

Rpt. 5a.

REPORT ON BOILERS.

No. 79675

Received at London Office - 9 OCT 1925

Date of writing Report

102

When handed in at Local Office

26/9/1925

Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at

Walker on Tyne

Date, First Survey Sept 11th 1924

Last Survey 22. Sept

1925

Reg. Book.

on the

Motor Ship "British Petrol"

(Number of Visits —)

Gross 6392

Net 4113

Master

Built at Walker-on-Tyne

By whom built Swan Hunter and Wigham Richardson & Co Ltd

Yard No. 1196

When built 1925

Engines made at

Walker on Tyne

By whom made

Swan Hunter and Wigham Richardson

Engine No. 1196

When made 1925

Boilers made at

J-2

By whom made

J-2

Boiler No. 1196

When made 1925

Nominal Horse Power

814.5

Owners British Tanker Co Ltd

Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Leighton's Patent Steel & Tube Co Ltd - James Colville & Sons Ltd (Letter for Record 15.)

Total Heating Surface of Boilers 2470 ft^2 Is forced draught fitted Yes Coal or Oil fired Oil only

No. and Description of Boilers One Horizontal Multitubular Working Pressure 150 lbs

Tested by hydraulic pressure to 275 Date of test 4.3.25 No. of Certificate 9901 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler None No. and Description of safety valves to each boiler 2 direct spring loaded

Area of each set of valves per boiler {per Rule 11.00 as fitted 11.04 Pressure to which they are adjusted 155 Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boiler

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 16" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-4 1/2" Length 11'-6" Shell plates: Material steel Tensile strength 30-34

Thickness 3/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end none cap inter. none

long. seams double butt straps Diameter of rivet holes in {circ. seams 1" as fitted 15/16" Pitch of rivets {6.625"

Percentage of strength of circ. end seams {plate 69.18 rivets 42.41 Percentage of strength of circ. intermediate seam {plate none rivets -

Percentage of strength of longitudinal joint {plate 85.84 rivets 85.55 combined 88.80 Working pressure of shell by Rules 151 lbs

Thickenss of butt straps {outer 31/32" inner 25/32" No. and Description of Furnaces in each Boiler 2 Leighton's + additional tubes

Material steel Tensile strength 26-30 Smallest outside diameter 37 3/16"

Length of plain part {top - bottom - Thickness of plates {crown 13/32" bottom 13/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.e. bottom None Working pressure of furnace by Rules 155 lbs

End plates in steam space: Material steel Tensile strength 26-30 Thickness 1 1/2" Pitch of stays 18" x 18"

How are stays secured Double butts Working pressure by Rules 151 lbs

Tube plates: Material {front steel back " Tensile strength {26-30 26-30 Thickness {7/8" 7/8"

Mean pitch of stay tubes in nests 9.375 Pitch across wide water spaces 13 1/2" x 7 1/2" Working pressure {front 159 lbs back 156 "

Girders to combustion chamber tops: Material steel Tensile strength 28 3/32 tons Depth and thickness of girder

at centre 9 1/8" x 1 1/2" Length as per Rule 30 3/32" Distance apart 8 3/4" No. and pitch of stays

in each 2-9 3/8" Working pressure by Rules 151 Combustion chamber plates: Material steel

Tensile strength 26-30 Thickness: Sides 7/8" Back 3/4" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9 1/2" x 9 3/8" Back 9" x 9" Top 9 3/8" x 8 3/4" Are stays fitted with nuts or riveted over in comb. chambers

Working pressure by Rules 152 lbs Front plate at bottom: Material steel Tensile strength 26-30 Thickness 3/4"

Thickness 7/8" Lower back plate: Material steel Tensile strength 26-30 Thickness 3/4"

Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over

Working Pressure 172 lbs Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 2 7/8" x 2 1/4" No. of threads per inch 6 Area supported by each stay 324 in^2

Working pressure by Rules 153 lbs Screw stays: Material steel Tensile strength 26-30

Diameter {At turned off part, 1 1/2" x 1 7/8" No. of threads per inch 9 Area supported by each stay 82 in^2 89-5

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Working pressure by Rules *152* ✓ Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, or Over threads *1 1/8"* ✓
 No. of threads per inch *9* ✓ Area supported by each stay *1012"* ✓ Working pressure by Rules *150 lbs* ✓
 Tubes: Material *Iron* ✓ External diameter { Plain *2 1/2"* ✓ Stay *2 1/2"* ✓ Thickness { *10 WG* ✓ No. of threads per inch *9* ✓
 Pitch of tubes *3 3/4" x 3 3/4"* ✓ Working pressure by Rules *218 lbs* ✓ Manhole compensation: Size of opening in shell plate *20" x 16"* ✓ Section of compensating ring *8 1/2" x 7/8" Flanged* ✓ No. of rivets and diameter of rivet holes *32-1 1/4"* ✓
 Outer row rivet pitch at ends *8 3/4"* ✓ Depth of flange if ~~manhole~~ flanged *2 1/2"* ✓ 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

FOR The foregoing is a correct description,
 SWAN, HUNTER & WIGHAM RICHARDSON LTD
G. J. Sherry Manufacturer.
 Are the approved plans of boiler and superheater forwarded herewith *Yes*
 (If not state date of approval.)
 Total No. of visits

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

See Machinery report

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

The Boiler built under Special Survey the material and workmanship found good and efficient
The Boiler was tested at the makers works under 275 lbs "hydraulic pressure and found satisfactory
The boiler fitted up on board the Vessel in boiler house forward of Engine Room leading into Engine Room at top platform - Boiler on top of oil fuel Bunker.
The Boiler is fitted for burning oil fuel (9-25) flash point above 150 °F under forced draught. The Safety Valves adjusted under steam 155 lbs "FVR 3/8" AVR 3/8" Easing Gears fitted -
In my opinion this Vessel is now eligible for the notation + L M C. 9-25

Survey Fee £ *20: 6 : 0* When applied for, *7/10/* 192*5*
 Travelling Expenses (if any) £ : : When received, *15/10/* 192*5*

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

Committee's Minute *TUES. 13 OCT 1925*

Assigned *See other report*