

REPORT ON BOILERS.

No. 54332

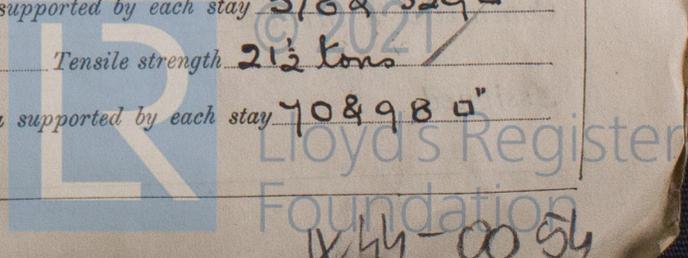
28 MAR 1934

Received at London Office

When handed in at Local Office 22.3.1934 Port of Glasgow
 Survey held at Glasgow Date, First Survey 11.7.33 Last Survey 20.3.1934
 on the new steel 9/15 "HARTLEBURY" (Number of Visits 91) Tons {Gross 5082 Net 3036
 Built at Port Glasgow By whom built Lithgows Ltd Yard No. 865 When built 1934
 Made at Glasgow By whom made Daine Rowan & Co. Ltd Engine No. 962 When made 1934
 Made at Glasgow By whom made Daine Rowan & Co. Ltd Boiler No. 962 When made 1934
 Horse Power 431 Owners J & C Harrison (Inqrs) Port belonging to London

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Makers of Steel L. Shilles Ltd (Letter for Record (R) ✓)
 Heating Surface of Boilers 4352 sq ft ✓ Is forced draught fitted yes ✓ Coal or Oil fired coal ✓
 Description of Boilers Two single ended Working Pressure 220 ✓
 hydraulic pressure to 380 Date of test 16-11-33 No. of Certificate 19304 Can each boiler be worked separately yes ✓
 Firegrate in each Boiler 46 sq ft ✓ No. and Description of safety valves to each boiler Two Improved High Lift ✓
 each set of valves per boiler {per Rule 5.7870" as fitted 6.280"} Pressure to which they are adjusted 225 ✓ Are they fitted with easing gear yes ✓
 donkey boilers, state whether steam from main boilers can enter the donkey boiler -
 distance between boilers or uptakes and bunkers or woodwork 2'-0" Is oil fuel carried in the double bottom under boilers no
 distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated yes
 internal dia. of boilers 14'-6" Length 11'-6" Shell plates: Material steel ✓ Tensile strength 29-33 tons ✓
 1 3/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end. WR inter. -} ✓
 15BS TR Diameter of rivet holes in {circ. seams F15/16 B17/16 long. seams 17/16} Pitch of rivets {F3.43 B3.93 9 1/16} ✓
 gage of strength of circ. end seams {plate F61.7 B63.4 rivets F45.6 B47.4} Percentage of strength of circ. intermediate seam {plate 85.16 rivets 90.3} ✓
 gage of strength of longitudinal joint {plate 85.16 rivets 90.3 combined 88.5} Working pressure of shell by Rules 220
 of butt straps {outer 1 1/16" inner 13/16"} No. and Description of Furnaces in each Boiler Three Deighton 3 of ✓
 steel Tensile strength 26-30 tons Smallest outside diameter 3'-6 13/32" ✓
 of plain part {top } Thickness of plates {crown } 45" } Description of longitudinal joint welded ✓
 {bottom } 64" } Working pressure of furnace by Rules 243 ✓
 of stiffening rings on furnace or c.c. bottom -
 stays in steam space: Material steel Tensile strength 26-30 tons Thickness 15/16" Pitch of stays 20 1/2" x 17 1/2" ✓
 stays secured DN Working pressure by Rules 222 ✓
 plates: Material {front steel back " } Tensile strength {26-30 tons " } Thickness {15/16" 25/32" } ✓
 pitch of stay tubes in nests 9.6" Pitch across wide water spaces 14" ✓ Working pressure {front 229 back 236} ✓
 to combustion chamber tops: Material steel Tensile strength 28-32 tons ✓ Depth and thickness of girder
 2 @ 9 1/8" x 7/8" Length as per Rule 2'-10 14/32" Distance apart 8 1/2" No. and pitch of stays
 3 @ 8 1/4" Working pressure by Rules 225 Combustion chamber plates: Material steel
 strength 26-30 tons Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 25/32" ✓
 stays to ditto: Sides 8 1/4" x 8 1/2" Back 8 3/4" x 8" Top 8 1/4" x 8 1/2" Are stays fitted with nuts or riveted over nuts ✓
 pressure by Rules 234 Front plate at bottom: Material steel Tensile strength 26-30 tons ✓
 15/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 13/16" ✓
 stays at wide water space 13 7/16" Are stays fitted with nuts or riveted over nuts ✓
 Pressure 220 Main stays: Material steel Tensile strength 28-32 tons ✓
 At body of stay, 3 1/4" & 3" No. of threads per inch 6 Area supported by each stay 378 & 329 sq" ✓
 Over threads
 pressure by Rules 245 & 238 Screw stays: Material Iron Tensile strength 21 1/2 tons ✓
 At turned off part, 1 3/4" & 2" No. of threads per inch 9 Area supported by each stay 708 & 98 sq" ✓
 Over threads



W44-0054

Working pressure by Rules 254 & 253 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 2"

No. of threads per inch 9 Area supported by each stay 98" Working pressure by Rules 253

Tubes: Material Iron External diameter { Plain 3" Stay 3" Thickness { 8 W.S. 1/4" 5/16" 3/8" No. of threads per inch 9

Pitch of tubes 4 3/16" x 4 1/8" Working pressure by Rules 250 Manhole compensation: Size of opening in shell plate 19 1/2" x 15 1/2" Section of compensating ring 9 3/4" x 1 5/8" No. of rivets and diameter of rivet holes 34 @ 1 1/16"

Outer row rivet pitch at ends 9 7/8" Depth of flange if manhole flanged 3" Steam Dome: Material none

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 Smoke tube Manufacturers of { Tubes See tube bulletin # 1402 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 no Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes

Area of each safety valve 1.770" Are the safety valves fitted with easing gear yes Working pressure as per Rules _____ Pressure to which the safety valves are adjusted 227 lbs Hydraulic test pressure: tubes _____, castings _____ and after assembly in place 440 lbs Are drain cocks or valves fitted to free the superheater from water where necessary yes

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

The foregoing is a correct description,
 For David Roway & Co. Ltd Manufacturer.
 Arch. W. Grierson

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith yes (If not state date of approval.)

while building { During erection on board vessel - - } **SEE ACCOMPANYING MACHINERY REPORT.** Total No. of visits 91

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Harpasa. G.L. Rpt. No. 54172.

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

The materials and workmanship are good
 The boilers have been constructed under special survey, satisfactorily fitted in the vessel and their safety valves adjusted under steam.

22/3/34

Survey Fee ... £ See inquiry Rpt When applied for, 19
 Travelling Expenses (if any) £ : : : When received, 19

Sch Davis.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 MAR 1934 IRH.
 Assigned SEE ACCOMPANYING MACHINERY REPORT.



Rpt. 13.
RE
 Date of writing
 No. in S Reg. Book 39927.
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