

REPORT ON BOILERS.

No. 81896

10 OCT 1927

Received at London Office

8 OCT 1927

of writing Report 1927 When handed in at Local Office

Port of Newcastle on Tyne

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

Survey held at Walker.

(Number of Visits —) Gross 5075 Tons Net 3155

on the Steel Screw steamer "PRUNUS" EX. MV city of Stockholm

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 Ltd

Engine No. 1246 When made 1925-8

Boilers made at Walker on Tyne

By whom made Swan Hunter & W. Richardson Ltd

Boiler No. 1246 When made 1925-8

Indicated Horse Power 504

Owners Venetian Shipping Co Ltd
Holland Transport Ltd

Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 7410 sq ft Is forced draught fitted yes

No. and Description of Boilers 3 S.E. Cylindrical Multitubular 3 S.E. 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 per Rule 874 sq in as fitted 98 sq in 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 drs.

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 1 9/32" Are the shell plates welded or flanged no Description of riveting: circ. seams end D R L A P inter. V

Long. seams TR.D.B.S Diameter of rivet holes in circ. seams 1 7/16" Pitch of rivets 4.525" plate rivets

Percentage of strength of circ. end seams plate 68.25% rivets 42.89% Percentage of strength of circ. intermediate seam plate 85.41% rivets 84.33% combined 87.69%

Percentage of strength of longitudinal joint plate 85.41% rivets 84.33% combined 87.69%

Working pressure of shell by Rules 202 lb

Thickness of butt straps outer 31/32 inner 13/32 No. and Description of Furnaces in each Boiler 3 Corrugated Doughton & Co Ltd

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

Length of plain part top bottom Thickness of plates crown 5/8 bottom 5/8 Description of longitudinal joint welded

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 1 9/32 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 back steel Tensile strength 26/30 tons Thickness 1 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 back 270 lb

Girders to combustion chamber tops: Material steel Tensile strength 28/32 tons Depth and thickness of girder

at centre 9 1/8" x 14 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

Tensile strength 26/30 tons Thickness: Sides 3/4 Back 9 1/2 x 8 1/4 Top 10 x 9 Combustion chamber plates: Material steel

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 31

Thickness 1 Lower back plate: Material steel Tensile strength 26/30 tons Thickness 31

Pitch of stays at wide water space 8 1/4 x 14 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 Over threads 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 1 5/8 Over threads 1 5/8 No. of threads per inch 9 Area supported by each stay (9 1/2 x 8) - 17

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"* Over threads *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
Tubes: Material *Iron* External diameter { Plain *2 1/2"* Stay *2 1/2"* Thickness { *9/16"* 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 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 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 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 *yes*

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

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.)

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

Please see Machinery Report on machinery

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



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Foundation