

REPORT ON BOILERS.

No. 79416

Received at London Office 22 JUL 1925

Date of writing Report 1925 When handed in at Local Office 1925 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Newcastle-on-Tyne Date, First Survey Nov 11th 1924 Last Survey 6 July 1925
 on the steel screw steamer *Princesse Marie José* (Number of Visits) Gross 2494 ^{app} Tons Net 1538
 Master *Swan Hunter* Built at Newcastle By whom built *Wigham Richardson* Yard No. 1267 When built 1925
 Engines made at Newcastle By whom made *Mallouin Shipways, Eng. Co. Ltd* Engine No. 860 When made 1925
 Boilers made at Newcastle By whom made *Mallouin Shipways, Eng. Co. Ltd* Boiler No. 860 When made 1925
 Nominal Horse Power 283 Owners *Ocean Ac Mon Belge* Port belonging to *Antwerp*
d'armement et de navigation

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Saints Colville & Co. Ltd.* (Letter for Record *S.*)
 Total Heating Surface of Boilers *4462 sq ft* Is forced draught fitted *No* Coal or Oil fired *Coal*
 No. and Description of Boilers *3 Single Ended Multitubular* Working Pressure *180 lbs*
 Tested by hydraulic pressure to *320* Date of test *5.3.25* No. of Certificate *9903* Can each boiler be worked separately *Yes*
 Area of Firegrate in each Boiler *45 sq ft* No. and Description of safety valves to each boiler *2 Spring loaded*
 Area of each set of valves per boiler {per Rule *13.4* *9.96* as fitted *7.94* Pressure to which they are adjusted *180* Are they fitted with easing gear *Yes*
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *No donkey boiler*
 Smallest distance between boilers or uptakes and bunkers or woodwork *27"* Is oil fuel carried in the double bottom under boilers *No*
 Smallest distance between shell of boiler and tank top plating *24"* Is the bottom of the boiler insulated *Yes*
 Largest internal dia. of boilers *12-9 7/8"* Length *10-6"* Shell plates: Material *steel* Tensile strength *28-32 tons*
 Thickness *1 7/16"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams {end *double lap* inter. *none*
 long. seams *butt straps* Diameter of rivet holes in {circ. seams *1 1/8"* Pitch of rivets {*3.58"* long. seams *1 1/8"*
 Percentage of strength of circ. end seams {plate *68.6* rivets *-* Percentage of strength of circ. intermediate seam {plate *none* rivets *-*
 Percentage of strength of longitudinal joint {plate *85.93* rivets *90.00* combined *90.00* Working pressure of shell by Rules *182.5*
 Thickness of butt straps {outer *1 5/16"* inner *1 1/2"* No. and Description of Furnaces in each Boiler *2 Heightons*
 Material *steel* Tensile strength *26-30 tons* Smallest outside diameter *46 1/4"*
 Length of plain part {top *-* bottom *-* Thickness of plates {crown *1 1/2"* bottom *3/32"* Description of longitudinal joint *Welded*
 Dimensions of stiffening rings on furnace or c.c. bottom *none* Working pressure of furnace by Rules *187 lbs*
 End plates in steam space: Material *steel* Tensile strength *26-30 tons* Thickness *1 1/16"* Pitch of stays *19 1/2" x 18 1/2"*
 How are stays secured *double into* Working pressure by Rules *181.5 lbs*
 Tube plates: Material {front *steel* back *"* Tensile strength {*26-30 tons* Thickness {*1 1/16"*
 Mean pitch of stay tubes in nests *11 1/8"* Pitch across wide water spaces *14" x 8 3/4"* Working pressure {front *184 lbs* back *192 "*
 Girders to combustion chamber tops: Material *steel* Tensile strength *28-32 tons* Depth and thickness of girder
 at centre *7 1/2" x 1 1/2"* Length as per Rule *29 3/8"* Distance apart *9"* No. and pitch of stays
 in each *2-9 1/8"* Working pressure by Rules *187 lbs* Combustion chamber plates: Material *steel*
 Tensile strength *26-30 tons* Thickness: Sides *3/32"* Back *21/32"* Top *3/32"* Bottom *3/4"*
 Pitch of stays to ditto: Sides *9 1/8" x 9"* Back *9 1/8" x 9"* Top *9 1/8" x 9"* Are stays fitted with nuts or riveted over *into*
 Working pressure by Rules *183 lbs* Front plate at bottom: Material *steel* Tensile strength *26-30 tons*
 Thickness *1"* Lower back plate: Material *steel* Tensile strength *26-30* Thickness *1 3/16"*
 Pitch of stays at wide water space *14 x 9 1/8"* Are stays fitted with nuts or riveted over *into*
 Working Pressure *193 lbs* Main stays: Material *steel* Tensile strength *28-32 tons*
 Diameter {At body of stay, *3"* No. of threads per inch *6* Area supported by each stay *370 sq"*
 Working pressure by Rules *182 lbs* Screw stays: Material *steel* Tensile strength *26-30 tons*
 Diameter {At turned off part, *1 5/8"* No. of threads per inch *9* Area supported by each stay *82 sq"*

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Working pressure by Rules ²⁴ 185 Are the stays drilled at the outer ends ²⁰ 20 Margin stays: Diameter { At turned off part, or Over threads } 1 1/8" ✓
 No. of threads per inch 9 Area supported by each stay 104.5 sq. in. Working pressure by Rules 203 lbs ✓
 Tubes: Material ²⁴ Mt. Lion External diameter { Plain 3 1/2" ✓ Stay 3 1/4" ✓ } Thickness { 5/16" x 1/4" ✓ } No. of threads per inch 9 ✓
 Pitch of tubes 4 1/2" x 4 1/8" (15 1/2" x 8 1/4") Working pressure by Rules Plain 230 stay 181.5 lbs Manhole compensation: Size of opening in shell plate 19" x 15" ✓ Section of compensating ring 36" x 30" x 1 1/8" ✓ No. of rivets and diameter of rivet holes 40 - 1 1/8" ✓
 Outer row rivet pitch at ends 8" ✓ Depth of flange if manhole flanged 20" ✓ 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 none 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 ²⁴ Yes ✓

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

The foregoing is a correct description,

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

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

These Boilers were constructed under Special Survey. The materials & workmanship are sound and good. They were constructed to approved plan, and to the Society's rules. They were tested satisfactorily by hydraulic pressure and the safety valves were adjusted under steam. In my opinion the Boilers are eligible for classification.

Survey Fee £

Travelling Expenses (if any) £

When applied for,

192

When received,

192

Maurice Nelson

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 28 JUL 1925

Assigned



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