

REPORT ON BOILERS.

No. 95349

AUG 20 1937

Received at London Office
NEWCASTLE-ON-TYNE

Date of writing Report 17/8/37 When handed in at Local Office 18/7/37 Port of

Survey held at Newcastle on Tyne Date, First Survey 25 Dec 1936 Last Survey 17/8/37
Book. (Number of Visits) Gross 8298
Net 4936

on the Sted 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.)

Total 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 1/4" 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
as fitted 7.94

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 bunker 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
inter. none

Pitch of rivets { circ. seams 7/8" Pitch of rivets { rivets 2.89
plate 5.75

Percentage of strength of circ. end seams { plate 69.79 Percentage of strength of circ. intermediate seam { rivets 42.43
rivets 85.86 Working pressure of shell by Rules 150 lbs.
combined 89.02

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

Thickness of butt straps { outer 9/16" No. and Description of Furnaces in each Boiler Two Doughton Corrugated
inner 11/16" Tensile strength 26/30 tons Smallest outside diameter 37 3/16"

Material Steel Thickness of plates { crown 13/32" Description of longitudinal joint Furnaces fire welded
bottom 5/8" c.c. butt Working pressure of furnace by Rules 155 lbs.

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 DR. nuts & washers Working pressure by Rules 151 lbs

Tube plates: Material { front Steel Tensile strength { 26/30 tons Thickness { 7/8"
back Steel 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
back 156 "

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 1/32" 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 CC. margin + side stays are nutted both ends. Remainder are riveted inside C.C. and nutted outside

Working pressure by Rules 150 lbs. Front plate at bottom: Material Steel Tensile strength 26/30 tons Thickness 7/8"

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 7/8"

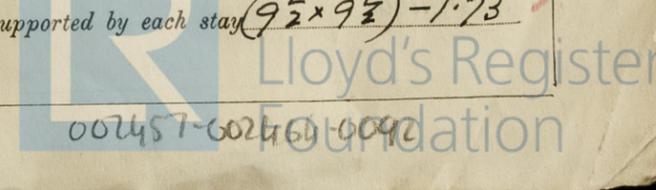
Pitch of stays at wide water space 14 3/4" x 9" Are stays fitted with nuts or riveted over Nuts

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 others 2 1/4"

Working pressure by Rules 151 lbs. Screw stays: Material Steel Tensile strength 26/30 tons

Diameter { At turned off part, 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
Over threads



Working pressure by Rules 172 lb Are the stays drilled at the outer ends No Margin stays: Diameter 1 5/8 (At turned off part, Over threads)
 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
 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
 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 & CO. LTD. Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
 { During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) See machinery report
 Total No. of visits 26/8/37

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. British Trawler 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



Rpt. 1
 Date of
 No. in Reg. B
 2179
 Built a
 Owners
 Electric
 Is the V
 System
 Pressure
 Direct o
 If altern
 Has the A
 Generato
 are they ov
 Where mor
 series with
 approved
 Have certifi
 Are all term
 short circuit
 Position o
 in way of t
 woodwork or
 are the gener
 Earthing, o
 in metallic co
 a fuse on each
 Switchboard
 injury and da
 horizontally fr
 materials
 is it of an app
 non-hygroscopic
 type Yes
 omnibus bars
 "off" position
 switches
 Triple pole
 Are turbine driv
 fire-resisting ma
 voltmeters
 E lamps
 do these comply