

## REPORT ON MACHINERY.

No. 25289

Port of GlasgowReceived at London Office JUN. 21 MAY 1907No. in Survey held at GlasgowDate, first Survey 7 Dec 05Last Survey 8 May

1907

Reg. Book.

153 on the

S.S. "Strathdee"

(Number of Visits)

Master

Built at Port GlasgowBy whom built R. Duncan & Co

Tons

Gross

Net

When built 1907Engines made at GlasgowBy whom made David Rowan & Cowhen made 1907Boilers made at doBy whom made dowhen made 1907

Registered Horse Power

Owners Burrell & Son (Glasgow)Port belonging to GlasgowNom. Horse Power as per Section 28 366Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted No

## ENGINES, &amp;c.—Description of Engines

Triple ExpansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 25" 41" 68"Length of Stroke 48"

Revs. per minute

Dia. of Screw shaft

as per rule 14 1/2"

Material of

IronIs 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 —Length of stern bush 4'-10"

Dia. of Tunnel shaft

as per rule 12'-68"as fitted 13'

Dia. of Crank shaft journals

as per rule 13'-32"as fitted 13'-6"Dia. of Crank pin 13'-6"Size of Crank webs 8'-2"

Dia. of thrust shaft under

collars 14 1/4"Dia. of screw 17'-6"Pitch of Screw 17'-9"No. of Blades 4State whether moveable NoTotal surface 93'No. of Feed pumps 2Diameter of ditto 3 1/2"Stroke 24"Can one be overhauled while the other is at work YesNo. of Bilge pumps 2Diameter of ditto 4"Stroke 24"Can one be overhauled while the other is at work YesNo. of Donkey Engines 3Sizes of Pumps 9x12x10, 8x5x8, 5x4x3 1/2x5No. and size of Suctions connected to both Bilge and Donkey pumps —In Engine Room 4-3 1/2"In Holds, &c. 2-3 1/2"

each hold

No. of Bilge Injections 1sizes 6"Connected to condenser, or to circulating pump —Is a separate Donkey Suction fitted in Engine room & size Yes-3 1/2"Are 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 —Are all connections with the sea direct on the skin of the ship YesAre they Valves or Cocks BothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YesAre 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 YesAre the Blow Off Cocks fitted with a spigot and brass covering plate YesWhat pipes are carried through the bunkers For SuctionsHow are they protected Wood coveringAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections —of Stern Tube —Screw shaft and Propeller Exam'd at Ex.Is the Screw Shaft Tunnel watertight YesIs it fitted with a watertight door Yesworked from Top gratingBOILERS, &c.—(Letter for record 15)Manufacturers of Steel The Clydebridge Steel & PlateTotal Heating Surface of Boilers 5868Is Forced Draft fitted NoNo. and Description of Boilers 3 Single EndedWorking Pressure 180 lbTested by hydraulic pressure to 360 lbDate of test 20/3/07No. of Certificate 8864Can each boiler be worked separately YesArea of fire grate in each boiler 55'

No. and Description of Safety Valves to

each boiler 2 SpringArea of each valve 5.94"Pressure to which they are adjusted 185 lbAre they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork StokeholdMean dia. of boilers 14'-0"Length 11'-0"Material of shell plates SteelThickness 1 3/16"Range of tensile strength 28.2-31.7Are the shell plates welded or flanged NoDescrip. of riveting: cir. seams D. R. L.long. seams D. B. S.Diameter of rivet holes in long. seams 1 7/16"Pitch of rivets 8 3/4"Lap of plates or width of butt straps 19 1/4"

Per centages of strength of longitudinal joint

rivets 96.8plate 83Working pressure of shell by rules 188 lbSize of manhole in shell 16" x 12"Size of compensating ring FlangedNo. and Description of Furnaces in each boiler 3 DightonMaterial SteelOutside diameter 3'-8 1/2"Length of plain part topThickness of plates bottomcrown 1 7/16"Description of longitudinal joint weldNo. of strengthening rings —Working pressure of furnace by the rules 185Combustion chamber plates: Material SteelThickness: Sides 7/8"Back 7/8"Top 7/8"Bottom 7/8"Pitch of stays to ditto: Sides 7 7/8"Back 7 7/8"Top 7 7/8"If stays are fitted with nuts or riveted heads YesWorking pressure by rules 218 lbMaterial of stays SteelDiameter at smallest part 1.48"Area supported by each stay 62"Working pressure by rules 190

End plates in steam space:

Material SteelThickness 1 1/4"Pitch of stays 18" x 18"How are stays secured D. B. S.Working pressure by rules 216 lbMaterial of stays SteelDiameter at smallest part 7.59"Area supported by each stay 324"Working pressure by rules 216Material of Front plates at bottom SteelThickness 7/8"Material of Lower back plate SteelThickness 3/16"Greatest pitch of stays 13 1/4"Working pressure of plate by rules 193Diameter of tubes 3 1/4"Pitch of tubes 4 1/2" x 4 1/2"Material of tube plates SteelThickness: Front 7/8"Back 27/32"Mean pitch of stays 9"Pitch across wide water spaces 13 1/4"Working pressures by rules 180 lbGirders to Chamber tops: Material Steel

Depth and

thickness of girder at centre (8 1/2" x 7 1/2")Length as per rule 30"Distance apart 8 1/4"Number and pitch of stays in each 3-7 1/4"Working pressure by rules 200 lbSuperheater 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

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

Are they fitted with easing gear

Working pressure of end plates

Area of safety valves to superheater

U11100-0078

Working pressure of end plates

Area of safety valves to superheater

U11100-0078

Working pressure of end plates

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Working pressure of end plates

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Working pressure of end plates

Area of safety valves to superheater

U11100-0078



VERTICAL DONKEY BOILER—

Manufacturers of Steel

None

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:— Propeller shaft, propeller, set of piston rings, set of air & circulating pump valves, etc., & the bolts & nuts required by the rules.

The foregoing is a correct description,

for David Rowan & Co. Manufacturer.

Dates of Survey while building: During progress of work in shops— 1905 Dec 7, 16, 21, 28, 1906 Jan 12, 19, Feb 6, 8, 11, 13, Mar 5, 9, 12, 14, 16, Apr 12, 21, 27, May 21, 31, June 1, 5, 6, 13, 18, 25, 26, 27, 28, 29, 30, 1907 Jan 14, 16, 21, 24, Feb 7, 21, Mar 12, 16, 26, 27, 28, Apr 28, 1907 May 6, 8. Total No. of visits 59.

Is the approved plan of main boiler forwarded herewith Yes  
" " " donkey " " " None

Dates of Examination of principal parts—Cylinders 11/2/07 etc Slides 11/2/07 etc Covers 11/2/07 etc Pistons 11/2/07 etc Rods 11/2/07 etc  
Connecting rods 11/2/07 etc Crank shaft 3/7/06 etc Thrust shaft 28/7/06 etc Tunnel shafts 28/7/06 etc Screw shaft 5/6/06 etc Propeller 13/3/07  
Stern tube 13/3/07 Steam pipes tested 26/3/4/07 Engine and boiler seatings 26/4/07 Engines holding down bolts 26/4/07  
Completion of pumping arrangements 6/5/07 Boilers fixed 6/5/07 Engines tried under steam 8/5/07  
Main boiler safety valves adjusted 2/5/07 Thickness of adjusting washers P. P. 5/16, 5/16, C. P. 5/16, 5/16, L. P. 5/16, 5/16  
Material of Crank shaft steel Identification Mark on Do. (H.G.S.) Material of Thrust shaft steel Identification Mark on Do. (H.G.S.)  
Material of Tunnel shafts steel Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do.  
Material of Steam Pipes copper Test pressure 360 lbs

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

The engines & boilers of this vessel have been constructed under Special Survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is in my opinion eligible for notation \*LMC 5, 07 (in red) in the Register Book.

It is submitted, that this vessel is eligible for THE RECORD. +LMC 5.07  
J.R.R.  
23/5/07  
23.5.07

The amount of Entry Fee.. £ 3 : : When applied for, 20 MAY 1907  
Special .. .. £ 88 : 6 :  
Donkey Boiler Fee .. .. £ : :  
Travelling Expenses (if any) £ : : When received, 22/5/07

Committee's Minute Glasgow 20 MAY 1907

Assigned J. R. M. C. 5-07

H. Gardner-Smith.  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.