

REPORT ON BOILERS.

Bel 10,160

-1 MAY 1929

No. 15887

Received at London Office 21 JUN 1928

of writing Report 20 6 1928 When handed in at Local Office 20 6 1928 Port of Grimby
See 7.8. Report.
Survey held at Lincoln Date, First Survey 13th Jan Last Survey 13th June 1928
Boat No. 439 on the Twin Screw vessel "HIGHLAND BRIGADE"
By whom built Harland & Wolff Ltd. Yard No. 812 When built 1929
By whom made Harland & Wolff Ltd. Engine No. 812 When made 1929
By whom made Babcock & Wilcox Ltd. Boiler No. 73/4550 When made 1928
Port belonging to Belfast

VERTICAL DONKEY BOILER.

made at Lincoln By whom made Babcock & Wilcox Ltd. Boiler No. 73/4550 When made 1928 Where fixed Upper Deck
Manufacturers of Steel Parkgate, Norman Lang, Bolton Vaughan
Total Heating Surface of Boiler 600 sq. ft. Is forced draught fitted Coal or Oil fired Horizontal heat
and Description of Boilers One, Clarkson Thimble Tube type Working pressure 100 lb.
tested by hydraulic pressure to 200 lb. Date of test 7th June, 1928 No. of Certificate 234
Area of Firegrate in each Boiler None No. and Description of safety valves to each boiler Two, 2 1/2" dia. spring loaded
Area of each set of valves per boiler 7.8" Pressure to which they are adjusted adjusted Are they fitted with easing gear ✓
State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler or uptake and bunkers ✓
Is oil fuel carried in the double bottom under boiler ✓ Smallest distance between base of boiler and tank top plating ✓
Is the base of the boiler insulated ✓ Largest internal dia. of boiler 6'-0" Height 12'-6 1/2"
Shell plates: Material S. L. Steel Tensile strength 28/32 T Thickness 1/2"
Description of riveting: circ. seams top end s. r. bot. d. r. long. seams D. R. D. R. 20 g.
Are the shell plates welded or flanged ✓ Plate 56 rivets 43 of Longitudinal joint plate 73 rivets 102 combined 95
Dia. of rivet holes in 7/8" Pitch of rivets 3.134 Percentage of strength of circ. seams 43
Working pressure of shell by rules 144 lb. Thickness of butt straps outer 7/16" inner 7/16"
Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat Material S. L. Steel
Tensile strength 26/30 T Thickness 7/16" Radius 2 1/2" Working pressure by rules 135 lb.
Description of Furnace: Plain, spherical, or dished crown ✓ Material S. L. Steel Tensile strength 26/30 T
Thickness 1 1/2" External diameter 5'-2 1/2" Length as per rule 9'-3 1/2" Working pressure by rules 120 lb.
Pitch of support stays circumferentially ✓ and vertically ✓ Are stays fitted with nuts or riveted over ✓
Diameter of stays over thread ✓ Radius of spherical or dished furnace crown ✓ Working pressure by rule ✓
Thickness of Ogee Ring ✓ Diameter as per rule ✓ Working pressure by rule ✓
Combustion Chamber: Material ✓ Tensile strength ✓ Thickness of top plate ✓
Radius if dished ✓ Working pressure by rule ✓ Thickness of back plate ✓ Diameter if circular ✓
Length as per rule ✓ Pitch of stays ✓ Are stays fitted with nuts or riveted over ✓
Diameter of stays over thread ✓ Working pressure of back plate by rules ✓
Tube Plates: Material ✓ Tensile strength ✓ Thickness ✓ Mean pitch of stay tubes in nests ✓
If comprising shell, Dia. as per rule ✓ Pitch in outer vertical rows ✓ Dia. of tube holes FRONT ✓ BACK ✓
Is each alternate tube in outer vertical rows a stay tube ✓ Working pressure by rules ✓
Girders to combustion chamber tops: Material ✓ Tensile strength ✓
Depth and thickness of girder at centre ✓ Length as per rule ✓
Distance apart ✓ No. and pitch of stays in each ✓ Working pressure by rule ✓

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Crown stays: Material Tensile strength Diameter { at body of stay, or over threads

No. of threads per inch Area supported by each stay Working pressure by rules

Screw stays: Material Tensile strength Diameter { at turned off part, or over threads No. of threads per inch

Area supported by each stay Working pressure by rules Are the stays drilled at the outer ends

Tubes: Material S.D. steel External diameter { plain 3 1/2 6 2 1/2 Thickness 9/16 stay

No. of threads per inch Pitch of tubes Working pressure by rules

Manhole Compensation: Size of opening in shell plate Section of compensating ring No. of rivets and dia

of rivet holes Outer row rivet pitch at ends Depth of flange if manhole flanged

Uptake: External diameter 3'-5 1/2" Thickness of uptake plate 3/4"

Cross Tubes: No. External diameters Thickness of plates

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Annual Survey Request Form

W. H. Binks

Manufac

Dates of Survey while building { During progress of work in shops - - { 1928 Jan 13, 26 Mar 7 Apr 5, 13, 17 May 1-3, 10, 18, 21, 27 Jun 7, 13 Is the approved plan of boiler forwarded herewith Yes, 6/2/28 (If not state date of approval.)

{ During erection on board vessel - - { Total No. of visits 14

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

This boiler has been built under Special Survey and in accordance with the Rules and approved plan. The materials and workmanship are good (See Gens 14 Intng Rpt. No 15842 of which this case is a duplicate).

This boiler has been fastened efficiently on a flat on an upper deck at the forward end of the engine room. It is fitted for using oil fuel (purity system) or exhaust gases. The safety valves have been adjusted in steam to lift at 100 lbs. These valves are fitted with easing gear. Accumulation tests under waste lead and oil burning conditions were made and a rise of pressure of 8 lbs. was noted.

R. Lee Amess
Belfast.

Survey Fee ... £ 4 : 4 : - When applied for, 11-6-28
Travelling Expenses (if any) £ 1 : 14 : - When received, 3-9-28 See London note 94

Committee's Minute

Assigned

JUL 7 MAY 1928

See Bel Rpt No 10160



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