

REPORT ON BOILERS.

No. 81484

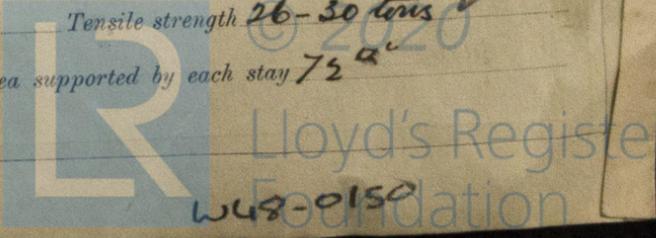
Received at London Office

23 JUN 1927

Date of writing Report 18 June 1927 When handed in at Local Office 22/6/1927 Port of Newcastle on Tyne
 No. in Survey held at Walker Date, First Survey 12 Oct. 1926 Last Survey 16 June 1927
 Reg. Book. (Number of Visits —) Gross 2190 Tons Net 905
 on the TWIN SCREW STEAMER "JUNA"
 Master Walker Built at Walker By whom built S. H. W. R. L. D. Yard No. 1230 When built 1927-6
 Engines made at Walker By whom made Swan Hunter, Lightham, Richardson & Co. Ld. Engine No. 1230 When made 1927-6
 Boilers made at Walker By whom made Swan Hunter, Lightham, Richardson & Co. Ld. Boiler No. 1230 When made 1927-6
 Nominal Horse Power 469 Owners British India Steam Navigation Co. Ld. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Co. Ld. Plates Marshall & Co. Ld. Dighton & Co. Ld. Furnaces. (Letter for Record S)
 Total Heating Surface of Boilers 7313 sq ft Is forced draught fitted yes Coal or Oil fired oil Working Pressure 215 lbs
 No. and Description of Boilers 3 S.E. CYL. MULTITUBULAR
 Tested by hydraulic pressure to 3734 lbs Date of test 13.5.27 No. of Certificates 144 LGS Can each boiler be worked separately yes
 Area of Firegrate in each Boiler OIL FUEL No. and Description of safety valves to each boiler two, direct spring loaded, high lift, 2 3/4" dia
 Area of each set of valves per boiler {per Rule 10.84 as fitted 11.86} Pressure to which they are adjusted 215 lbs Are they fitted with easing gear yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler none
 Smallest distance between boilers or uptakes and bunkers or woodwork 27" Is oil fuel carried in the double bottom under boilers yes
 Smallest distance between shell of boiler and tank top plating 28" Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 14' 6 5/16" Length 11-6" Shell plates: Material Steel Tensile strength 30/34 tons
 Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D. R. LAP inter. —}
 long. seams TR. D. B. S. Diameter of rivet holes in {circ. seams 1 1/2" long. seams 1 3/8"} Pitch of rivets {4.757" 8 15/16"}
 Percentage of strength of circ. end seams {plate 68.46% rivets 42.38%} Percentage of strength of circ. intermediate seam {plate none rivets —}
 Percentage of strength of longitudinal joint {plate 84.61% rivets 88.86% combined 87.00%} Working pressure of shell by Rules 217 lbs
 Thickness of butt straps {outer 1 1/32" inner 1 7/32"} No. and Description of Furnaces in each Boiler 3 Dighton Corrugated Smallest outside diameter 3' 6 1/16"
 Material Steel Tensile strength 26/30 tons Description of longitudinal joint weld
 Length of plain part {top — bottom —} Thickness of plates {crown 31" bottom 32"} Working pressure of furnace by Rules 223 lbs
 Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 223 lbs
 End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 9/32" Pitch of stays 19 1/2" x 17 7/8"
 How are stays secured double nuts and washers Working pressure by Rules 219 lbs
 Tube plates: Material {front Steel back Steel} Tensile strength {26-30 tons 26-30 tons} Thickness {1 3/32" 13"}
 Mean pitch of stay tubes in nests — x 7 1/2" Pitch across wide water spaces 13 1/2" Working pressure {front 223 lbs back 269}
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder
 at centre 8 1/2" x 22" Length as per Rule 31 1/2" Distance apart 8" No. and pitch of stays
 in each 2 of 9 3/4" pitch Working pressure by Rules 215 lbs Combustion chamber plates: Material Steel
 Tensile strength 26-30 tons Thickness: Sides 32" Back 11" Top 23" Bottom 32" See Marshall's 29/6/27.
 Pitch of stays to ditto: Sides 8" x 9" Back 9" x 8 1/2" Top 9 3/4" x 8" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 216 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons
 Thickness 1 1/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 31"
 Pitch of stays at wide water space 13 1/2" x 14 7/8" x 8 1/2" Are stays fitted with nuts or riveted over nuts
 Working Pressure 285 lbs Main stays: Material Steel Tensile strength 28-32 tons
 Diameter {At body of stay 3/8" or Over threads 3/8"} No. of threads per inch 6 Area supported by each stay 19 1/2" x 17 7/8"
 Working pressure by Rules 215 lbs Screw stays: Material Steel Tensile strength 26-30 tons
 Diameter {At turned off part 1 5/8" or Over threads 1 5/8"} No. of threads per inch 9 Area supported by each stay 72"



Working pressure by Rules $216 \frac{1}{2}$ Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part. or Over threads $1 \frac{1}{8}$ ✓
 No. of threads per inch 9 ✓ Area supported by each stay $11 \frac{1}{2} \times 8 \frac{1}{2}$ Working pressure by Rules $223 \frac{1}{2}$
 Tubes: Material $Iron$ ✓ External diameter { Plain $2 \frac{1}{2}$ ✓ Stay $2 \frac{1}{2}$ ✓ Thickness { 8 W G ✓ $3 \frac{1}{8} + 5 \frac{1}{16}$ ✓ No. of threads per inch 9 ✓
 Pitch of tubes $3 \frac{3}{4}$ ✓ Working pressure by Rules $218 \frac{1}{2}$ Manhole compensation: Size of opening in shell plate 32×16 ✓ Section of compensating ring $Flanged$ ✓ No. of rivets and diameter of rivet holes $32 - 19 \frac{1}{16}$ dia ✓
 Outer row rivet pitch at ends $5 \frac{5}{16}$ ✓ Depth of flange if manhole flanged $2 \frac{3}{4} \times 1 \frac{1}{32}$ ✓ Steam Dome: Material $Iron$ ✓
 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 $none$ 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 23 inclusive for boilers been complied with yes ✓

The foregoing is a correct description, FOR SWAN HUNTER & WICHAM RICHARDSON, LTD. Manufacturer, $21/6/27$ *M. W. Winstanley*

Dates of Survey { During progress of work in shops - - while building { During erection on board vessel - - - } See *Truly Report*
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
*The Boilers built under Special Survey the material and workmanship found good and efficient.
 The Boilers Satisfactorily fitted up on board the Vessel, tested under steam and found Satisfactory.*

Survey Fee $please see 1st entry Report on Trading$ £ : : When applied for, 192
 Travelling Expenses (if any) £ : : When received, 192

L. G. Shallowors
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 28 JUN 1927**
 Assigned *See Report attached*

