

## REPORT ON BOILERS.

No. 28958

Date of writing Report 24<sup>th</sup> Nov 1924 When handed in at Local Office 24<sup>th</sup> Nov 1924 Port of Sunderland  
 Received at London Office 29 NOV 1924  
 No. in Reg. Book. Survey held at Sunderland Date, First Survey ✓ Last Survey 21<sup>st</sup> Nov 1924  
 on the new steel S.S. "ROYAL MOOR" (Number of Visits ✓) Gross 1906.91 Tons Net 1089.17  
 Master ✓ Built at Sunderland By whom built Messrs John Brown & Co. Ltd No. 176 When built 1924  
 Engines made at Sunderland By whom made North Eastern Marine Eng. Co. Engine No. 2565 When made 1924  
 Boilers made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd Boiler No. 2565 When made 1924  
 Nominal Horse Power 216 Owners Moore Line Ltd Port belonging to Newcastle  
 (Manager) Messrs Walter Runciman & Co. Ltd

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

Manufacturers of Steel The Steel Co. of Scotland (Letter for Record (S))  
 Total Heating Surface of Boilers 3594 Is forced draught fitted No Coal or Oil fired coal  
 No. and Description of Boilers Two Cylindrical Simple End 258 Working Pressure 180 lbs  
 Tested by hydraulic pressure to 320 lbs Date of test 20-6-24 No. of Certificate 3886 Can each boiler be worked separately Yes  
 Area of Firegrate in each Boiler 46 No. and Description of safety valves to each boiler Two - Direct Spring loaded  
 Area of each set of valves per boiler {per Rule 11.52 as fitted 11.86 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes  
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler not so fitted  
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" Is oil fuel carried in the double bottom under boilers ✓  
 Smallest distance between shell of boiler and tank top plating 22" Is the bottom of the boiler insulated No  
 Largest internal dia. of boilers 13'-6 3/4" Length 11'-0" Shell plates: Material Steel Tensile strength 28 to 32 tons  
 Thickness 1 1/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. LAP inter. ✓  
 long. seams T.R. D.B.S. Diameter of rivet holes in {circ. seams 1 5/32" long. seams 1 5/32" Pitch of rivets { 3 1/2" 8 3/8"  
 Percentage of strength of circ. end seams {plate 61.4 rivets 43.9 Percentage of strength of circ. intermediate seam {plate ✓ rivets ✓  
 Percentage of strength of longitudinal joint {plate 86.1 rivets 85.5 combined 89.4 Working pressure of shell by Rules 181  
 Thickness of butt straps {outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 - Dighton  
 Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 35 5/32"  
 Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 29" bottom 64" Description of longitudinal joint Welded  
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 184  
 End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1 1/4" Pitch of stays 24 x 18"  
 How are stays secured Double nuts and washers Working pressure by Rules 182  
 Tube plates: Material {front Steel back Steel Tensile strength { 26 to 30 tons Thickness { 7/8" 3/4"  
 Mean pitch of stay tubes in nests 9 1/8" x 9" Pitch across wide water spaces 14 1/2" Working pressure {front 187 back 193  
 Girders to combustion chamber tops: Material Steel Tensile strength 28 to 32 tons Depth and thickness of girder  
 at centre 2 @ 8" x 13/16" Thick Length as per Rule 32 5/32" Distance apart 9" No. and pitch of stays  
 in each 2 @ 10 1/8" Working pressure by Rules 189 Combustion chamber plates: Material Steel  
 Tensile strength 26 to 30 tons Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32"  
 Pitch of stays to ditto: Sides 1 1/2" x 10 1/8" Back 11" x 10 1/2" Top 9" x 10 1/8" Are stays fitted with nuts or riveted over Nuts in C.C. back plate  
 Working pressure by Rules 182 Front plate at bottom: Material Steel Tensile strength 26 to 30 tons  
 Thickness 7/8" Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 29/32"  
 Pitch of stays at wide water space 14 1/2" x 10 1/2" Are stays fitted with nuts or riveted over Nuts  
 Working Pressure 210 Main stays: Material Steel Tensile strength 28 to 32 tons  
 Diameter {At body of stay, 3 1/8" or Over threads ✓ No. of threads per inch 6 Area supported by each stay 432 sq. in.  
 Working pressure by Rules 197 Screw stays: Material Steel Tensile strength 26 to 30 tons  
 Diameter {At turned off part, ✓ or Over threads 1 7/8" No. of threads per inch 9 Area supported by each stay 118



REPORT ON BOILERS

Working pressure by Rules 180 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads 2" ✓

No. of threads per inch 9 ✓ Area supported by each stay 135" Working pressure by Rules 183

Tubes: Material Woot Iron ✓ External diameter { Plain 3 3/4" ✓ Stay 3 3/4" ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9 ✓

Pitch of tubes 4 9/16" x 4 1/2" ✓ Working pressure by Rules 230 ✓ Manhole compensation: Size of opening in End plate 16" x 12" ✓ Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓

Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 3 1/4" ✓ 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 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 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

FOR THE NORTH EASTERN MARINE ENGINEERS OF LONDON  
The foregoing is a correct description.  
C. T. Adams  
Manufacturer.

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

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

The materials and workmanship are good  
The boilers have been constructed under special survey  
and satisfactorily fixed in the vessel.

Survey Fee ... .. £ Charged on Machinery Report When applied for. 192  
Travelling Expenses (if any) £ When received. 192

George Anderson  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 2 DEC 1924

Assigned



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Foundation