

REPORT ON BOILERS.

9944

Received at London Office.....

Date of writing Report 13th June, 1955 When handed in at Local Office..... 19..... Port of Dundee

No. in Reg. Book. Survey held at Dundee Date, First Survey 27th April, 1954 Last Survey 6th June, 1955

951565 on the M.V. "WOOLWICH" (Number of Visits 27) Tons { Gross 7669
Net 4145

Built at Dundee By whom built Calder S.B. & E. Co. Ltd. Yard No. 691 When built 1955

Engines made at Glasgow By whom made Alex. Stephen & Son, Ltd. Engine No. 108E When made 1954

Boilers made at Dundee By whom made Calder S.B. & E. Co. Ltd. Boiler No. ✓ When made 1955

MN as per Rule 940 Owners Britannia S.S. Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS ~~MAINS~~, ~~AUXILIARY~~, OR DONKEY. (OIL FIRED).

Manufacturers of Steel Calverley, Ltd.

Total Heating Surface of Boilers 1885 sq. ft. Of Superheaters 390 sq. ft.

Total for Register Book 2275 sq. ft. Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers 1-SE. byl. Multitubular Working Pressure 150 lb./sq. in.

Tested by hydraulic pressure to 275 lb./sq. in. Date of test 11-1-55 No. of Certificate 1086 Can each boiler be worked separately yes

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 1-2 1/4 dia. inf. H.L. safety spring

Area of each set of valves per boiler { per Rule 7.15
as fitted 7.95 Pressure to which they are adjusted 150 lb./sq. in. Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boiler

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-0" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 1'-3 1/2" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 13'-0" Length 12'-0" Shell plates: Material SM Steel Tensile strength 29-33

If fusion welded, state name of welding Firm ✓ Have all the requirements of the Rules for Class I vessels been complied with ✓ Thickness 29/32 Are the shell plates welded or flanged Neither Description of riveting: circ. seams { end D.R.
inter 5/16
long. seams T.R. DBS. Diameter of rivet holes in { circ. seams 1"
long. seams 1" Pitch of rivets { 3.2"
7"

Percentage of strength of circ. end seams { plate 68.75%
rivets 43% Percentage of strength of circ. intermediate seam { plate 85.7%
rivets 92.06%

Percentage of strength of longitudinal joint { plate 89.84%
combined 89.84%

Thickness of butt straps { outer 1 1/16
inner 13/16 No. and Description of Furnaces in each Boiler 3 - Dighton section

Material SM Steel Tensile strength 26-30 Smallest outside diameter 37 1/4"

Length of plain part { top 13 1/2
bottom 13 1/2 Thickness of plates 13/32 Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom None fitted

End plates in steam space: Material SM Steel Tensile strength 26-30 Thickness 1" Pitch of stays 18 x 17

How are stays secured Nuts both sides

Tube plates: Material { front SM Steel
back SM Steel Tensile strength 26-30 Thickness { 25/32
3/4

Mean pitch of stay tubes in nests 12 3/4 x 8 1/2 Pitch across wide water spaces 13 3/8 x 8 1/2

Girders to combustion chamber tops: Material SM Steel Tensile strength 28-32 Depth and thickness of girder at centre 2 @ 8 1/2 x 23 1/2 Length as per Rule 34 5/8 Distance apart 9 7/8 No. and pitch of stays in each 2 @ 11 pitch

Combustion chamber plates: Material SM Steel

Tensile strength 26-30 Thickness: Sides 1 1/16 Back 5/8 Top 1 1/16 Bottom 1 1/16

Pitch of stays to ditto: Sides 9 7/8 x 11 Back 8 1/4 x 9 3/4 Top 9 7/8 x 11 Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material SM Steel Tensile strength 26-30

Thickness 25/32 Lower back plate: Material SM Steel Tensile strength 26-30 Thickness 23/32

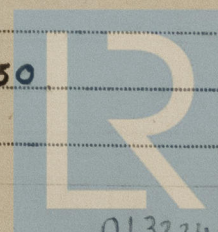
Pitch of stays at wide water space 14 x 8 1/4 Are stays fitted with nuts or riveted over Nuts

Main stays: Material SM Steel Tensile strength 28-32

Diameter { At body of stay 2 5/8
Over threads 3" No. of threads per inch 6

Screw stays: Material SM Steel Tensile strength 26-30

Diameter { At turned off part 1 1/2
Over threads 1 1/2 No. of threads per inch 9



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Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part or Over threads 1 5/8, 1 3/8

No. of threads per inch 9

Tubes: Material PLAIN-EN 8 External diameter { Plain 3 Stay 3 Thickness { 9 W.G. 1/4, 5/16 No. of threads per inch 9

Pitch of tubes 4 1/4 x 4 1/4 Manhole compensation: Size of opening in shell plate 20 x 16 Section of compensating ring 15 1/4" No. of rivets and diameter of rivet holes 40-1 1/8

Outer row rivet pitch at ends 7 3/4 Depth of flange if manhole flanged 3 3/8 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 Melrose Manufacturers of { Tubes Tubes Ltd Steel forgings Steel Press & Forge Ltd Steel castings Crucible Ltd

Number of elements 38 Material of tubes bold brown mild steel Internal diameter and thickness of tubes 20 mm 2.5 mm

Material of headers Forged steel Tensile strength 28-32 Thickness 7/8 minimum Can the superheater be shut off and the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes

Area of each safety valve 1.767 sq" Are the safety valves fitted with easing gear Yes

Pressure to which the safety valves are adjusted 155 lb/sq" Hydraulic test pressure: tubes 1250 lb/sq" forgings and castings 450 lb/sq" and after assembly in place 450 lb/sq" Are drain cocks or valves fitted to free the superheater from water where necessary Yes

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

FOR AND ON BEHALF OF THE CALDON SHIPBUILDING & ENGINEERING CO. LTD.
W. Gardiner Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1954-April 27, June 8, July 2, Aug. 13-20-27, Sept. 3-10-17-24, Oct. 11, Nov. 1-9, Dec. 3-17-30, 1955-Jan. 11-21 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes
During erection on board vessel - - 1955 April 15, May 10-17-27, June 1-6 Total No. of visits 27

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Wokingham" Dun Rpt 9880

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been built under special survey in accordance with the approved plans, the requirements of the Society's Rules and the Secretary's letter. The materials and workmanship are good. On completion of manufacture the boiler was subjected to a hydraulic test pressure of 275 lb/sq" and found sound and tight at that pressure. The boiler has been efficiently installed in the vessel, examined under steam and the safety valves adjusted to 150 lb/sq". Accumulation tests were carried out satisfactorily.

Survey Fee ... £ 34 : 10 : - When applied for 17th June 1955
Travelling Expenses (if any) £ ✓ : : When received 19

A.B. Smith
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 28 JUN 1955
Assigned SEE ACCOMPANYING MACHINERY REPORT