

REPORT ON BOILERS.

No. 12128

APR 12 1938

Received at London Office

Date of writing Report 10 When handed in at Local Office 8-11-38 Port of Belfast
 Please see Machinery report.
 No. in Survey held at Belfast Date, First Survey Last Survey 2-4-38 19
 Reg. Book 2182 on the STEEL T.W. SC. CAPETOWN CASTLE (Number of Visits) Gross 26850 Tons Net 16600
 Built at Belfast By whom built Harland & Wolff Ltd Yard No. 986 When built 1938
 Engines made at Belfast By whom made Harland & Wolff Ltd Engine No. 986 When made 1938
 Boilers made at Belfast By whom made Harland & Wolff Ltd Boiler No. 986 When made 1938
 Owners Union Castle Mail S. S. Co Ltd Port belonging to London

VERTICAL DONKEY BOILER.

Made at Belfast By whom made Harland & Wolff Ltd Boiler No. 986 When made 1938 Where fixed Upper Deck ER
 Manufacturers of Steel Colvilles Ltd
 Total Heating Surface of Boiler 1800 Is forced draught fitted Coal or Oil fired Exhaust Gas.
 No. and Description of Boilers Two Clarkson Waste Heat Bagat/1800 Working pressure 100 lbs.
 Tested by hydraulic pressure to 200 lbs./sq. inch Date of test 29th Oct 1937 No. of Certificate 1038
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two 3" C.I. double opening marine imp. H.L.
 Area of each set of valves per boiler per rule 9.75 as fitted 14.14 Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear Yes
 State whether steam from main boilers can enter the donkey boiler No Smallest distance between boiler or uptake and bunkers
 or woodwork 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 9'-4 1/2" Height 22'-0"
 Shell plates: Material S Tensile strength 28 3/32 tons Thickness 9/16"
 Are the shell plates welded or flanged Butt strap ends Description of riveting: circ. seams 5R. Long. seams DR.
 Dia. of rivet holes in circ. seams 6 3/4" Pitch of rivets 3 1/4" Percentage of strength of circ. seams plate 54.37 rivets 44.77 of Longitudinal joint plate 78.5 rivets 88 combined 91.2
 Working pressure of shell by rules 106 lbs. Thickness of butt straps outer 1/2" inner 1/2"
 Shell Crown: Whether complete hemisphere, dished partial spherical, or flat dished Material S
 Tensile strength 24/30 tons Thickness 1" Radius 8'-6" Working pressure by rules 103 lbs.
 Description of Furnace: Plain, spherical, or dished crown Yes Material S Tensile strength 24/30 tons
 Thickness 2 7/32" External diameter top 6'-5 3/4" Length as per rule Working pressure by rules
 Pitch of support stays circumferentially 12" and vertically 7'-4 1/8" Are stays fitted with nuts or riveted over Nuts
 Diameter of stays over thread 2" Radius of spherical or dished furnace crown 5'-9 27/32" Working pressure by rule 102.3 lbs.
 Thickness of Ogee Ring 1 9/32" Diameter as per rule D 9'-1 1/4" Working pressure by rule 129 lbs.
 Combustion Chamber: Material S Tensile strength 24/30 tons Thickness of top plate 2 7/32"
 Radius if dished Working pressure by rule Thickness of back plate 1 3/8" Diameter if circular 6'-5 3/4"
 Length as per rule 14'-8 1/4" Stays mid length Pitch of stays Are stays fitted with nuts or riveted over
 Diameter of stays over thread Working pressure of back plate by rules 16 7/8 lbs.
 Tube Plates: Material front Tensile strength Thickness Mean pitch of stay tubes in nests
 If comprising shell, Dia. as per rule front Pitch in outer vertical rows Dia. of tube holes FRONT stay BACK stay
 back plain plain
 Is each alternate tube in outer vertical rows a stay tube Working pressure by rules front back
 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

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 _____

Thimbles _____

Tubes: Material S External diameter { 4" Thickness { 9 awg.

No. of threads per inch _____ Pitch of tubes HP 7.988" Working pressure by rules _____

Manhole Compensation: Size of opening in shell plate 16x12" Section of compensating ring 26 5/8" x 22 5/8" x 1 1/8" No. of rivets and diameter _____

of rivet holes 40 - 15/16" Outer row rivet pitch at ends 3.28" Depth of flange if manhole flanged 16 x 12 x 3 1/2"

Uptake: External diameter 3' 8 3/8" Thickness of uptake plate 1/8"

Cross Tubes: No. _____ External diameters { _____ Thickness of plates _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

The foregoing is a correct description,
 For HARLAND AND WOLFF, LIMITED.
A. J. Marshall Manufacturer
 Secretary

Dates of Survey { During progress of work in shops - - } Is the approved plan of boiler forwarded herewith Yes.
 while building { During erection on board vessel - - } (If not state date of approval.)
 Total No. of visits _____

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

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

These boilers were constructed under special survey to an approved design. The materials and workmanship are good. They were tested by hydraulic pressure efficiently installed & fastened on an upper deck in the motor room. The safety valves were adjusted under steam accumulation tests were satisfactory. They are adapted for use of exhaust gas only. In our opinion they are eligible for use on a classed vessel.

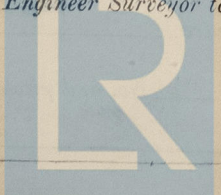
Survey Fee ... £ _____ : When applied for, _____ 19 _____

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

See machinery report.

Committee's Minute
 Assigned

FRI. 22 APR 1938
See Bel 76 12128

Charles J. Hunter, Rlee Arme
 Engineer Surveyor to Lloyd's Register of Shipping.
 Lloyd's Register Foundation