

REPORT ON BOILERS.

No. 88816

Received at London Office 29 JUL 1925

Date of writing Report

192

When handed in at Local Office

27 JUL 1925

Port of

LIVERPOOL

No. in
Surrey held at
Book.

Birkenhead

Date, First Survey

16th January

Last Survey

26th July

1925

25053 on the

s/s "La Perla"

(Number of Visits

1

Gross 3830

Tons Net 2340

ester

Built at

Birkenhead

By whom built

Cammell, Laird & Co. Ltd.

Yard No.

896 When built

1925

Engines made at

Birkenhead

By whom made

Cammell, Laird & Co. Ltd.

Engine No.

2122 When made

1925

Boilers made at

Birkenhead

By whom made

Cammell, Laird & Co. Ltd.

Boiler No.

2122 When made

1925

Nominal Horse Power

578

Owners Unifruit Co. Ltd. (Black & Green, Agents)

Port belonging to

Glasgow

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *D. Colville & Sons, Ltd., Carl of Dudley's Round Oak Works* ✓ (Letter for Record *S* ✓)

Total Heating Surface of Boilers *920 sq. ft.* Is forced draught fitted *Yes* ✓ Coal or Oil fired *Oil* ✓

No. and Description of Boilers *3 - Single Ended Multitubular Cylindrical* ✓ Working Pressure *200 lb* ✓

Tested by hydraulic pressure to *350* ✓ Date of test *29/5/25* ✓ No. of Certificate *2248* ✓ *2249* ✓ *2250* ✓ Can each boiler be worked separately *Yes* ✓

Area of Firegrate in each Boiler *Oil fired* ✓ No. and Description of safety valves to each boiler *2 - Spring loaded* ✓

Area of each set of valves per boiler *per Rule 21.4 sq. ins.* ✓ Pressure to which they are adjusted *205 lb.* ✓ 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 *16"* ✓ Is oil fuel carried in the double bottom under boilers *Yes* ✓

Smallest distance between shell of boiler and tank top plating *19"* ✓ Is the bottom of the boiler insulated *Yes* ✓

Largest internal dia. of boilers *16' 1/2"* ✓ Length *12' 2"* ✓ Shell plates: Material *Steel* ✓ Tensile strength *29 1/2 / 33 1/2 tons* ✓

Thickness *1 5/32"* ✓ Are the shell plates welded or flanged *No* ✓ Description of riveting: circ. seams *end 21.2* ✓ *inter. 3.926* ✓

Long. seams *T.R. - Double butt straps* ✓ Diameter of rivet holes in *circ. seams 1 1/2"* ✓ *long. seams 1 1/2"* ✓ Pitch of rivets *10 3/4"* ✓

Percentage of strength of circ. end seams *plate 61.8* ✓ *rivets 47.8* ✓ Percentage of strength of circ. intermediate seam *plate* ✓ *rivets* ✓

Percentage of strength of longitudinal joint *plate 85.27* ✓ *rivets 86.37* ✓ *combined 87.8* ✓ Working pressure of shell by Rules *212.7 lb.* ✓

Thickness of butt straps *outer 1/4"* ✓ *inner 1/2"* ✓ No. and Description of Furnaces in each Boiler *4 - Corrugated (Deighton)* ✓

Material *Steel* ✓ Tensile strength *26/30 tons* ✓ Smallest outside diameter *3' 8 1/2"* ✓

Length of plain part *top* ✓ *bottom* ✓ Thickness of plates *top 9/32"* ✓ *bottom 9/32"* ✓ Description of longitudinal joint *Weld* ✓

Dimensions of stiffening rings on furnace or c.c. bottom *Yes* ✓ Working pressure of furnace by Rules *210 lb* ✓

Stays in steam space: Material *Steel* ✓ Tensile strength *26/30 tons* ✓ Thickness *1 3/32"* ✓ Pitch of stays *18" x 16 1/2"* ✓

Are stays secured *Double nuts & washers* ✓ Working pressure by Rules *214 lb* ✓

Stays plates: Material *front Steel* ✓ *back Steel* ✓ Tensile strength *26/30 tons* ✓ Thickness *1"* ✓ *1 3/8"* ✓

Pitch of stay tubes in nests *10 7/8" x 7 1/2"* ✓ Pitch across wide water spaces *13 1/2"* ✓ Working pressure *front 559 lb* ✓ *back 281 lb* ✓

Boilers to combustion chamber tops: Material *Steel* ✓ Tensile strength *28/32 tons* ✓ Depth and thickness of girder

Centre *10 7/8" - 2' 2 3/32"* ✓ Length as per Rule *36 7/8"* ✓ Distance apart *8"* ✓ No. and pitch of stays

Each *3' - 9 1/2"* ✓ Working pressure by Rules *268 lb* ✓ *265* ✓ Combustion chamber plates: Material *Steel* ✓

Tensile strength *26/30 tons* ✓ Thickness: Sides *2 1/32"* ✓ Back *5/8"* ✓ Top *2 1/32"* ✓ Bottom *7/8"* ✓

Height of stays to ditto: Sides *8" x 9 1/8"* ✓ Back *8 1/2" x 7 1/2"* ✓ Top *8" x 9 1/8"* ✓ Are stays fitted with nuts or riveted over *Nuts* ✓

Working pressure by Rules *204 lb* ✓ Front plate at bottom: Material *Steel* ✓ Tensile strength *26/30 tons* ✓

Thickness *1"* ✓ Lower back plate: Material *Steel* ✓ Tensile strength *26/30 tons* ✓ Thickness *7/8"* ✓

Height of stays at wide water space *13 1/2" x 8 1/4"* ✓ Are stays fitted with nuts or riveted over *Nuts* ✓

Working Pressure *237 lb* ✓ Main stays: Material *Steel* ✓ Tensile strength *28/32 tons* ✓

At body of stay, *meter* *3 1/2"* ✓ No. of threads per inch *6* ✓ Area supported by each stay *297 sq. ins.* ✓

Over threads *meter* *247 lb* ✓ Screw stays: Material *Steel* ✓ Tensile strength *26/30 tons* ✓

At turned off part, *meter* *1 5/8"* ✓ No. of threads per inch *9* ✓ Area supported by each stay (wrapping) *73 sq. ins.* ✓

Working pressure by Rules 200 lb Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 86.6 sq. in. Working pressure by Rules 209 lb Tubes: Material Iron External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 5/16", 3/8", 1/2" No. of threads per inch 9 Pitch of tubes 32 1/4" x 3 5/8" Working pressure by Rules 230 lb (Lamin 200 lb) Manhole compensation: Size of opening in shell plate 22" x 18" Section of compensating ring No. 1 Rail No. of rivets and diameter of rivet holes 40 - 1 1/2" Outer row rivet pitch at ends 10 5/8" Depth of flange if manhole flanged 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 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

CAMMELL LARSEN AND COMPANY LIMITED
J. W. S. L. and
LOCAL SECRETARY.

Dates { During progress of work in shops - - - }
of Survey { During erection on board vessel - - - }
while building {
Description machy.

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 have been built under Special Survey and in accordance with the approved plan and the Secretary's letter (E) of 16/1/25
The materials and workmanship are good and when tested under hydraulic pressure to 350 lb per sq. inch, the boilers were found tight and satisfactory in every respect.
The Boilers have been securely fitted on board, examined under steam and safety valves adjusted for the working pressure of 200 lb per sq. inch

Survey Fee ... £ See Machinery report. When applied for, 192
Travelling Expenses (if any) £ When received, 192

B. G. Oxford
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 28 JUL 1925
Assigned See Machinery rpt. 1177