

REPORT ON BOILERS.

No. 21284.

Received at London Office

Date of writing Report 1st FEB 1941 When handed in at Local Office 4th FEB 1941 Port of GREENOCKNo. in Survey held at GREENOCK Date, First Survey 26th March 1940 Last Survey 30th Jan 1941

7765 on the SINGLE SC "DENBYDALE" 612 ENGINES (Number of Visits ✓) Tons { Gross 8000 Net 7236

Master Built at GLASGOW By whom built BLYTHSWOOD SHIP CO. L^{td} Yard No. 62 When built 1941Engines made at GREENOCK By whom made JOHN G. KINCAID & CO. L^{td} Engine No. 132 When made 1941Boilers made at GREENOCK By whom made JOHN G. KINCAID & CO. L^{td} Boiler No. 132 When made 1941

Nominal Horse Power 490 Owners Ministry of Shipping Port belonging to Glasgow.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record 5 ✓)

Total Heating Surface of Boilers 3302⁶ ✓ Is forced draught fitted 4 ✓ Gas or Oil fired 4 ✓

No. and Description of Boilers Two cylindrical ✓ Working Pressure 150 lb ✓

Tested by hydraulic pressure to 275 ✓ Date of test 19-10-40 No. of Certificate 2217 Can each boiler be worked separately 4 ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two 2" 144 ✓

Area of each set of valves per boiler { per Rule 6.25" as fitted 6.28" } Pressure to which they are adjusted 150 lb Are they fitted with easing gear 4 ✓

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

Smallest distance between boilers or uptakes and bunkers or woodwork 15" ✓ Is oil fuel carried in the double bottom under boilers No ✓

Smallest distance between shell of boiler and tank top plating Boilers on upper Deck in ER Is the bottom of the boiler insulated 4 ✓

Largest internal dia. of boilers 12-5 1/8" ✓ Length 11'-0" ✓ Shell plates: Material S Tensile strength 29/33 ✓

Thickness 7/8" ✓ Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end 29/33 inter. 2.873" } ✓

long. seams T.R. D.B.S. ✓ Diameter of rivet holes in { circ. seams 1 1/2" long. seams 1 3/8" } Pitch of rivets { 6.75" } ✓

Percentage of strength of circ. end seams { plate 67.4% rivets 43.7% } Percentage of strength of circ. intermediate seam { plate 86.0% rivets 86.8% } Working pressure of shell by Rules 158 lb ✓

Percentage of strength of longitudinal joint { plate 86.0% rivets 86.8% combined 89.6% } ✓

Thickness of butt straps { outer 2 1/32" inner 2 5/32" } No. and Description of Furnaces in each Boiler Two Dighton ✓

Material S Tensile strength 24/30 ton Smallest outside diameter 3'-9" ✓

Length of plain part { top bottom } Thickness of plates { crown 1/2" bottom } Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 160 lb ✓

End plates in steam space: Material S Tensile strength 24/30 ton Thickness 1 1/32" Pitch of stays 19" x 16 1/2" ✓

How are stays secured D.N. ✓ Working pressure by Rules 154 lb ✓

Tube plates: Material { front S back } Tensile strength { 24/30 ton } Thickness { 1 1/2" } ✓

Mean pitch of stay tubes in nests 9.5" ✓ Pitch across wide water spaces 13 1/2" ✓ Working pressure { front 183.25 back 185 } ✓

Girders to combustion chamber tops: Material S Tensile strength 29/33 ton Depth and thickness of girder ✓

at centre 8 3/4" x 1 1/2" ✓ Length as per Rule 2'-9 1/4" ✓ Distance apart 8 1/2" ✓ No. and pitch of stays ✓

in each 3 @ 8" ✓ Working pressure by Rules 192 lb ✓ Combustion chamber plates: Material S ✓

Tensile strength 24/30 ton Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4" ✓

Pitch of stays to ditto: Sides 8 x 9 ✓ Back 9 x 9 ✓ Top 8 x 8 1/2" ✓ Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules 167 lb ✓ Front plate at bottom: Material S Tensile strength 24/30 ✓

Thickness 1 5/16" ✓ Lower back plate: Material S Tensile strength 24/30 Thickness 7/8" ✓

Pitch of stays at wide water space 14" ✓ Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure 156 lb ✓ Main stays: Material S Tensile strength 28/32 ton ✓

Diameter { At body of stay, or Over threads } 2 1/2" ✓ No. of threads per inch 6 ✓ Area supported by each stay 313.5" ✓

Working pressure by Rules 170 lb ✓ Screw stays: Material S Tensile strength 24/30 ton ✓

Diameter { At turned off part, or Over threads } 1 1/2" - 1 5/8" ✓ No. of threads per inch 9 ✓ Area supported by each stay 72" x 81" ✓

Working pressure by Rules 174 lb Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 3/4" or Over threads

No. of threads per inch 9 Area supported by each stay 103.5" Working pressure by Rules 175 lb

Tubes: Material S External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 9/16" 1/32" No. of threads per inch 9

Pitch of tubes 3 7/8" x 3 3/4" Working pressure by Rules 250 lb Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 2' 5" x 2' 9" x 1" No. of rivets and diameter of rivet holes 38 x 1 1/8"

Outer row rivet pitch at ends 8" 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 _____

Area of each safety valve _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____

Rules _____ Are the safety valves fitted with easing gear _____ Working pressure as per _____

tubes _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____

_____ 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,
FOR JOHN G. KINGAID & CO. LIMITED.
W. G. Kingaid Director/Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith 16-10-39 (If not state date of approval.)

while building { During erection on board vessel - - - } Total No. of visits _____

See machinery report.

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No. _____

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

These boilers have been built under special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The safety valves have been adjusted under steam, accumulation nil. These boilers are eligible in my opinion to be fitted in a vessel classed in the Society's Register Book.

Survey Fee ... £ : When applied for, 10

Travelling Expenses (if any) £ : When received, 10

See machinery report.

Charles J. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 11 FEB 1941

Assigned

SEE ACCOMPANYING MACHINERY REPORT.



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