

# REPORT ON BOILERS.

Received at London Office 7-OCT 1942

Date of writing Report 19 When handed in at Local Office 17-9-1942. Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Date, First Survey 18-3-42. Last Survey 10-9-1942.

on the S/S. "TUZLA"

(Number of Visits) Gross 716 Tons Net 268

Master Built at Newcastle on Tyne By whom built Swan, Hunter & Wigham Richardson Ltd Yard No. 1752. When built 1942-  
Engines made at Newcastle on Tyne By whom made ditto Engine No. 1752. When made 1942-  
Boilers made at ditto By whom made ditto Boiler No. 1752. When made 1942-  
Nominal Horse Power Owners Port belonging to

## MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel Plates: Appleby-Frodingham Steel Coy. Ltd Stay Bars: The Steel Company of Scotland. (Letter for Record S.)  
Total Heating Surface of Boilers 2554 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal Working Pressure 180 lb/sq. in.  
No. and Description of Boilers Two Single ended.  
Tested by hydraulic pressure to 320 lb Date of test 29/7/42 No. of Certificate 992. Can each boiler be worked separately Yes  
Area of Firegrate in each Boiler 34.5 sq. ft. No. and Description of safety valves Two 2" Cockburn's dip' H.L.  
Area of each set of valves per boiler (per Rule 4.09 sq. in. as fitted 6.28 " Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler none  
Smallest distance between boilers or uptakes and bunkers 3'-0" Is oil fuel carried in the double bottom under boilers open floors  
Smallest distance between shell of boiler and tank top plating Open floors under Bln. Is the bottom of the boiler insulated No.  
Largest internal dia. of boilers 11'-1 1/4" Length 11'-0" Shell plates: Material Stl. Tensile strength 30 to 34 tons  
Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. overlap. inter. none.  
long. seams T.R. Dbl. butt straps Diameter of rivet holes in circ. seams 1" long. seams 15/16" Pitch of rivets 3.24" 6 5/8"  
Percentage of strength of circ. end seams (plate 69.13 rivets 42.47 Percentage of strength of circ. intermediate seam (plate none rivets none  
Percentage of strength of longitudinal joint (plate 85.84 rivets 85.55 combined 88.8 Working pressure of shell by Rules 182 lb.  
Thickness of butt straps (outer 21/32" inner 25/32" No. and Description of Furnaces in each Boiler Two "Deighton" Corrugated.  
Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 3'-0 15/16"  
Length of plain part (top 2'-4" c.c. bottom Thickness of plates (crown 15/32" bottom 11/16" c.c. bottom Description of longitudinal joint Fire welded.  
Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 181 lb.

End plates in steam space: Material S. Tensile strength 26 to 30 tons Thickness 29/32" Pitch of stays 13 3/4" x 1 1/2" max.  
How are stays secured Nuts inside & outside. Working pressure by Rules 183 lb.  
Tube plates: Material (front S. back S. Tensile strength 26 to 30 tons Thickness (29/32" 3/4"  
Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure (front 236 lb back 228 lb.

Girders to combustion chamber tops: Material S. Tensile strength 28 to 32 tons Depth and thickness of girder at centre 8 3/8" x 5/8" x two Length as per Rule 30 9/16" Distance apart 9" No. and pitch of stays in each Two @ 9 3/4" Working pressure by Rules 181 lb. Combustion chamber plates: Material S.  
Tensile strength 26 to 30 tons Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"  
Pitch of stays to ditto: Sides 9 1/2" x 9 1/2" Back 9" x 9 3/4" Top 9" x 9 3/4" Are stays fitted with nuts or riveted over with nuts.  
Working pressure by Rules 182 lb. min. Front plate at bottom: Material S. Tensile strength 26 to 30 tons  
Thickness 29/32" Lower back plate: Material S. Tensile strength 26 to 30 tons Thickness 29/32"  
Pitch of stays at wide water space 13 1/2" x 9 3/4" (14 1/4" x 9 3/4" max.) Are stays fitted with nuts or riveted over with nuts  
Working Pressure 225 lb Main stays: Material S. Tensile strength 28 to 32 tons

Diameter (At body of stay or Over threads) 2 3/8" No. of threads per inch 6. Area supported by each stay 206.5 sq. in.  
Working pressure by Rules 190 lb. Screw stays: Material S. Tensile strength 26 to 30 tons  
Diameter (At turned off part or Over threads) 1 3/4" No. of threads per inch 9. Area supported by each stay 88.3 sq. in.  
Coats P.T.O.

Working pressure by Rules 204 lbs Are the stays drilled at the outer ends No Margin stays: Diameter <sup>At turned off part,  $1\frac{3}{4}$ " +  $1\frac{7}{8}$ "</sup> Over threads

No. of threads per inch 9 Area supported by each stay 107.3 sq ins Working pressure by Rules 198 lbs min.

Tubes: Material Steel External diameter <sup>Plain</sup> 2 $\frac{1}{2}$ " Thickness <sup>Stay</sup> 9.45  $1\frac{1}{4}$  +  $5/16$  No. of threads per inch 9

Pitch of tubes 3 $\frac{3}{4}$  x 3 $\frac{3}{4}$ " Working pressure by Rules 187 lbs min. Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 19 $\frac{1}{8}$ " x  $\frac{7}{8}$ " No. of rivets and diameter of rivet holes 32 @  $1\frac{5}{16}$  dia

Outer row rivet pitch at ends 9 $\frac{1}{8}$ " Depth of flange if manhole flanged 2 $\frac{1}{2}$ " Steam Dome: None

Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint <sup>Plate</sup> <sub>Rivets</sub> \_\_\_\_\_

Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of stays \_\_\_\_\_

How connected to shell \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

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

Type of Superheater None

Manufacturers of \_\_\_\_\_

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 \_\_\_\_\_

Area of each safety valve \_\_\_\_\_ Are the safety valves fitted with casing gear \_\_\_\_\_ Working pressure as per Rules \_\_\_\_\_ 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,

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.

E J Howard

Dates of Survey <sup>During progress of work in shops - -</sup> <sub>while building <sup>During erection on board vessel - -</sup></sub>

See Machinery Rpt. H.

Are the approved plans of boiler and superheater forwarded herewith No. 11/2/42 (If not state date of approval.)

Total No. of visits \_\_\_\_\_

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. 3/6 ECEABAT. SHWR Y and No 1662. 2nd Rpt 98746 & sister vessels.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These Boilers have been constructed under special survey in accordance with the approved plans and the Society's Rules, and the materials & workmanship are good

The Boilers have been satisfactorily fitted on board and tested under steam under working conditions

See also machy Rpt H.

Survey Fee ... £ See Rpt H: } When applied for, 19

Travelling Expenses (if any) £ : : } When received, 19

Awatt

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 20 OCT 1942

Assigned See fe machy rpt.



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