rivet holes in long. seams 13/8 Pitch of rivets 9/12 Lap of plates or width of butt straps 20"

Per centages of strength of longitudinal joint rivets 86-5 plate 65-4 Working pressure of shell by rules 183 lbs Size of manhole in shell 16 x 12

Size of compensating ring McNeil No. and Description of Furnaces in each boiler 3 Doughton Material S Outside diameter 4-3

Length of plain part top 3 bottom 3 Thickness of plates crown 19/32 Description of longitudinal joint welded No. of strengthening rings -

Working pressure of furnace by the rules 185 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 13/16

Pitch of stays to ditto: Sides 8 x 9 Back 8 x 9 1/2 Top 8 x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 185 lbs

Material of stays S Diameter at smallest part 1.76 Area supported by each stay 72 1/2 Working pressure by rules 190 End plates in steam space:

Material S Thickness 1/32 Pitch of stays 18 x 18 How are stays secured Nuts Working pressure by rules 192 Material of stays S

Diameter at smallest part 6.33 Area supported by each stay 324 Working pressure by rules 185 Material of Front plates at bottom S

Thickness 7/8 Material of Lower back plate S Thickness 13/16 Greatest pitch of stays 3 1/2 x 8 Working pressure of plate by rules 3/4

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates S Thickness: Front 31/32 Back 1/16 Mean pitch of stays 3 1/2

Pitch across wide water spaces 13 1/2 Working pressures by rules 184 lbs Girders to Chamber tops: Material Iron Depth and

thickness of girder at centre 9 1/2 x 2-1 Length as per rule 34 3/4 Distance apart 9 Number and pitch of stays in each 3-8

Working pressure by rules 194 lbs 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

W600-0221

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 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 _____ Plates _____
 Working pressure of shell by rules _____ 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 _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Two top end & two bottom end connecting rod bolts
 Two main turning bolts one set of coupling Bolts & one set of Feed
 & Bilge Pump Valves

The foregoing is a correct description,

of DUNSMUIR & JACKSON, Limited

Manufacturer.

James Fletcher

Dates of Survey while building { During progress of work in shops - 1906 July 12 Aug 11 16 Sep 19 27 Oct 10 22 28 Nov 2 3 8 23 Dec 24
 { During erection on board vessel - 1907 Jan 9 11 15 21 24 26 28 31 Feb 1 2 3 8 20 Mar 14
 Total No. of visits 27

Is the approved plan of main boiler forwarded herewith 9/10

" " " donkey " " " 9/10

Dates of Examination of principal parts—Cylinders 21-1-07 Slides 21-1-07 Covers 21-1-07 Pistons 21-1-07 Rods 21-1-07

Connecting rods 24-12-06 Crank shaft 22-10-06 Thrust shaft 10-10-06 Tunnel shafts 22-10-06 Screw shaft 10-10-06 Propeller 10-10-06

Stern tube 10-10-06 Steam pipes tested 1-2-07 Engine and boiler seatings 26-1-07 Engines holding down bolts 26-1-07

Completion of pumping arrangements 26-1-07 Boilers fixed 26-1-07 Engines tried under steam 14-3-07

Main boiler safety valves adjusted 8-2-07 Thickness of adjusting washers PV 3/8 F SV 3/8, PV 3/8 SV 3/8, AY 3/8 B FV 3/8 F

Material of Crank shaft S Identification Mark on Do. 22-10-06 Material of Thrust shaft S Identification Mark on Do. 10-10-06

Material of Tunnel shafts S Identification Marks on Do. 22-10-06 Material of Screw shafts S Identification Marks on Do. 10-10-06

Material of Steam Pipes Iron Test pressure 600 lb

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

The machinery of this vessel has been constructed under special Survey, the materials, workmanship are of good quality, it has been securely fitted on board, & tried under steam & found satisfactory

In my opinion it is eligible to be classed in the Register Book with the record of + LMC. 3.07

This vessel is a duplicate of the S/S "Bloemfontein" (Glas Rep't 24612.)
 The approved plan were forwarded with the above Report.

It is submitted that this vessel is eligible for THE RECORD + LMC 307

F.D.

ELEC LIGHT.

The amount of Entry Fee.. £ 3 : : When applied for, 25 MAR 1907
 Special .. £ 43 : 18 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : : When received, 25 MAR 1907

Committee's Minute Glasgow 5 MAR 1907

Assigned + LMC. 3.07

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



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MACHINERY CERTIFICATE
 WRITTEN 26-3-07