

REPORT ON BOILERS.

Received at London Office

3 JUN 1925

Date of writing Report

192

When handed in at Local Office

192

Port of

Glasgow

No. in Reg. Book.

Survey held at

Glasgow

Date, First Survey

12th Sept 24

Last Survey

25th May 1925

1925

on the new steel S/S "RAJPUT".

(Number of Visits 43.)

Gross 5521 Tons Net 3391

Master

Built at Port Glasgow

By whom built Lithgow's Ltd

Yard No. 773

When built 1925

Engines made at

Glasgow

By whom made

D. Rowan & Co Ltd

Engine No. 809

When made 1925

Boilers made at

Glasgow

By whom made

D. Rowan & Co Ltd

Boiler No. 809

When made 1925

Nominal Horse Power

Owners

Asiatic N. Co

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D. and C. White & Sons Ltd The Steel Company of Scotland and The Lanarkshire Steel Co. Ltd (Letter for Record (S))

Total Heating Surface of Boilers 1152 sq ft Is forced draught fitted no Coal or Oil fired coal

No. and Description of Boilers one single ended Working Pressure 110

Tested by hydraulic pressure to 215 Date of test 26-3-25 No. of Certificate 16765 Can each boiler be worked separately -

Area of Firegrate in each Boiler 44 sq ft No. and Description of safety valves to each boiler two, direct opening

Area of each set of valves per boiler per Rule 11.52 sq ft as fitted 11.86 sq ft Pressure to which they are adjusted 115 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no

Smallest distance between boilers and bunkers 16" Is oil fuel carried in the double bottom under boilers no tank

Smallest distance between shell of boiler and tank top plating no tank Is the bottom of the boiler insulated yes

mean largest internal dia. of boilers 12'-0" Length 10'-6" Shell plates: Material steel Tensile strength 28-32 tons

Thickness 32 Are the shell plates welded or flanged no Description of riveting: circ. seams end 5/8" inter. 1/2"

long. seams DBS. TR Diameter of rivet holes in circ. seams 13/16" long. seams 13/16" Pitch of rivets 2.284" 5 7/8"

Percentage of strength of circ. end seams plate 64.4 rivets 56.8 Percentage of strength of circ. intermediate seam plate 82.19 rivets 94.5

Percentage of strength of longitudinal joint plate 82.19 rivets 94.5 combined 92 Working pressure of shell by Rules 115

Thickness of butt straps outer 3" inner 5/8" No. and Description of Furnaces in each Boiler two plain

Material steel Tensile strength 26-30 tons Smallest outside diameter 46.56"

Length of plain part top 6'-1" bottom 6'-9 3/8" Thickness of plates crown 2 3/32" bottom 2 3/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 131

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1" Pitch of stays 25" x 14"

How are stays secured W.N. Working pressure by Rules 110

Tube plates: Material front steel back steel Tensile strength 26-30 tons Thickness 13/16" 1 1/16"

Lean pitch of stay tubes in nests 12 1/4" Pitch across wide water spaces 14 1/2" Working pressure front 116 back 142

Girders to combustion chamber tops: Material steel Tensile strength 26-30 tons Depth and thickness of girder

at centre 2 @ 7 1/2" x 9" Length as per Rule 31 3/4" Distance apart 9" No. and pitch of stays

in each 2 @ 10 1/8" Working pressure by Rules 114 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 2 1/32"

Pitch of stays to ditto: Sides 9" x 10 1/8" Back 9" x 10 1/4" Top 9" x 10 1/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 116 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 13/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 5/8"

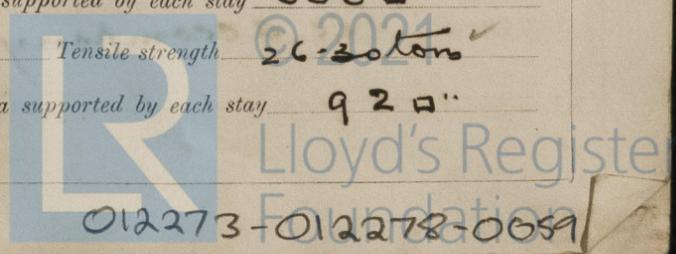
Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over nuts

Working Pressure 116 Main stays: Material steel Tensile strength 28-32 tons

Diameter At body of stay, 2 1/4" or Over threads No. of threads per inch 6 Area supported by each stay 350 sq"

Working pressure by Rules 126 Screw stays: Material steel Tensile strength 26-30 tons

Diameter At turned off part, 1 1/2" or Over threads No. of threads per inch 10 Area supported by each stay 92 sq"



Working pressure by Rules 1360" Are the stays drilled at the outer ends Margin stays: Diameter { At turned off part, or Over threads 1 5/8" =

No. of threads per inch 10 Area supported by each stay 107 1/2" Working pressure by Rules 142

Tubes: Material Iron External diameter { Plain 3 1/2" Thickness { 9 W.S. - No. of threads per inch 9

Pitch of tubes 4 1/2 x 4 3/8" Working pressure by Rules 180 Manhole compensation: Size of opening

shell plate 19 x 15" Section of compensating ring 6 1/2" x 2 1/2" flanged No. of rivets and diameter of rivet holes 38 @ 1 3/16"

Outer row rivet pitch at ends 5 9/64" Depth of flange if manhole flanged 3" Steam Dome: Material none

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

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

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 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

The foregoing is a correct description,
for David Rowan & Co. Ltd.
Arch^d W. Grierson Manufacturer.

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

{ During erection on board vessel - - - Total No. of visits

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

The materials and workmanship are good
The boiler has been constructed under special Survey in accordance with the Rules. It has been satisfactorily fitted in the vessel and its safety valves adjusted under steam.

Survey Fee ... £ 4 : 4 : When applied for, 1/6/1925

Travelling Expenses (if any) £ : : When received, 5/10/1925

D. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 - JUN 1925

Assigned See accompanying machinery report.



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