

REPORT ON BOILERS.

No. 110442

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Writing Report.....19..... When handed in at Local Office.....1953..... Port of.....NEWCASTLE-ON-TYNE.....

Survey held at.....SOUTH SHIELDS..... Date, First Survey.....31.12.51..... Last Survey.....12.5..... 1953.....

Book..... S.S. RUSHWOOD..... (Number of Visits.....73.....) Gross.....6208.....

on the..... SOUTH SHIELDS..... By whom built.....MESSRS J. READHEAD & SONS LTD..... Yard No.....574..... When built.....1953.....

at..... By whom made..... Engine No.....574..... When made.....

es made at..... By whom made..... Boiler No.....574..... When made.....

rs made at..... By whom made.....

nal Horse Power.....M.N. = 504..... Owners.....WM. FRANCE FENWICK & CO. LTD..... Port belonging to.....LONDON.....

LITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel.....COLVILLES LTD..... (Letter for Record.....)

al Heating Surface of Boilers.....6915 sqft. (3 Boilers) Of Superheaters.....3000 sqft. (3 boilers)

l for Register Book.....9915 sqft. Is forced draught fitted.....Yes..... Coal or Oil fired.....Oil.....

and Description of Boilers.....3. S.E. Multitubular..... Working Pressure.....220 lb/sq"

ted by hydraulic pressure to.....380 lb/sq" Date of test.....24-6-52..... No. of Certificate.....1495 (Centre) 1496 (Port) 1497 (Starboard) Can each boiler be worked separately.....Yes.....

a of Firegrate in each Boiler..... No. and Description of safety valves to each boiler.....One - C.S. Improved H.L. Double Safety Valve.....

a of each set of valves per boiler.....per Rule.....6.13 sq.in. Pressure to which they are adjusted.....220 lb/sq" Are they fitted with easing gear.....Yes.....

case of donkey boilers, state whether steam from main boilers can enter the donkey boiler.....

allest distance between boilers or uptakes and bunkers or woodwork.....4'-9" Is oil fuel carried in the double bottom under boilers.....Yes.....

allest distance between shell of boiler and tank top plating.....2'-3" Is the bottom of the boiler insulated.....Yes.....

gest internal dia. of boilers.....14'-3 1/4" Length.....11'-9" Shell plates: Material.....O.H. Steel..... Tensile strength.....29-33 tons/sq"

fusion welded, state name of welding Firm..... Have all the requirements of the Rules for Class I vessels.....

on complied with..... Thickness.....1 3/8" Are the shell plates welded or flanged.....No..... Description of riveting: circ. seams.....end.....D.R. LAP. inter.....

g. seams.....TREBLE ROW D. BUTT STRAPS..... Diameter of rivet holes in.....circ. seams.....1 7/16" long. seams.....1 7/16" Pitch of rivets.....4 1/2" 9 3/4"

centage of strength of circ. end seams.....plate.....66.2% rivets.....44.1% Percentage of strength of circ. intermediate seam.....plate.....85.25% rivets.....90% combined.....88.5% W.P. by RULE = 220.5 lb/sq"

centage of strength of longitudinal joint.....plate..... Thickness of butt straps.....outer.....1 1/2" inner.....1 3/8" No. and Description of Furnaces in each Boiler.....3 - Daughton type per boiler.

aterial.....O.H. Steel..... Tensile strength.....26-30 tons/sq" Smallest outside diameter.....3'-5"

length of plain part.....top..... Thickness of plates.....5/8" Description of longitudinal joint.....Welded.....

imensions of stiffening rings on furnace or c.c. bottom.....

nd plates in steam space: Material.....O.H. Steel..... Tensile strength.....26-30 tons/sq" Thickness.....1 3/8" Pitch of stays.....19" x 18"

ow are stays secured.....Nuts inside & outside.....

ube plates: Material.....front.....O.H. Steel..... Tensile strength.....26-30 tons/sq" Thickness.....15/16" 25/32"

ean pitch of stay tubes in nests.....8 1/2" x 10 5/8" Pitch across wide water spaces.....14"

irders to combustion chamber tops: Material.....O.H. Steel..... Tensile strength.....29-33 tons/sq" Depth and thickness of girder.....

centre.....8 1/2" x 13" (2-7/8" plates) Length as per Rule.....2'-9 3/32" Distance apart.....8 3/4" No. and pitch of stays.....

each.....2 at 10" Combustion chamber plates: Material.....O.H. Steel.....

ensile strength.....26-30 tons/sq" Thickness: Sides.....3/4" Back.....3/4" Top.....3/4" Bottom.....1/2"

itch of stays to ditto: Sides.....9 5/8" x 9 3/16" Back.....9 15/16" x 9" Top.....8 3/4" x 10" Are stays fitted with nuts or riveted over.....Nuts, except rings riveted at shell end.

ront plate at bottom: Material.....O.H. Steel..... Tensile strength.....26-30 tons/sq" Thickness.....7/8"

Thickness.....15/16" Lower back plate: Material.....O.H. Steel..... Tensile strength.....26-30 tons/sq" Thickness.....7/8"

itch of stays at wide water space.....14" x 9" Are stays fitted with nuts or riveted over.....Nuts.....

Main stays: Material.....O.H. Steel..... Tensile strength.....28-32 tons/sq"

Diameter.....At body of stay.....3 1/2" x 3 1/4" No. of threads per inch.....6.....

Screw stays: Material.....O.H. Steel..... Tensile strength.....26-30 tons/sq"

Diameter.....At turned off part.....1 3/8" No. of threads per inch.....9.....

Are the stays drilled at the outer ends No. Margin stays: Diameter 2" x 2" At turned off part 2" x 2" or Over threads 2" x 2"

No. of threads per inch 9 threads/inch.

Tubes: Material Hot finished steel External diameter 3" Plain 3" Thickness 5/16" x 3/8" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2"

Manhole compensation: Size of opening 36 in.

shell plate 20" x 14" Section of compensating ring 58" x 34" x 13" No. of rivets and diameter of rivet holes 36 rivets: 1"

Outer row rivet pitch at ends 9 3/4" 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 ✓

Internal diameter ✓ Thickness of crown ✓ No. and diam. stays ✓

How connected to shell ✓ Inner radius of crown ✓

Size of doubling plate under dome ✓ Diameter of rivet holes and of rivets in outer row in dome connection to shell ✓

Type of Superheater Smoke tube type Manufacturers of Tubes The Superheater Co. Ltd. Manchester

Number of elements 146 Material of tubes S.P. Steel Steel forgings ✓ Steel castings ✓

Material of headers S.P. Steel Tensile strength 26-30 tons/sq. in. Internal diameter and thickness of tubes ✓

Can the superheater be shut off from the boiler Yes

the boiler be worked separately Yes 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 2.41 sq. ins. Are the safety valves fitted with easing gear Yes

Pressure to which the safety valves are adjusted 225 lb./sq. in. Hydraulic test pressure ✓

tubes 1000 lb./sq. in. forgings and castings 660 lb./sq. in. and after assembly in place 450 lb./sq. in. Are drain 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

FOR JOHN READHEAD & SONS, LTD.
The foregoing is a correct description,
N.H. Coatsworth Director

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

During erection on board vessel - - Please see Rpt. 4 Total No. of visits 73

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. B.B. ROOKWOOD. N.W.C. Rpt. No 1099

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

The boilers have been constructed under Special Survey and in accordance with the requirements of the Rules, Secretary's letters and approved plans.

The Materials and workmanship are good.

The Boilers have been satisfactorily installed on board, examined under steam and the safety valves adjusted to the approved pressure.

Survey Fee See Rpt. 4.

Travelling Expenses (if any) £

When applied for, 19

When received, 19

J. W. Walker.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 19 JUN 1955

Assigned See F.E. mchey. rpt.



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