

Rpt. 5a.

## REPORT ON BOILERS.

No. 69100

Received at London Office 14 DEC 1944

Date of writing report 8-10-1943 When handed in at Local Office 9-12-1944 Port of GLASGOW

No. in  
Reg. Book. Survey held at  
on the

Paisley

Date, First Survey 28. 6. 1943 Last Survey 1-12-1944

H.M.T.

BIGGAL SINGLE SC.

(Number of Visits 11)

Gross  
Tons  
Net

Built at Port Glasgow By whom built Messrs Ferguson Bros Ltd Yard No. 369 When built 1937  
Engines made at Port Glasgow By whom made Ferguson Bros Engine No. 369 When made 1945  
Boilers made at Paisley By whom made Messrs A.F. Craig & Co Ltd Boiler No. 822 When made 1943  
Nominal Horse Power Owners The Admiralty Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd

Total Heating Surface of Boilers 2650 sq ft

Is forced draught fitted yes

(Letter for Record S)

No. and Description of Boiler 1-Single Ended

Coal or Oil fired coal

Tested by hydraulic pressure to 350 lb Date of test 4-10-43 No. of Certificate 21514 Can each boiler be worked separately

Working Pressure 200 lb/sq in

Area of Firegrate in each Boiler 63.36 sq ft No. and Description of safety valves to each boiler

Area of each set of valves per boiler { per Rule  
as fitted

Pressure to which they are adjusted

Are they fitted with easing gear

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers 14'-9 3/8" Length 11'-6"

Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 15/16" Are the shell plates welded or flanged no

Description of riveting: circ. seams { end  
inter.

long. seams T.R.B.B.S.

Diameter of rivet holes in { circ. seams } 13/8"  
long. seamsPitch of rivets { 3.92"  
9/2"Percentage of strength of circ. end seams { plate 65.2  
rivets 44.76Percentage of strength of circ. intermediate seam { plate  
rivetsPercentage of strength of longitudinal joint { plate 85.52  
rivets 88.54

combined 88.77

Thickness of butt straps { outer 1"  
inner 1 1/8"

No. and Description of Furnaces in each Boiler 3-Corrugated.

Tensile strength 26-30 tons

Smallest outside diameter 3'-6 7/16"

Material Steel

Thickness of plates { crown 19/32  
bottom

Description of longitudinal weld

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material Steel

Tensile strength 26-30 tons

Thickness 1 1/32"

Pitch of stays 21" x 20"

How are stays secured D. Nuts

Tube plates: Material { front Steel  
back

Tensile strength 26-30 tons

Thickness { 7/8"  
25/32"

Mean pitch of stay tubes in nests 8.94"

Pitch across wide water spaces 1'-1 5/8"

Girders to combustion chamber tops: Material Steel

Tensile strength 28-32 tons

Depth and thickness of girder

at centre 8 1/4" 2c 15/16"

Length as per Rule 2'-7 15/32"

Distance apart 9" + 10 3/4" (wing)

No. and pitch of stays

in each 2-9 7/8"

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons

Thickness: Sides 25/32"

Back 3/4"

Top 25/32"

Bottom 25/32"

Pitch of stays to ditto: Sides 10 3/4" x 9 7/8"

Back 9 1/2" x 9 7/8"

Top 9 7/8" x 10 3/4"

Are stays fitted with nuts or riveted over Nuts in c.c.s &amp; back plates

Front plate at bottom: Material Steel

Tensile strength 26-30 tons

Thickness 7/8"

Lower back plate: Material Steel

Tensile strength 26-30 tons

Thickness 7/8"

Pitch of stays at wide water space 14 1/2" x 9 7/8"

Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel

Tensile strength 28-32 tons

Diameter { At body of stay 3 1/8"  
Over threads

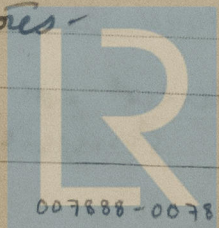
No. of threads per inch 6

Screw stays: Material Steel

Tensile strength 26-30 tons

Diameter { At turned off part 1 7/8"  
Over threads

No. of threads per inch 9



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Foundation

007688-007894-0062



Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 2 1/8" (outer) or 2" Over threads

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain } 2 3/4" Thickness { 8 S.W.G. } of threads per inch 9

Pitch of tubes 3 7/8" x 3 7/8" Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring Flanged plate 1 5/16" of rivets and diameter of rivet holes 32 - 13/8"

Outer row rivet pitch at ends 10 1/8" Depth of flange if manhole flanged ✓ Steam Dome: Material None

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets

Internal diameter Thickness of crown No. and diameter of stays Inner radius of crown

How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes Steel forgings Steel castings

Number of elements Material of tubes Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve Are the safety valves fitted with easing gear

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes.

The foregoing is a correct description, Thos. A. Fair Manufacturer.

Dates of Survey { During progress of work in shops - - - } 1943 Jan 28 Aug 30 Sep 7 7.24 Oct 4.5.6 13.27 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - - - } 19.27 Dec 1 Total No. of visits 11

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. J. 11811. 4/6 Ppt-6760

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey in accordance with the Rule Requirements, approved plans, & Admin Specifications. The materials & workmanship are good. This boiler has been dispatched to Port Glasgow, for installation in Messrs Ferguson Bros Ltd, Yard no. 369. J1537.

This boiler has been efficiently installed in the vessel & its safety valves adjusted under steam 200 lbs / sq W.P. Please see machinery report for recommendations.

Charles J. Hume

24-4-43

Glasgow

Survey Fee ... .. £ Agreed fee When applied for, 19

Travelling Expenses (if any) £ ... When received, 19

R. J. Eastwood  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 DEC 1944  
1 MAY 1945

Assigned Deferred for completion