

REPORT ON BOILERS.

No. 94780

pt. 5a.

Received at London Office - 6 MAR 7
NEWCASTLE-ON-TYNE

Date of writing Report 19 5/31 1937 When handed in at Local Office Port of Newcastle on Tyne
 No. in Survey held at Newcastle on Tyne Date, First Survey 16 July Last Survey 4/31 1937
 (Number of Visits 1) Tons { Gross 8299
 Net 4936
 on the Steel S. Motor Tanker "ABBEYDALE"
 Built at Walker (Newcastle on Tyne) By whom built Swan, Hunter & Wigham Richardson Ltd. Yard No. 1506 When built 1937
 By whom made W. Dorford & Sons Ltd Engine No. _____ When made 1937
 Boilers made at Newcastle By whom made Swan, Hunter & Wigham Richardson, Ltd Boiler No. 1506 When made 1937
 Owners The Admiralty Port belonging to LONDON.

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

Manufacturers of Steel The Steel Coy. of Scotland, Parkgate St & Co. Rotherham (Letter for Record S.)
 Is forced draught fitted Yes Coal or Oil fired Oil fired only.
 Total Heating Surface of Boilers 1520 sq ft Working Pressure 150 lbs.
 No. and Description of Boilers One S.E. Cylindrical Multitubular Scotch
 Tested by hydraulic pressure to 275 lbs. Date of test 27/11/36 No. of Certificate 694 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler 2-2 1/4" Cookburn's Improved High Lift Spring Loaded.
 Area of each set of valves per boiler { per Rule 6.95 sqms 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 are fitted.
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'10" Is oil fuel carried in the bunker under boilers Yes
 Is the bottom of the boiler insulated Yes
 Smallest distance between shell of boiler and tank top plating 2'10"
 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
 long. seams TR. Double butt straps Diameter of rivet holes in { circ. seams 7/8" Pitch of rivets { 2.89"
 { long. seams 13/16" { 5.75"
 Percentage of strength of circ. end seams { plate 69.79 Percentage of strength of circ. intermediate seam { plate ✓
 { rivets 42.43 { rivets ✓
 Percentage of strength of longitudinal joint { plate 85.86 Working pressure of shell by Rules 150 lbs.
 { rivets 86.41
 { combined 89.02

No. and Description of Furnaces in each Boiler Two Deighton Corrugated
 Thickness of butt straps { outer 9/16" Tensile strength 26/30 tons Smallest outside diameter 37 3/16"
 { inner 11/16"
 Material Steel Description of longitudinal joint Furnaces fire welded
 Length of plain part { top 2'5" Thickness of plates { crown 13/32"
 { bottom 2'5" c.c. butt { 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
 End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 7/8" Pitch of stays 16 3/8" x 14"
 Working pressure by Rules 151 lbs.
 How are stays secured Double nuts & washers. Thickness { 7/8" 5/8"

Tube plates: Material { front } Steel Tensile strength { 26/30 tons Working pressure { front 158 lbs.
 { back } { back 156 lbs.
 Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13 1/2" x 7 1/2"
 Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder
 at centre 7 3/4" x 12" Length as per Rule 29 21/32" Distance apart 9 1/2" No. and pitch of stays
 in each 2 of 9" Working pressure by Rules 152 lbs. Combustion chamber plates: Material Steel
 Tensile strength 26/30 tons Thickness: Sides 5/8" Back 23/32" 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 nuts both ends.
 Working pressure by Rules 150 c.c. sides 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 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 body of stay, Two top stay 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 1/4" Tensile strength 26/30 tons
 Working pressure by Rules 151 lbs. Screw stays: Material Steel Tensile strength 26/30 tons
 Diameter { At turned off part, 1 5/8" & 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 lbs Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"

No. of threads per inch 9 Area supported by each stay (10 3/4 x 9) - 1.73 sq in Working pressure by Rules 160 lbs

Tubes: Material IRON External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 10 49 3/8 + 5/16 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 3/4" Working pressure by Rules 229 lbs Manhole compensation: Size of opening in shell plate 20 x 16" Section of compensating ring 7 3/4 x 3/4 x 2 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

FOR The foregoing is a correct description,
 SWAN, HUNTER, & WIGHAM RICHARDSON, LT^d Manufacturer.
J. J. Tweedy DIRECTOR

Dates of Survey { During progress of work in shops - - } See Machinery Report Are the approved plans of boiler and superheater forwarded herewith 15/11/35 (If not state date of approval.)

while building { During erection on board vessel - - - } _____ Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. British Fame Nov Rpt 94124
British Indurmer. " " 94275

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

This Donkey Boiler has been built under special survey in accordance with the Rules & approved plan, and the materials & workmanship are good. The Boiler is fitted on top of the O.F. Bunker in the Boiler Space forward of the Engine Room, having access from the top platform of the Eng. Room. The Boiler is fitted for burning oil fuel 3.37 flash point above 150°F under forced draft. and the Safety valves were adjusted under steam to 150 lbs / sq. The accumulation test was satisfactory.

Survey Fee £ 10-2 | When applied for, _____ 19 _____

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

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

Committee's Minute FRI 12 MAR 1937

Assigned See Nov 26 94780

