

REPORT ON BOILERS.

Received at London Office

Date of writing Report 28.7.1947 When handed in at Local Office 28.7.1947 Port of Antwerp.

No. in Survey held at Antwerp. Date, First Survey 6-11-46. Last Survey 16 June 1947.

99904 on the S.S. HEMBURY ex H.M.S. GREENWICH (Number of Visits 18.) Tons Gross Net

Master Built at Newcastle-on-Tyne By whom built Wm Robson Ltd. Yard No. 164 When built 1915

Engines made at Wallsend-on-Tyne. By whom made Swan, Hunter, Wigham Richardson Engine No. When made

Boilers made at do. By whom made do. Boiler No. 920 When made 1913.

Owners J.F.R. Grant Ltd. Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel N.H. Stated (Letter for Record Yes)

Total Heating Surface of Boilers 6137 sq ft 6004 in plan Is forced draught fitted Yes. Coal or Oil fired Coal.

Description of Boilers Two - Single End Scotch Type. Working Pressure 150 lb.

Tested by hydraulic pressure to 320 lb. Date of test 25.5.47 No. of Certificate 1913 Rules Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 66.5 sq ft No. and Description of safety valves to each boiler 2 - Direct Spring loaded.

Area of each set of valves per boiler 33.25 sq ft as fitted 35.442 sq ft Pressure to which they are adjusted 150 lb. Are they fitted with easing gear Yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-2" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 16'-0 3/4" Length 12'-1 1/2" Shell plates: Material Steel Tensile strength 33 tons/in² Stated D.R. Calc. 33 tons/in²

Thickness 1 3/8" Are the shell plates welded or flanged No Description of riveting: circ. seams end 17/8" inter. 9 3/4"

Ang. seams T.R. D.B.S. Diameter of rivet holes in circ. seams 19/16" long. seams 17/16" Pitch of rivets 17/8" 9 3/4"

Percentage of strength of circ. end seams plate 61.6. rivets 48.5. Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate rivets 82.25. rivets 70.0. Working pressure of shell by Rules 182 lbs/in² combined 84.8.

Thickness of butt straps outer 17/32" inner 1 1/4" No. and Description of Furnaces in each Boiler Three Corrugated Morrison Section

Material Steel Tensile strength 26-30 tons/in² Smallest outside diameter 3'-11 1/4"

Length of plain part top bottom Thickness of plates crown 5/8" bottom 5/8" Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 187 lbs/in²

End plates in steam space: Material Steel Tensile strength 26-30 tons/in² Thickness 1 1/16" Pitch of stays 16 1/4" x 17"

How are stays secured Double Nuts & Washers. Working pressure by Rules 182 lbs/in²

Tube plates: Material front back Steel. Tensile strength 26-30 tons/in² Thickness 31/32" 13/16" Working pressure front 182 lbs/in² (w.w. space) back 180 lbs/in²

Lean pitch of stay tubes in nests 11 1/4" Pitch across wide water spaces 13 1/2" Working pressure 180 lbs/in²

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons/in² Depth and thickness of girder

Centre 10" x 5 7/8" Length as per Rule 37" Distance apart 7 1/2" No. and pitch of stays

Each 3 c 7 7/8" Working pressure by Rules 185 lbs/in² Combustion chamber plates: Material Steel.

Tensile strength 26-30 tons/in² Thickness: Sides 2 1/32" 5/8" Top 2 1/32" Bottom 1"

Pitch of stays to ditto: Sides 7 7/8" x 7 7/8" Back 7 1/4" x 6 5/8" Top 7 7/8" x 7 1/2" Are stays fitted with nuts or riveted over Fitted with nuts.

Working pressure by Rules 180 lbs/in² (w. back) least. Front plate at bottom: Material Steel Tensile strength 26-30 tons/in²

Thickness 3 1/32" Lower back plate: Material Steel Tensile strength 26-30 tons/in² Thickness 7/8"

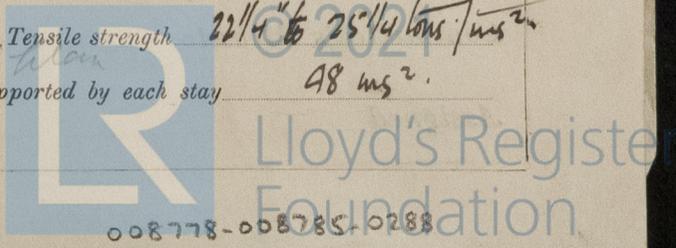
Pitch of stays at wide water space 14" 13 1/2" x 7 3/4" Are stays fitted with nuts or riveted over Fitted with Nuts.

Working Pressure 181 lbs/in² Main stays: Material Steel Tensile strength 27-30 tons/in²

Diameter At body of stay, or Over threads 3" No. of threads per inch 6 Area supported by each stay 277 ms²

Working pressure by Rules 186 lbs/in² Screw stays: Material Steel Tensile strength 22 1/4" to 25 1/4" 48 ms²

Diameter At turned off part, or Over threads 1 3/4" x 7 7/8" No. of threads per inch 9 Area supported by each stay 48 ms²



Working pressure by Rules ^{180 lbs / sq. in.} Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part,} 5" x 1 3/4"
 No. of threads per inch 9 Area supported by each stay 54 sq. in. Working pressure by Rules 180 lbs / sq. in.
 Tubes: Material Steel External diameter ^{Plain} 2 1/2" Thickness ^{Stay} 5/16" + 1/8" No. of threads per inch 11
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules Plain 240 Stay 220 + 180 lbs / sq. in. Manhole compensation: Size of opening in shell plate 6" x 12" Section of compensating ring 9" x 1 3/8" No. of rivets and diameter of rivet holes 30 @ 1 7/16"
 Outer row rivet pitch at ends 8 1/4" Depth of flange if manhole flanged _____ 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 _____
 How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____
 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} _____
 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 _____
 Area of each safety valve _____ Are the safety valves fitted with casing gear _____ Working pressure as per Rules _____
 Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: tubes _____ forgings and 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 _____

The foregoing is a correct description,

 Manufacturer.

Dates of Survey ^{During progress of work in shops - -} _____ Are the approved plans of boiler and superheater forwarded herewith (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 _____ If so, state Vessel's name and Report No. _____

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

Please see Report 9. for details of recommendations

Survey Fee ... See Rpt 9. : : } When applied for, 19
 Travelling Expenses (if any) £ : : } When received, 19

J. S. Martin
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

