

REPORT ON BOILERS.

No. 101086.

Received at London Office

Date of writing Report 19 When handed in at Local Office 26 FEB 1943 19 Port of NEWCASTLE-ON-TYNE

No. in Surrey held at Wallaseed, 4 Date, First Survey 8.12.41 Last Survey 18.2.1943
Reg. Book. South Shields (Number of Visits 19) Gross 1047.49
9307 on the S.S. EMPIRE MOULMEIN Tons Net 4741.25

Built at S. Shields By whom built J. Readhead & Sons Ltd Yard No. 540 When built 1944
Engines made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 540 When made 1944
Boilers made at Wallaseed By whom made Wallaseed Slipway & Dry Dock Co. Ltd Boiler No. 4006 When made 1943
Nominal Horse Power Owners Ministry of War Transport Port belonging to S. Shields

PORT CENTRE AUX.
MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record S)

Total Heating Surface of Boilers 2416 sq. ft. Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers 1 S.B. Working Pressure 220

Tested by hydraulic pressure to 380 Date of test 8.1.43 No. of Certificate 1028 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 55 sq. ft. No. and Description of safety valves to each boiler Double improved high lift

Area of each set of valves per boiler (per Rule 6.42) (as fitted 7.94) Pressure to which they are adjusted 220 lb. Are they fitted with easing gear yes

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 2'-4" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2'-0" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 15'-0 1/8" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33

Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams (end DR) (inter.)

long. seams T.R. D.B.S. Diameter of rivet holes in (circ. seams 1 1/2" Pitch of rivets (4.07" (10 3/8"

Percentage of strength of circ. end seams (plate 63.1 (rivets 46.7 Percentage of strength of circ. intermediate seam (plate) (rivets)

Percentage of strength of longitudinal joint (plate 85.5 (rivets 86 (combined 87

Thickness of butt straps (outer 1 1/8" (inner 1 1/4" No. and Description of Furnaces in each Boiler 3 c.f.

Material Steel Tensile strength 26-30 Smallest outside diameter 3'-9 1/4"

Length of plain part (top) (bottom) Thickness of plates (crown 1/16" Description of longitudinal joint weld

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

End plates in steam space: Material Steel Tensile strength 26-30 Thickness 1 1/32" Pitch of stays 20" x 21"

How are stays secured Double nuts

Tube plates: Material (front Steel (back Tensile strength 26-30 Thickness (15/16" (25/32"

Mean pitch of stay tubes in nests 9.7" Pitch across wide water spaces 14" x 8 1/4"

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

at centre 10 1/2" x 11/16" D.B.L. Length as per Rule 33 7/32" Distance apart 9 1/4" No. and pitch of stays

in each 3 x 8" Combustion chamber plates: Material Steel

Tensile strength 26-30 Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8" 13/16" in plan

Pitch of stays to ditto: Sides 9 1/4" x 8" Back 9 1/4" x 8" Top 9 1/4" x 8" Are stays fitted with nuts or riveted over nuts

Front plate at bottom: Material Steel Tensile strength 26-30

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 Thickness 27/32"

Pitch of stays at wide water space 14" x 8" Are stays fitted with nuts or riveted over nuts

Main stays: Material Steel Tensile strength 28-32

Diameter (At body of stay, 3 1/4" (Over threads No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26-30

Diameter (At turned off part, 1 3/4" (Over threads No. of threads per inch 9



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Foundation

Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 1/8" x 2"

No. of threads per inch 9

Tubes: Material S. D. Steel External diameter { Plain 3" Stay 3" Thickness { 8 W.G. 3/8" x 7/16" No. of threads per inch 9

Pitch of tubes 1 1/2" x 1 1/2" Manhole compensation: Size of opening in shell plate none Section of compensating ring No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends 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 Thickness of crown No. and diameter of stays Inner radius of crown

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 easing gear

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 yes

The foregoing is a correct description.
FOR THE WALLSEND SHIPWAY & ENGINEERING CO. LIMITED
J. W. PHELSON Manufacturer.
DIRECTOR

Dates of Survey { During progress of work in shops - - 1941. Dec. 8. 1942. Jan. 2. 12. Feb. 9. 18. 21. 25. May. 5. June 12. 16. July. 16. Sept. 25. 29. Oct. 14. Are the approved plans of boiler and superheater forwarded herewith 12.4.41 (If not state date of approval.)

while building { During erection on board vessel - - - 28. Nov. 23. Dec. 29. 1943. Jan. 8. Feb. 18. Total No. of visits 19

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.) This boiler has been constructed under Special Survey in accordance with the Approved Plan, the Requirements of the Rules & the Specification. The materials & workmanship are good & the boiler proved sound & tight under hydraulic test. The boiler has not yet been allocated to a vessel.

This boiler has been efficiently installed & fixed in the above vessel, examined under steam & the safety valves adjusted to the approved pressure.
J. G. MacLennan

Survey Fee 1/3 of (gross boiler fee) + 25% £ 15 : 5 : 6 When applied for 8 MAR 1943 19

Travelling Expenses (if any) £ : : When received, 19

R. C. C. C. C.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 6 SEP 1944

Assigned see minute on J.E. Rpt.