

No. 454

TRANSFERRED TO
L. R. SYSTEM

BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. 438 No. in Register Book 954

CALGARIAM

S.S. Glenellah

Makers of Boilers Baledon S. + E. Co. L^{td}

Makers of Engines Baledon S. + E. Co. L^{td}

ENG. Works No. 323

MACHINERY.



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BRITISH CORPORATION FOR THE SURVEY AND
REGISTRY OF SHIPPING.

Surveyor's Report on the New Machinery of the

No. in Register Book *8th September 1905*
 Report No. _____ Received at Glasgow Office _____
 Surveyor's District *Dundee* Works No. *323*
 Survey held at *Dundee*
 First Visit *14th April* Last Visit *2nd Sept* Total Visits *50 including previous*
 Name of Steamer *Glenella* Gross Tons *2272.01* R.H.P. *1288*
 When Built *1905* Where Built *Dundee*
 Owners _____ Port of Registry *Hamilton*
 Engines made by *The Calson 578 Co Ltd* in *Lilybank Englns*
 Where made *Dundee*
 Boilers made by *The Calson 578 Co Ltd* in *Dundee*
 Where made *Lilybank Foundry*
 Donkey Boiler made by _____ in _____
 Where made _____

ENGINES.

Description *Triple expansion surface condensing*
 No. of Cyls. *3* Diameter *19 $\frac{1}{2}$, 33, 54* Stroke *36*
 Cub. feet in L. P. Cylinder _____ Revs. per minute *81*
 Diameter of Crank Shaft *10 $\frac{3}{4}$* Thrust Shaft *10 $\frac{3}{4}$* Propeller Shaft *12 $\frac{3}{4}$*
 and Length of Crank Pin *10 $\frac{3}{4}$ x 12 $\frac{1}{2}$*
 Shaft Journals *10 $\frac{3}{4}$ x 11*
 Size of Crank Webs *7 $\frac{1}{2}$ x 19 $\frac{1}{2}$* Is Crank Shaft built? *Yes*
 Diameter of Propeller *15-0* Pitch *14-3* No. of Blades *4*
 Fitted or Solid *Solid* Material of Blades and Boss *Cast iron*

Total Surface *44.5 sq ft*

No. of Feed Pumps or Engines *Two Woodcock's* Diameter *8" x 6"* Stroke *18"*

Can one be overhauled while the other is at work? *Yes Tanky fire deck, fire deck*

Where do they pump from and to? *Hotwell, Cond, Main sea, bilge, hold, etc.*

No. of Donkey Engines *2* Diameter of Pump and Stroke *see pages 9 & 10*

Where do they pump from and to?

No. of Bilge Pumps or Engines *2* Diameter *3"* Stroke *20"*

Can one be overhauled while the other is at work? *Yes Yes*

Where do they pump from and to? *From bilges & hold overboard*

No. and kind of Sluices on Engine Room Bulkheads *✓*

Are they always accessible?

Are all the Bilge Suction Pipes fitted with Roses, and are these always accessible? *Yes*

No. and Size of Bilge Injections connected to Condenser

Has Circulating Pump a Bilge Suction with Non-return Valve? *Yes*

Are Circulating and other Pumps worked by Main Engines? *Yes, Air & Bilge*

Are all Sea Connections fitted direct on to Vessel's plating? *Yes*

Are they Valves or Cocks? *Valves* Placed so as to be easily seen and accessible? *Yes*

Are the Discharge Chests fitted above the Deep Load Line? *Yes Yes*

Are they fitted direct on Vessel's side with Non-return Valves, easily accessible? *Yes*

Are all Valves, Cocks, or Pipes, in connection with the Machinery, accessible? *Yes*

Are the Valves, Cocks, and Pipes so arranged as to absolutely prevent any unintentional connection between the Sea and the Bilges? *Yes Yes*

Are all Blow-off Cocks fitted with ~~grogots~~ *grogots* passing through the Vessel's plating, and ~~having Covering Plates or~~

Flanges on the outside? *Yes*

Are efficient Rose Plates or Grids fitted to the Sea Suctions? *Yes*

What Pipes are carried through Tankers or Holds, and how are they protected? *Above*

Is the Shaft Tunnel fitted with an efficient Watertight Door? *✓*

From what Deck is it worked?

Are there any Doors in Stokehold Bulkheads?

From what Deck are they worked?

Are these Doors in good working condition?

MAIN BOILERS.

Iron or Steel *Siemens Martin Steel*

No. of Boilers *2* No. of Furnaces in each *3*

Description of Boilers, single or double ended, or any Superheating Arrangement *Single ended*

Diameter of Boilers *14'-6" Inside* Length *11'-0" over plates*

Working Pressure *180 lbs* Hydraulic Test *360 lbs*

Can Boilers be worked separately? *Yes*

Can Superheater be shut off while Boiler is working?

Square feet of Grate Surface in each Boiler *60*

" " Heating " " *1955.5*

No. and kind of Safety Valves on each Boiler *One pair*

Diameter and Area of each Safety Valve *2 3/4" 5.9 area*

No., Diameter, and Area of Safety Valves or Superheater

Are the Valves fitted with Easing Gear? *Yes*

Thickness of Shell Plates *1 3/8"*

Diameter of Rivets *1 3/8"* Holes Punched or Drilled *Drilled*

Description of Riveting in Shell *Treble rivetted butt*

Circumferential Seams *Double rivetted* Long Seams *Treble rivetted butt*

Pitch of Rivets *4 5/16"* Width of Overlap *6 7/8"*

Percentage of Strength in Long Seams *Plate 85.1% Rivet 86.4%*

Working Pressure by Rules *208 lbs*

Size of Manhole in Shell *16 x 12* Size of Compensating Rings *14 3/16 x 3 3/8*

Calson top standard door standard door

Description of Furnaces *Morrison*

Outside Diameter of Furnace $3-8\frac{1}{4}"$ Inside ditto $3-4"$ Length between Tube Plates $4'-0"$

Thickness of Plates $\frac{15}{16}"$

If Adamson Rings, state greatest distance between the Rings

Working Pressure by Rules

Combustion Chamber distance, front to back $3'-0"$ over plates

Thickness of Plating, Back $\frac{19}{32}"$ Sides $\frac{19}{32}"$ Bottom $\frac{7}{8}"$

Pitch of ~~Stays~~ Sides $4\frac{1}{2}" \times 9"$ Back $4\frac{1}{2}" \times 8" \times 6" \times 8"$ Top $4\frac{1}{2}" \times 8"$

Top Girders, No. over each Chamber 5 Depth $10\frac{7}{8}"$ Thickness $\frac{3}{4}"$ double plates

Diameter of Screwed Stays $\frac{1}{2}"$ If fitted with Nuts outside and inside: *Yes between center & wing between wings & shell riveted inside riveted through nuts*

Working Pressure by Rules

Thickness of End Plates in Steam Space $\frac{15}{16}"$

Pitch of Stays on End Plates $1'-5\frac{1}{4}" \times 1'-4"$

Effective Diameter of Stays (smallest part) 3.034

How are Stays secured? *Nutted outside & in*

Working Pressure by Rules

Thickness of Front end Plates at Bottom $\frac{13}{16}"$

Back $\frac{13}{16}"$

External Diameter and thickness of Tubes (Plain and Stay) *Plain $3\frac{3}{4}" \times N^{\circ} 7 W.G.$ Stay $3\frac{3}{4}" \times \frac{5}{16}"$ check $3\frac{3}{4}" \times \frac{5}{8}"$*

Pitch of Tubes $4\frac{7}{8}" \times 4\frac{7}{8}"$

No. of Plain Tubes in each Stack 47

Stay *16 riveted 11 in wings & 18 in cent nutted out & in*

How are they secured to Tube Plates: *40 nutted back & in of pipe ends & secured & riveted at back 48 screwed & riveted $\frac{1}{2}$ at one end*

Thickness of Tube Plates, Front $\frac{15}{16}"$ Back $\frac{15}{16}"$

Spaces between Stacks of Tubes $11"$

Least distance between Side Stacks and Boiler Shell $10"$

Distance between Top of Furnaces and Bottom Row of Tubes, Side Furnaces $9"$

Centre Furnace $10"$

Dimensions of Steam Chest or Superheater

Thickness of Plating of ditto Riveting

Is the Staying Longitudinal or otherwise?

How connected to Boiler?

Working Pressure by Rules

DONKEY BOILER.

Iron or Steel

Description of Boiler

Diameter Length

Working Pressure Hydraulic Test, and when applied

Square Feet of Grate Surface

Heating

Thickness of Shell Plating

Description of Riveting

Diameter of Rivets Pitch

Holes Punched or Drilled

Lap of Plating

Percentage of strength of Joint

Thickness of Crown Plates

Side

Description of Staying

Height of Furnace Crown above Fire Grate

Diameter of Uptake Tube

Material Thickness

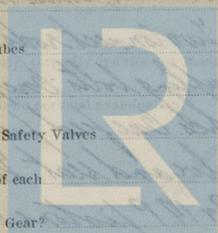
Number of Water Tubes Material

Diameter Thickness

Number and kind of Safety Valves

Diameter and Area of each

If fitted with Easing Gear?



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If the Donkey Boiler is Tubular, the additional particulars as required for Main Boilers must be given in accordance with the Rules.

DONKEY BOILER

GENERAL CONSTRUCTION.

Have all the requirements under Section 33 of the Rules, paragraphs 1 to 13, been complied with in every respect?

If not, give full details of the points of difference, and state when the same were sanctioned by the Chief Surveyor

Surveyor

State articles of Spare Gear supplied

Four propeller blades, studs & nuts.
Two piston rod top end bolts. Two connect rods bottom end bolts
Two main bearing bolts. One set coupling bolts. One pair
connect rod bottom end bushes. One feed pump valve
and seat. One bilge pump valve and seat. Three spare
Ram bottom rings for H. P. & M. P. pistons. 100 bolts & nuts.

Six cyl cover bolts. 6 gunk ring bolts. Two valves
for main checks. One set of fire bars.
One set metallic packing for pistons and valve spindles.

Give for each Main Boiler and for Donkey Boiler respectively the dates of Hydraulic Testing and Valve Setting

and Trial of Machinery under Steam. If the Trial was conducted at the Wharf and not at Sea, the Surveyor should state how long he was in attendance

Hydraulic test of Main Boilers 15th July 1905
Valve setting 2nd September 1905
Trial trip in river 2nd September 1905

Are the Steam Pumping Arrangements in accordance with the approved Plan, and Section 34 of the Rules? If not, state in what respect they differ, and when such differences were sanctioned by the Chief Surveyor

yes

Are the Materials used in the construction of Boilers and Engines sound and trustworthy? *yes*

Is the workmanship throughout thoroughly satisfactory? *yes*

The above particulars correctly describe the Machinery of the S.S. *Glenellah*
as ascertained by me from personal examination.

J. H. Mackie

Engineer Surveyors to the British Corporation for the
Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

H.S.	Sq. ft.	16	10	0
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G.S.

No. DONKEY BOILERS.

H.S.	Sq. ft.			
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G.S.

£	16	10	0
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ENGINES.

L. P. C.	47.7	Cub. ft.	13	0	0
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£	:	:	:
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Testing, &c.

£	:	:	:
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Expenses

Total ...	£	29	10	0
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It is submitted that this Report be approved,

John King
Chief Surveyor.

Approved by the Committee, *for the pleasure of M.B.N.**
on the 18th October 1905.

Fees applied for *5th Sept 1905*Fees paid *26th Sept 1905*

Robert Manning
Secretary.

SKETCHES OF SPECIAL ARRANGEMENTS, &c.

Clarke Chapman

Ash ejector pump

8" dia steam cyl
5" dia water cyl
8" stroke

Pumps from sea, tanks, holdwell & bilges

" to ash ejector, main boilers, deck & overboard

Ballast Donkey Worthington. 12" x 15" x 15"

Pumps from sea, tanks, bilges & condensers
" to condenser, tanks, deck & overboard.



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Sketch of Special Arrangements
to be made for the purpose of
the proposed new building
at the site of the old building
at the corner of the street
and the railway

Sketch of Special Arrangements
to be made for the purpose of
the proposed new building
at the site of the old building
at the corner of the street
and the railway

J. L. King

Approved by the Committee
 on the 10th day of July 1885

John L. King



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