

REPORT ON BOILERS.

No. 12093

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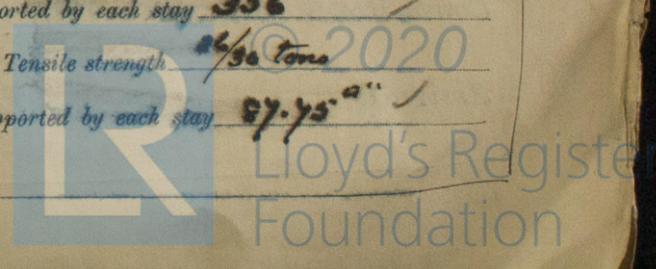
Date of writing Report _____ When handed in at Local Office _____ Port of Belfast
 Visits included in 7. E. Mch. 1938
 No. in Reg. Book. Belfast Date, First Survey _____ Last Survey 14 July 1938
 on the DEVIS (Number of Visits _____) Tons { Gross 4054 Net 3744
 Master _____ Built at Belfast By whom built Harland & Wolff L. Yard No. 1002 When built 1938
 Engines made at Belfast By whom made Harland & Wolff L. Engine No. 1002 When made 1938
 Boilers made at Belfast By whom made Harland & Wolff L. Boiler No. 1002 When made 1938
 Nominal Horse Power 898 Owners Lampson & Holt L. Part belonging to Liverpool

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel Columbian L. (Letter for Record S)
 Total Heating Surface of Boilers 15254 Is forced draught fitted No Coal or Oil fired Oil
 No. and Description of Boilers One S.E. cylindrical Working Pressure 120 lbs
 Tested by hydraulic pressure to 230 lbs Date of test 31-8-37 No. of Certificate 1036 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler _____ No. and Description of safety valves to each boiler 1-2 1/2" double opening H.L. (opp.)
 Area of each set of valves per boiler { per Rule 7.28" as fitted 7.9" Pressure to which they are adjusted 120 lbs Are they fitted with easing gear Yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler _____
 Smallest distance between boilers or uptakes and bunkers or woodwork 16" Is oil fuel carried in the double bottom under boilers Yes
 Smallest distance between shell of boiler and tank top plating 2'-3" Is the bottom of the boiler insulated Yes
 Largest internal dia. of boilers 12'-6" Length 10'-6" Shell plates: Material S Tensile strength 29/33 ton
 Thickness 2 3/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR inter. _____
 Long. seams TRAB. Diameter of rivet holes in { circ. seams 1 1/16" Pitch of rivets { 2.959" long. seams 1 1/16" _____
 Percentage of strength of circ. end seams { plate 65.2% rivets 51.6% Percentage of strength of circ. intermediate seam { plate _____ rivets _____
 Percentage of strength of longitudinal joint { plate 82% rivets 181.5% combined 72.5% Working pressure of shell by Rules 124 lbs
 Thickness of butt straps { outer 9/16" inner 1/16" No. and Description of Furnaces in each Boiler Two Motion
 Material S Tensile strength 24/30 ton Smallest outside diameter 40 1/2"
 Length of plain part { top _____ bottom _____ Thickness of plates { crown 3/16" bottom _____ Description of longitudinal joint WR
 Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 152 lb
 End plates in steam space: Material S Tensile strength 24/30 ton Thickness 1 1/16" Pitch of stays 18 1/2" x 16"
 How are stays secured Double nuts Working pressure by Rules 127.9 lb
 Tube plates: Material { front S back _____ Tensile strength { 24/30 ton Thickness { 3/4"
 Mean pitch of stay tubes in nests 11 1/2" Pitch across wide water spaces 16 1/2" Working pressure { front 154 lb back 158.8 lb
 Girders to combustion chamber tops: Material S Tensile strength 28/32 ton Depth and thickness of girder
 at centre 7 1/8" x 1 1/2" Length as per Rule 29 15/16" Distance apart 11" No. and pitch of stays
 in each 3 at 7" Working pressure by Rules 128 lb Combustion chamber plates: Material S
 Tensile strength 24/30 ton Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/8"
 Pitch of stays to ditto: Sides 10 1/2" x 8" Buck 9 = 9 3/4" Top 11 x 7" Are stays fitted with nuts or riveted over Nuts
 Working pressure by Rules 123 lb Front plate at bottom: Material S Tensile strength 24/30 ton
 Thickness 1 1/16" Lower back plate: Material S Tensile strength 24/30 ton Thickness 3/4"
 Pitch of stays at wide water space 13" Are stays fitted with nuts or riveted over Nuts
 Working Pressure 172 lb Main stays: Material S Tensile strength 28/32 ton
 Diameter { At body of stay, _____ or _____ Over threads 2 1/2" No. of threads per inch 6 Area supported by each stay 356"
 Working pressure by Rules 124 lb Screw stays: Material S Tensile strength 24/30 ton
 Diameter { At turned off part, _____ or _____ Over threads 1 1/2" 1 3/8" 1 3/4" No. of threads per inch 9 Area supported by each stay 87.75"

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Working pressure by Rules 143L Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part,} 1 3/8" or 1 3/4"
 No. of threads per inch 9 Area supported by each stay 107.5" Working pressure by Rules 145L
 Tubes: Material W.I. External diameter ^{Plain} 3 1/4" Thickness ^{SWG} 1/4 9/32 5/16 No. of threads per inch 9
 Pitch of tubes 4 1/2" Working pressure by Rules 171L Manhole compensation: Size of opening in
 shell plate 16 1/2" x 12 1/2" Section of compensating ring 36 x 32 x 1 1/2" No. of rivets and diameter of rivet holes 28 - 1 1/8"
 Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 1 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

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,
 FOR HARBAND AND WOLF, LONDON
 A. J. Marshall
 Manufacturer.
 Secretary.

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.) _____
 Total No. of visits _____

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. MU DELANE BEL N° 10271.

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

This boiler has been built under special survey to an approved design. The materials and workmanship are good. It has been satisfactorily tested by hydraulic pressure, installed & fastened on a seat at the Starboard end of the engine room. The safety valves were adjusted under steam & the accumulation test was satisfactory. In my opinion this boiler is eligible for use on a vessel classed with the Society

Survey Fee £ _____
 Travelling Expenses (if any) £ _____
 When applied for, 19 _____
 When received, 19 _____

See machinery report

Charles J. Hunter.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 25 FEB 1938
 Assigned See Bel J.C. 12093

