

REPORT ON BOILERS.

No. 95531

Received at London Office 15 JUN 1929

Date of writing Report *June 8th 1929* When handed in at Local Office *14 JUNE 1929* Port of *LIVERPOOL*

No. in Survey held at *Birkenhead* Date, First Survey *Feby 12th* Last Survey *June 5th 1929*
 Book. *622* on the *S. S. 'Peveril'* (Number of Visits *49*) (Gross Tons *798*) (Net Tons *320*)

Builder *Birkenhead* By whom built *John Cammell & Co. Ltd* Yard No. *957* When built *1929*
 Engines made at *Birkenhead* By whom made *Cammell Laird & Co. Ltd* Engine No. *957* When made *1929*
 Boilers made at *Birkenhead* By whom made *Cammell Laird & Co. Ltd* Boiler No. *957* When made *1929*
 Nominal Horse Power *208* Owners *Telegraph Steam Packet Co* Port belonging to *Douglas S. of M.*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *David Colville* (Letter for Record *(r)*)
 Total Heating Surface of Boilers *4340 sq ft* Is forced draught fitted *no* Coal or Oil fired *Coal*
 No. and Description of Boilers *Two Cylindrical Multitubular* Working Pressure *200 lb sq in*
 Tested by hydraulic pressure to *350 lb sq in* Date of test *5/4/29* No. of Certificate *2331* Can each boiler be worked separately *Yes*
 Area of Firegrate in each Boiler *65 sq ft* No. and Description of safety valves to each boiler *Two spring loaded*
 Area of each set of valves per boiler *per Rule 1.94 sq ft* Pressure to which they are adjusted *200 lb sq in* 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 *2'-1"* Is oil fuel carried in the double bottom under boilers *✓*
 Smallest distance between shell of boiler and tank top plating *✓* Is the bottom of the boiler insulated *no*
 Largest internal dia. of boilers *15'-0"* Length *10'-9"* Shell plates: Material *Steel* Tensile strength *28-32 tons sq in*
 Thickness *1 3/8"* Are the shell plates welded or flanged *no* Description of riveting: circ. seams *DR lap*
 long. seam *Double Butts* Diameter of rivet holes in *circ. seams 1 1/16"* Pitch of rivets *3.85"*
 Percentage of strength of circ. end seams *plate 62.6* Percentage of strength of circ. intermediate seam *plate 50.3*
 Percentage of strength of longitudinal joint *plate 85.* Working pressure of shell by Rules *202 lb sq in*
 Thickness of butt straps *outer 1 1/16"* No. and Description of Furnaces in each Boiler *3 Corrugated* 3.C.F.
 Material *Steel* Tensile strength *26-30 tons sq in* Smallest outside diameter *3'-8 3/4"*
 Length of plain part *top 1 1/2"* Thickness of plates *bottom 5/8"* Description of longitudinal joint *weld.*
 Dimensions of stiffening rings on furnace or c.c. bottom *none* Working pressure of furnace by Rules *212 lb sq in*
 End plates in steam space: Material *Steel* Tensile strength *26-30 tons sq in* Thickness *1 1/4"* Pitch of stays *21 x 19 1/2"*
 How are stays secured *Double nuts & plain washers* Working pressure by Rules *204 lb sq in*
 Tube plates: Material *front Steel* Tensile strength *26-30 tons sq in* Thickness *1"*
 Mean pitch of stay tubes in nests *9'-9"* Pitch across wide water spaces *13 3/4"* Working pressure *front 278 lb sq in*
 Girders to combustion chamber tops: Material *Steel* Tensile strength *28-32 tons sq in* Depth and thickness of girder *back 284 lb sq in*
 at centre *8 1/2 x 20 29/32"* Length as per Rule *2'-7 7/16"* Distance apart *9 7/8"* No. and pitch of stays
 in each *Two at 7 7/8"* Working pressure by Rules *210 lb sq in* Combustion chamber plates: Material *Steel*
 Tensile strength *26-30 tons sq in* Thickness: Sides *1/16"* Back *1/16"* Top *1/16"* Bottom *7/8"*
 Pitch of stays to ditto: Sides *9 1/2 x 7 7/8"* Back *9 3/4 x 7 3/4"* Top *9 7/8 x 7 7/8"* Are stays fitted with nuts or riveted over *nuts*
 Working pressure by Rules *212 lb sq in* Front plate at bottom: Material *Steel* Tensile strength *26-30 tons sq in*
 Thickness *1"* Lower back plate: Material *Steel* Tensile strength *26-30 tons sq in* Thickness *7/8"*
 Pitch of stays at wide water space *14 3/4 x 7 3/4"* Are stays fitted with nuts or riveted over *nuts*
 Working Pressure *225 lb sq in* Main stays: Material *Steel* Tensile strength *28-32 tons sq in*
 Diameter *At body of stay, 3 3/8"* No. of threads per inch *6* Area supported by each stay *410 sq in*
 Working pressure by Rules *214 lb sq in* Screw stays: Material *Lowmoor Iron* Tensile strength *21 1/2 tons sq in*
 Diameter *At turned off part, 1 9/8"* No. of threads per inch *9* Area supported by each stay *75 lb sq in*

Working pressure by Rules **203 1/2** Are the stays drilled at the outer ends **ho** Margin stays: Diameter ^{At turn of part.} **1 7/8**
 No. of threads per inch **9** Area supported by each stay **950** Working pressure by Rules **224 1/2**
 Tubes: Material **Prime Iron** External diameter ^{Plain} **2 3/4** Thickness **1/8** No. of threads per inch **9**
 Pitch of tubes **4 x 3 7/8** Working pressure by Rules **234 1/2** Manhole compensation: Size of opening in
 shell plate **2 1/4 x 17 1/4** Section of compensating ring **Ring 2' 10" x 1 7/16** No. of rivets and diameter of rivet holes **44 2 1/16**
 Outer row rivet pitch at ends **9 7/8** Depth of flange if manhole flanged **3 1/4** Steam Dome: Material **Iron**
 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 ☒ 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} ☒
 Number of elements ☒ Material of tubes ☒ ^{Steel castings} ☒
 Material of headers ☒ Tensile strength ☒ Internal diameter and thickness of tubes ☒
 the boiler be worked separately ☒ Thickness ☒ Can the superheater be shut off and
 Area of each safety valve ☒ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ☒
 Rules ☒ Are the safety valves fitted with easing gear ☒ Working pressure as per
 tubes ☒ Pressure to which the safety valves are adjusted ☒ Hydraulic test pressure:
 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 22 inclusive for boilers been complied with **Yes**

JAMMELL LAIRD AND COMPANY LIMITED
 The foregoing is a correct description,
J. W. Laird Manufacturer.

Dates of Survey ^{During progress of} ☒
 while ^{work in shops --} ☒
 building ^{During erection on} ☒
 board ^{board as set --} ☒

Are the approved plans of boiler and superheater forwarded herewith
 (If not state date of approval.)
 Total No. of visits **49**

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

These boilers have been constructed in accordance with the Rules and the approved plan. On completion they were satisfactorily fitted on board and examined under steam.

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

J. J. Milton
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **LIVERPOOL 14 JUNE 1929**

Assigned *See accompanying Machinery list.*