

REPORT ON BOILERS.

No. 20244.

Received at London Office

21 OCT 1936

Date of writing Report 19. 9 1936 When handed in at Local Office 16th OCTOBER. 1936 Port of GreenockNo. in Survey held at Greenock Date, First Survey 16th JANUARY. 1936 Last Survey 14th OCTOBER. 1936on the S/S "Arabian Prince" (Number of Visits ✓) Tons } Gross 1959.65
Net 1035.09

Master Built at P. Glasgow By whom built W. Hamilton & Co. Yard No. 425 When built 1936

Engines made at Greenock By whom made John & T. McCand. & Co. Engine No. 649 When made 1936

Boilers made at Greenock By whom made John & T. McCand. & Co. Boiler No. 649 When made 1936

Nominal Horse Power Owners Prince Louis & Furness & Co. Ltd. Port belonging to London.
Mannagon

MULTITUBULAR BOILERS—MAIN, ~~HEATING~~ OR DONKEY

Manufacturers of Steel Calville & Stal Co of Scotland. (Letter for Record S)

Total Heating Surface of Boilers 4900 sq ft Is forced draught fitted yes Coal or Oil fired Coal

No. and Description of Boilers 2 Single Ended Working Pressure 220

Tested by hydraulic pressure to 380 Date of test 26. 6. 36 No. of Certificate 2061 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 60.5 sq ft No. and Description of safety valves to each boiler 2 Cockle valves Improved High Lift

Area of each set of valves per boiler { per Rule 6.5 sq ft as fitted 7.95 sq ft Pressure to which they are adjusted 22.5 Are they fitted with easing gear yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork 6'-0" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 15" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 14'-9 1/8" Length 12'-0" Shell plates: Material S Tensile strength 29.33

Thickness 1 7/16" Are the shell plates welded or flanged yes Description of riveting: circ. seams { end 0.12 inter. 4.249

long. seams T R O D B S Diameter of rivet holes in { circ. seams 1 15/32 long. seams 1 7/16 Pitch of rivets { 9 3/4

Percentage of strength of circ. end seams { plate 65-4 rivets 44 Percentage of strength of circ. intermediate seam { plate 85-2 rivets 86-0

Percentage of strength of longitudinal joint { plate 86-0 rivets 84.6 Working pressure of shell by Rules 224

Thickness of butt straps { outer 1 3/32 inner 1 7/32 No. and Description of Furnaces in each Boiler 3 Deightons

Material S Tensile strength 26-30 Smallest outside diameter 3'-9 3/8"

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

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 222

End plates in steam space: Material S Tensile strength 26-30 Thickness 1 5/16" Pitch of stays 20'-18"

How are stays secured DN Washers Working pressure by Rules 223

Tube plates: Material { front S back Tensile strength { 26-30 Thickness { 1 5/16 2 5/32

Mean pitch of stay tubes in nests 9'-2 1/2" Pitch across wide water spaces 14" Working pressure { front 228 back 239

Girders to combustion chamber tops: Material S Tensile strength 29-33 Depth and thickness of girder at centre 22'-11 1/4" 3 1/4" Length as per Rule 3'-0 3/4" Distance apart 9 3/8" No. and pitch of stays in each 32'-8 5/8" Working pressure by Rules 230 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 23/32" Back 1 1/16" Top 23/32" Bottom 13/16"

Pitch of stays to ditto: Sides 8 5/8" 9" Back 8 1/4" 9" Top 8 5/8" 9 3/8" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 223 Front plate at bottom: Material S Tensile strength 26-30

Thickness 1 5/16" Lower back plate: Material S Tensile strength 26-30 Thickness 7/8"

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

Working Pressure 226 Main stays: Material S Tensile strength 28-32

Diameter { At body of stay, or Over threads 3 1/4" No. of threads per inch 6 Area supported by each stay 360 sq in

Working pressure by Rules 250 Screw stays: Material S Tensile strength 26-30

Diameter { At turned off part, or Over threads 1 3/4" 1 7/8" No. of threads per inch 9 Area supported by each stay 44.25 sq in

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Lloyd's Register
Foundation

Working pressure by Rules 224 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part. 1 7/8" }
 No. of threads per inch 9 Area supported by each stay 96.45 sq. in. Working pressure by Rules 221
 Tubes: Material Iron External diameter { Plain } 3" Thickness { 8 WG } 3/8 9/32 11/32 No. of threads per inch 9
 Pitch of tubes 4 1/4 x 4 1/8 Working pressure by Rules 234 Manhole compensation: Size of opening in
 shell plate 20 1/2 x 16 1/2 Section of compensating ring 3-1 x 2 8 1/2 x 1 1/8 No. of rivets and diameter of rivet holes 42 at 1 5/8 x 3/2
 Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 3 1/2" 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 }
 Internal diameter Working pressure by Rules Thickness of crown Rivets 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 Superheating Co. Manufacturers of Tubes Superheating Co.
 Number of elements - Material of tubes - Internal diameter and thickness of tubes 16 1/2 x 2.5 mm
 Material of headers For particulars of Superheating Co. see Manchester Ref. No. 815-6 attached
 the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off and
 Area of each safety valve 6.283 sq. in. Are the safety valves fitted with easing gear yes Working pressure as per
 Rules Pressure to which the safety valves are adjusted 220 Hydraulic test pressure:
 tubes 1000 lb. castings 660 and after assembly in place 440 Are drain cocks or 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

The foregoing is a correct description,
 For JOHN G. KINCAID & CO. LIMITED.
 Robert Green Director. Manufacturer.

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - }
 SEE MACHINERY REPORT
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 Total No. of visits

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 approved plans & the workmanship & material are of good quality. They have now been securely fitted on board. This Report accompanies that of the Machinery.

Survey Fee charged on Machinery Ref. When applied for, 19
 Travelling Expenses (if any) £ When received, 19

W. Gordon. Muirhead
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 20 OCT 1956
 Assigned THE ACCOMPANYING MACHINERY REPORT.