

REPORT ON BOILERS.

No. 81896

10 OCT 1927

Received at London Office

8 OCT 1927

of writing Report *1 Oct 27* When handed in at Local Office

Port of *Newcastle on Tyne*

Date, First Survey *4th May* Last Survey *29 Sept 1927*

Survey held at *Walker* (Number of Visits *—*) Gross Tons *5075*

on the *Steel Screw steamer "PRUNUS" EX. MV city of Stockholm* Net Tons *3155*

Built at *Glasgow* By whom built *Barclay Curle & Co Ltd* Yard No. *—* When built *1925-8*

Engines made at *Walker on Tyne* By whom made *Swan Hunter W. Richardson & Co Ltd* Engine No. *1246* When made *1925-8*

Boilers made at *Walker on Tyne* By whom made *Swan Hunter W. Richardson & Co Ltd* Boiler No. *1246* When made *1925-8*

Indicated Horse Power *504* Owners *Veneta Shipping Co Ltd* Port belonging to *LONDON*
Holland Trust Ltd

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Plates, *Steel Coy of Scotland, Furnaces, Doughton & Co Ltd* (Letter for Record *S V*)

Total Heating Surface of Boilers *7410 sq ft* Is forced draught fitted *yes* Coal or Oil fired *either*

No. and Description of Boilers *3 S.E. Cylindrical Multitubular* Working Pressure *200 lb*

Tested by hydraulic pressure to *350* Date of test *20.7.27* No. of Certificate *168* Can each boiler be worked separately *yes*

Area of Firegrate in each Boiler *60 sq ft* No. and Description of safety valves to each boiler *two direct spring, High Lift 2 1/2 dia*

Area of each set of valves per boiler *8.74 sq ft* Pressure to which they are adjusted *200 lb* Are they fitted with easing gear *yes*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *none, no dr.*

Smallest distance between boilers or uptakes and bunkers or woodwork *21"* Is oil fuel carried in the double bottom under boilers *yes*

Smallest distance between shell of boiler and tank top plating *2'-0"* Is the bottom of the boiler insulated *yes*

Largest internal dia. of boilers *14'-9 7/16"* Length *11'-9"* Shell plates: Material *Steel* Tensile strength *30/34 tons*

Thickness *19/32"* Are the shell plates welded or flanged *no* Description of riveting: circ. seams *end D R L A P*

Long. seams *TR.D.B.S* Diameter of rivet holes in *circ. seams 17/16"* Pitch of rivets *9"*

Percentage of strength of circ. end seams *plate 68.25%* Percentage of strength of circ. intermediate seam *rivets 42.89%*

Percentage of strength of longitudinal joint *plate 85.41%* Working pressure of shell by Rules *202 lb*

Thickness of butt straps *outer 31/32"* No. and Description of Furnaces in each Boiler *3 Corrugated Doughton, Furnace*

Material *steel* Tensile strength *26/30 tons* Smallest outside diameter *3'-8 1/8"*

Length of plain part *top* Thickness of plates *bottom 5/8"* Description of longitudinal joint *weld*

Dimensions of stiffening rings on furnace or e.c. bottom *Working pressure of furnace by Rules 206 lb*

End plates in steam space: Material *Steel* Tensile strength *26/30 tons* Thickness *19/32"* Pitch of stays *20" x 19"*

How are stays secured *double nuts and washers* Working pressure by Rules *201 lb*

Tube plates: Material *front steel* Tensile strength *26/30 tons* Thickness *13/16"*

Mean pitch of stay tubes in nests *9 3/8"* Pitch across wide water spaces *13 1/2"* Working pressure *front 209 lb*

Girders to combustion chamber tops: Material *Steel* Tensile strength *28/32 tons* Depth and thickness of girder *back 270 lb*

at centre *9 1/8" x 1 1/2"* Length as per Rule *31.53"* Distance apart *9"* No. and pitch of stays

in each *2 of 10" pitch* Working pressure by Rules *202 lb* Combustion chamber plates: Material *Steel*

Tensile strength *26/30 tons* Thickness: Sides *3/4"* Back *C 21/32"* Top *3/4"* Bottom *3/4"*

Pitch of stays to ditto: Sides *9 1/2" x 8"* Back *9 1/2" x 8 1/4"* Top *10" x 9"* Are stays fitted with nuts or riveted over *nuts*

Working pressure by Rules *201 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 *31/32"*

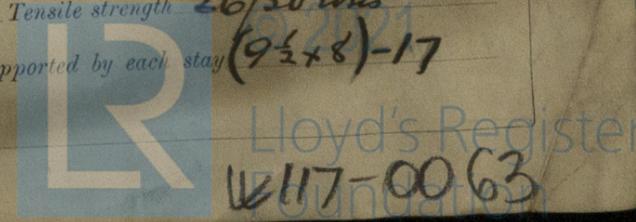
Pitch of stays at wide water space *8 1/4" x 1 1/2"* Are stays fitted with nuts or riveted over *nuts, see plan*

Working Pressure *278 lb* Main stays: Material *Steel* Tensile strength *28/32 tons*

Diameter *At body of stay 3/4"* No. of threads per inch *6* Area supported by each stay *20" x 19"*

Working pressure by Rules *215 lb* Screw stays: Material *Steel* Tensile strength *26/30 tons*

Diameter *At turned off part 15/8"* No. of threads per inch *9* Area supported by each stay *(9 1/2" x 8) - 17*



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Working pressure by Rules 204 lb Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part} 1 7/8 ^{or} 1 7/8 ^{Over threads} Working pressure by Rules 230 lb

No. of threads per inch 9 Area supported by each stay (11 1/2 x 8 1/4) 236 Working pressure by Rules 230 lb

Tubes: Material Low External diameter ^{Plain} 2 1/2 ^{Stay} 2 1/2 Thickness 5/16 - 3/8 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 3/4 Working pressure by Rules 218 lb Manhole compensation: Size of opening in shell plate 20 x 16 Section of compensating ring 10 1/16 x 1 9/32 No. of rivets and diameter of rivet holes 32 1 9/16

Outer row rivet pitch at ends 10 5/8 Depth of flange if manhole flanged 2 3/4 flange Steam Dome: Material none fitted

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

How connected to shell Inner radius of crown Working pressure by Rules

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 fitted 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

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 yes

FOR The foregoing is a correct description,
SWAN, HUNTER & WIGHAM RICHARDSON, LTD. Manufacturer.

Dates of Survey ^{During progress of work in shops - -} ^{During erection on board vessel - -}

while building 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.)

The Boilers built under Special Survey the material and workmanship found good and efficient

The boilers satisfactorily fitted on board the vessel. tested under steam under working conditions and found satisfactory.

Fitted for burning oil fuel. 9-27. flash point above 150° F.

In my opinion these boilers are now eligible for the notation of +NB (in Red) to be made in the Register Book with date. 9-27

Survey Fee ... £ : : When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

L. G. Shallcross.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 OCT 1927

Assigned see minute on
how Rpt 81896 attached

