

# REPORT ON BOILERS.

No. 95349

AUG 20 1937

Received at London Office

NEWCASTLE-ON-TYNE

Writing Report 17/8/37 19 When handed in at Local Office 18/7/ 1937 Port of

Survey held at Newcastle on Tyne Date, First Survey 23 Dec 1936 Last Survey 17/8/37 19  
(Number of Visits ) Gross 8298  
Tons Net 4936

on the Stead M/s BRITISH RESOLUTION.

Built at Newcastle By whom built Swan Hunter & W. Richardson Ltd Yard No. 1514 When built 1937

Engines made at Sunderland By whom made Wm Doxford & Son Ltd Engine No. 199 When made 1937

Boilers made at Newcastle By whom made Swan, Hunter & W. Richardson Ltd Boiler No. 1514 When made 1937

Indicated Horse Power  $\frac{1520}{15} = 101$ . Owners British Tanker Co. Port belonging to LONDON

~~MULTITUBULAR BOILERS~~ ~~MAIN, AUXILIARY, OR, DONKEY.~~ Two FURNACE OIL FIRED

Manufacturers of Steel Steel Coy of Scotland (Letter for Record S.)

Heating Surface of Boilers 1520 sq ft Is forced draught fitted Yes Coal or Oil fired Oil fired

Description of Boilers One Single Ended Horizontal Multitubular Working Pressure 150 lbs.

Tested by hydraulic pressure to 275 Date of test 30/4/37 No. of Certificate 714 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler Two 2 1/2" Cockburn's Improved

Area of each set of valves per boiler per Rule 6.95 sq in Pressure to which they are adjusted 150 lbs 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 Boilers

Smallest distance between boilers or uptakes and bunkers or woodwork 2' 10" Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 2' 10" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 11' 4 1/2" Length 11' 6" Shell plates: Material Steel Tensile strength 30/34 tons

Thickness 3/4" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR. Lap

Phg. seams T.R. Double butt straps Diameter of rivet holes in circ. seams 7/8" Pitch of rivets 2.89

Percentage of strength of circ. end seams plate 69.79 rivets 42.43 Percentage of strength of circ. intermediate seam plate None

Percentage of strength of longitudinal joint plate 85.86 rivets 86.41 combined 89.02 Working pressure of shell by Rules 150 lbs.

Thickness of butt straps outer 9/16 inner 11/16 No. and Description of Furnaces in each Boiler Two Doughton Corrugated

Material Steel Tensile strength 26/30 tons Smallest outside diameter 37 3/16

Length of plain part top 2' 5" c.c. butt Thickness of plates crown 5/8" c.c. butt Description of longitudinal joint Furnace. fore welded

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 155 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 7/8" Pitch of stays 16 3/8 x 14

How are stays secured Double nuts & washers Working pressure by Rules 151 lbs

Tube plates: Material front Steel Tensile strength 26/30 tons Thickness 5/8"

Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13 1/2 x 7 1/2 Working pressure front 158 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder

at centre 7 3/4 x 14 Length as per Rule 29 2 1/2 Distance apart 9 1/2 No. and pitch of stays

in each 2 9 9 Working pressure by Rules 152 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 5/8" Back 2 3/32 Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9 1/2 x 9 1/2 Back 9 x 8 Top 9 1/2 x 9 Are stays fitted with nuts or riveted over

Working pressure by Rules 150 lbs c.c. sides 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 3/4 x 9 Are stays fitted with nuts or riveted over Nuts

Working Pressure 210 lbs Main stays: Material Steel Tensile strength 28/32 tons

Diameter At top of stay, Two top stays 2 1/2 No. of threads per inch 6 Area supported by each stay (15 3/4 x 14 3/4) - 3.26

Over threads other 2 1/2 Working pressure by Rules 151 lbs Screw stays: Material Steel Tensile strength 26/30 tons

Diameter At turned off point, 1 7/8 & 1 1/2 No. of threads per inch 9 Area supported by each stay (9 1/2 x 9 1/2) - 1.73



Working pressure by Rules 172 lb Are the stays drilled at the outer ends No Margin stays: Diameter { 1 5/8 }  
 No. of threads per inch 9 Area supported by each stay (10 3/4 x 9) - 1.73 Working pressure by Rules 160 lb  
 Tubes: Material IRON External diameter { 2 1/2 } Thickness { 10 W.G. } No. of threads per inch 9  
 Pitch of tubes 3 3/4 x 3 3/4 Working pressure by Rules 229 lb Manhole compensation: Size of opening in  
 shell plate 20 x 16 Section of compensating ring 7 3/8 x 3/4 x two No. of rivets and diameter of rivet holes 32 - 1 1/8  
 Outer row rivet pitch at ends 8 Depth of flange if manhole flanged 2 1/2 Steam Dome: Material  
 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 Working pressure by Rules Thickness of crown No. and diameter of  
 stays Inner radius of crown Working pressure by Rules  
 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 None Manufacturers of { Tubes  
 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 Working pressure as per  
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:  
 tubes, 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.

Dates of Survey { During progress of  
 work in shops - -  
 while building { During erection on  
 board vessel - - - }

See machinery report

Are the approved plans of boiler and superheater forwarded herewith (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.

British Tuna Vessel Rpt 94124.  
 " Endurance 94275.

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

The Boiler has been constructed under Special Survey in accordance with the Society's Rules, and approved plans, and the materials & workmanship are good.  
 The Boiler is fitted on top of the oil fuel bunker in the Boiler space forward of the Engine Room having access from the top platform of the Engine Room.  
 It is fitted for burning oil fuel F.P. above 150°F. under forced draft.  
 The Safety Valves were adjusted under steam to 150 lbs. and the accumulation test was satisfactory.

Survey Fee ... £ See Machinery Rpt When applied for, 19

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

A. Watt & W. Nicholson.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 27 AUG 1937

Assigned

See F.E. Mchey rpt.



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Lloyd's Register Foundation

Rpt. 1

Date of

No. in Reg. B

2179

Built a

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do these comply v