

REPORT ON BOILERS.

No. 24325

Received at London Office

Date of writing Report 18.7.1947 When handed in at Local Office 18.7.1947 Port of Antwerp.
 Date, First Survey 6-11-46. Last Survey 16 June 1947.
 S.S. HEMBURY ex H.M.S. GREENWICH (Number of Visits 18.)
 Built at Newcastle-on-Tyne By whom built Wm. Wilson & Co. Yard No. 164 When built 1915
 Engines made at Wallsend-on-Tyne. By whom made Swan, Hunter, Wiggin & Richardson Engine No. When made
 Boilers made at do. By whom made do. Boiler No. 920 When made 1913.
 Owners J.R. Grant & Co. Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel N.H. Stated
 Total Heating Surface of Boilers 637 sq. ft. 6004 in. plan Is forced draught fitted Yes.
 Coal or Oil fired Coal.
 Working Pressure 150 lb.
 Description of Boilers Two - Single End Scotch Type.
 Date of test 15.5.47 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.
 Pressure to which they are adjusted 150 lb. Are they fitted with easing gear Yes.
 Area of each set of valves per boiler per Rule 33.25 sq. ft. 17.24 = 4 present Rules
 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 39 3/4 tons/in.²
 Thickness 1 3/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end 17/8" inter. 9 3/4"
 Pitch of rivets {circ. seams 19 1/16" long. seams 17 1/16"
 Percentage of strength of circ. end seams {plate 61.6. rivets 48.5. Percentage of strength of circ. intermediate seam {plate 8.25 rivets 10.0
 Working pressure of shell by Rules 182 lbs/in.²
 Percentage of strength of longitudinal joint {plate 8.25 rivets 10.0
 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/in.² 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/in.²
 End plates in steam space: Material Steel Tensile strength 26-30 tons/in.² Thickness 1 1/16" Pitch of stays 16 1/4" x 17"
 How are stays secured Double Hauls & Washers. Working pressure by Rules 182 lbs/in.²
 Tube plates: Material {front back Steel. Tensile strength {26-30 tons/in.² Thickness {31/32" 13/16"
 Lean pitch of stay tubes in nests 11 1/4" Pitch across wide water spaces 13 1/2" Working pressure {front 182 lbs/in.² back 180 lbs/in.²
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons/in.² Depth and thickness of girder
 Centre 10" x 5 1/8" 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/in.² Combustion chamber plates: Material Steel.
 Tensile strength 26-30 tons/in.² 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/in.² (W. Backs) Front plate at bottom: Material Steel Tensile strength 26-30 tons/in.²
 Thickness 3/32" Lower back plate: Material Steel Tensile strength 26-30 tons/in.² 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/in.² Main stays: Material Steel Tensile strength 27-30 tons/in.²
 Diameter {At body of stay, Over threads 3" No. of threads per inch 6 Area supported by each stay 277 in.²
 Working pressure by Rules 186 lbs/in.² Screw stays: Material Steel Tensile strength 22 1/4" to 25 1/4" tons/in.²
 Diameter {At turned off part, Over threads 1 3/4" x 7 7/8" No. of threads per inch 9 Area supported by each stay 48 in.²

Working pressure by Rules *180 lbs / sq. in.* Are the stays drilled at the outer ends *No* Margin stays: Diameter *3" x 1 1/4"*
(Circles last) 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 *2 1/2"* Thickness *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 *16" 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 _____ 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 forgings 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 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	£	:	:	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