

REPORT ON BOILERS.

No. 86684

Received at London Office 1 MAY 1923

Date of writing Report 1 MAY 1923 When handed in at Local Office 30th May 1923 Port of London

No. in Reg. Book 6789 Survey held at London Date, First Survey 25th April Last Survey 30th May 1923

on the Steel Tonnage "WANGARATTA" (Number of Visits 1) Gross Tons 4918 Net

Master Built at Belfast By whom built Workman Clark & Co^{ys} Yard No. 440 When built 1919
Engines made at Belfast By whom made do Engine No. 440 When made do
Boilers made at Belfast By whom made do Boiler No. 440 When made do
Nominal Horse Power 1138 Owners British India Steam Navigation Co^{ys} Port belonging to Glasgow

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record S)

Total Heating Surface of Boilers 17079 sq ft Is forced draught fitted yes Coal or Oil fired Coal

No. and Description of Boilers 3 Double ended multitubular Working Pressure 200 lbs
B.C. Certificate

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

Area of Firegrate in each Boiler 146.7 sq ft No. and Description of safety valves to each boiler 3 Spring loaded

Area of each set of valves per boiler per Rule as fitted 42.540 Pressure to which they are adjusted 200 lbs 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 12" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 20" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 16'-3" Length 20'-6" Shell plates: Material Steel Tensile strength 28-32 tons

Thickness 1 15/32 Are the shell plates welded or flanged No Description of riveting: circ. seams end DR Lap inter. T.R. Lap

long. seams DB Straps TR & R 5 1/2 Diameter of rivet holes in circ. seams 1 1/2" Pitch of rivets 4 3/8, 3.646 long. seams 1 1/2" 10 1/2, 5 1/4

Percentage of strength of circ. end seams plate 58.8 rivets 54.3 Percentage of strength of circ. intermediate seam plate 66.25 rivets 68

Percentage of strength of longitudinal joint plate 85.7 rivets 89 Working pressure of shell by Rules 201 lbs combined

Thickness of butt straps outer 1 1/8" inner 1 1/8" No. and Description of Furnaces in each Boiler 8 Reighton type C.F.

Material Steel Tensile strength 26-30 tons Smallest outside diameter 41 3/16"

Length of plain part top bottom Thickness of plates crown 1 1/2" bottom 3/8" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Double 3 1/2 x 3 1/2 x 1/2 Working pressure of furnace by Rules 210 lbs 3/4" plate between

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/32" Pitch of stays 21" x 16"

How are stays secured Double nut & washers 9 3/4" x 1" thick Working pressure by Rules 235 lbs

Tube plates: Material front back Steel Tensile strength 26-30 tons Thickness 1 1/4" Working pressure front 230 lbs back 200 lbs

Mean pitch of stay tubes in nests 11 1/4" x 7 1/4" Pitch across wide water spaces 13 1/2" Working pressure front 230 lbs back 200 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder at centre 8" x 12"

Length as per Rule 4'-4 1/2" Supported and length from shell Distance apart 8 1/2" No. and pitch of stays in each 6 @ 6 3/4"

Working pressure by Rules Tensile strength 26-30 tons Thickness: Sides 1/8" Back Top 1/8" Bottom 1/8"

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

Working pressure by Rules 212 Front plate at bottom: Material Steel Tensile strength 26-30 Thickness 1"

Lower back plate: Material Tensile strength Thickness Pitch of stays at wide water space Are stays fitted with nuts or riveted over

Working Pressure Main stays: Material Steel Tensile strength Diameter At body of stay 3" No. of threads per inch 6 Area supported by each stay 336 sq in

Over threads 3 1/4" Working pressure by Rules 233 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter At turned off part 1 3/4", 1 1/8" No. of threads per inch 10 Area supported by each stay 2.44 sq ft 18 stays

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Working pressure by Rules 208 Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part, or Over threads

No. of threads per inch ✓ Area supported by each stay ✓ Working pressure by Rules ✓

Tubes: Material Iron External diameter Plain 2 1/2 Thickness 8 W.G. 5/16, 3/8 No. of threads per inch 11

Pitch of tubes 3 5/8 x 3 3/4 Working pressure by Rules ✓ Manhole compensation: Size of opening in shell plate 14 3/4 Section of compensating ring 22 x 1 5/8 No. of rivets and diameter of rivet holes 32 @ 1 1/2

Outer row rivet pitch at ends 8 1/2 Depth of flange if manhole flanged 3 1/4 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 _____

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 ✓ 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 _____

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 _____

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 No (If not state date of approval.)

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

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

These boilers were built in 1919 under the survey of the British Corporation. Now opened up & with mountings examined & found satisfactory. Scantlings ascertained by actual measurement and found to agree with those shown on plan. Watchman Circulator now fitted.

These boilers are eligible in my opinion for classification with a working pressure of 200 lbs.

Survey Fee	...	£	:	:	When applied for.	192
Travelling Expenses (if any)	£	:	:	:	When received.	192

D. J. Stoddart
Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 4 OCT 1927
FRI. 15 JAN 1928
FRI. JUN 8 1923
FRI. MAR 1926
TUES. 25 NOV 1924
TUES. 18 AUG 1925
FRI. 26 FEB 1926
FRI. 20 JUN 1924
TUE DEC. 18 1923
TUE DEC. 18 1923
FRI. 23 NOV. 1923

Committee's Minute _____
Assigned See other Lon. Rpt 86684

