

REPORT ON BOILERS.

No. 23848

Received at London Office

21 APR 1949

Date of writing Report 5th APRIL 1949 When handed in at Local Office 7th APRIL 1949 Port of GREENOCKNo. in Reg. Book. Survey held at GREENOCK Date, First Survey 19th MARCH 1948 Last Survey 30th MARCH 1949

on the BRITISH PRUDENCE (Number of Visits.....) Tons Gross..... Net.....

Master..... Built at GLASGOW By whom built BLYTHSWOOD S/B Co Yard No. 90 When built 1949

Engines made at GREENOCK By whom made JOHN G. KINCAID & Co L^d Engine No. 1201 When made 1949

Boilers made at do By whom made do Boiler No. 1201 When made 1949

Nominal Horse Power 625 Owners BRITISH TANKER Co L^d Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colville L^d (Letter for Record (S))Total Heating Surface of Boilers 4138⁴ = 2 boilers Is forced draught fitted Yes Coal or Oil fired or Exh Gas

No. and Description of Boilers Two cylindrical SE Working Pressure 150 lbs

Tested by hydraulic pressure to 275 lbs Date of test 17-9-48 No. of Certificate 2497 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 1HL double spring x 2

Area of each set of valves per boiler per Rule 7.84⁰ as fitted 7.96⁰ Pressure to which they are adjusted 153 lbs 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 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Boilers on Tween Deck Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-0" Length 11'-6" Shell plates: Material S Tensile strength 29/33 tons

Thickness 29/32 Are the shell plates welded or flanged No Description of riveting: circ. seams end DR inter. 3.158

Long. seams TRDAS Diameter of rivet holes in circ. seams 13/16 long. seams 13/16 Pitch of rivets 6.375

Percentage of strength of circ. end seams plate 68.3 rivets 43.8 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85.29 rivets 88.7 Working pressure of shell by Rules 155.6 lbs

Thickness of butt straps outer 11/16 inner 13/16 No. and Description of Furnaces in each Boiler Two Dighton corrugated

Material S Tensile strength 26/30 tons Smallest outside diameter 3'-7 15/16

Length of plain part top bottom Thickness of plates crown 15/32 bottom 13/32 Description of longitudinal joint Weld

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

End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1/32 Pitch of stays 8 1/2 x 16 1/2

How are stays secured DN Working pressure by Rules

Tube plates: Material front S back Tensile strength 26/30 tons Thickness 7/8 1/16

Lean pitch of stay tubes in nests 9.375 Pitch across wide water spaces 13 1/2 Working pressure front back

Girders to combustion chamber tops: Material S Tensile strength 29/33 tons Depth and thickness of girder

t centre 8 3/4 x 1 1/2 = 2 3/4 thick Length as per Rule 2'-10 21/32 Distance apart 9 1/2 No. and pitch of stays

push each 3 @ 8 1/4 Working pressure by Rules Combustion chamber plates: Material S

Tensile strength 26/30 tons Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 2 1/32

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

Working pressure by Rules Front plate at bottom: Material S Tensile strength 26/30 tons Thickness 7/8

Lower back plate: Material S Tensile strength 26/30 tons Thickness 23/32

Pitch of stays at wide water space 13 1/2 x 8 1/4 Are stays fitted with nuts or riveted over Nuts each end.

Working pressure Main stays: Material S Tensile strength 28/32 tons

diameter At body of stay 2 3/8 or Over threads No. of threads per inch 6 Area supported by each stay

Working pressure by Rules Screw stays: Material S Tensile strength 26/30 tons

diameter At turned off part 1 1/2 or 1 3/8 No. of threads per inch 9 Area supported by each stay

Working pressure by Rules..... Are the stays drilled at the outer ends. *No* ✓ Margin stays: Diameter { At turned off part, ✓
or
Over threads..... *1 3/8"*
No. of threads per inch *9* ✓ Area supported by each stay..... Working pressure by Rules.....
Tubes: Material *S* External diameter { Plain..... *2 1/2"* ✓ Thickness { *10wg* ✓
Stay..... *2 1/2"* ✓ No. of threads per inch *9* ✓
Pitch of tubes *3 3/4" x 3 3/4"* ✓ Working pressure by Rules..... Manhole compensation: Size of opening i
shell plate *16 1/2" x 20 1/2"* ✓ Section of compensating rings *2' 9 1/2" x 2' 5 1/2" x 1 1/8"* No. of rivets and diameter of rivet holes *44 - 1 1/8"*
Outer row rivet pitch at ends *7 1/2"* ✓ Depth of flange if manhole flanged *McNeil type door* 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
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 forgings.....
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 a
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 casing gear..... Working pressure as p
Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test pressu
tubes..... forgings and castings..... and after assembly in place..... Are drain cocks
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.....

The foregoing is a correct description,

J. Bouwman
For JOHN G. KINCAID & CO., LTD. Manufacturer

Dates of Survey while building { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
During erection on board vessel - - - } Total No. of visits.....

Is this Boiler a duplicate of a previous case. *Yes* If so, state Vessel's name and Report No. *BRITISH PROGRESS GPN N° 23800*

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

These boilers have been constructed under Special Permit in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The Safety valves have been adjusted under steam for a working pressure of 150 lbs/sq"
For recommendations please see machinery report

Survey Fee ... £ *See machinery report* } When applied for.....19.....
Travelling Expenses (if any) £ : } When received.....19.....

Charles H. Hunter

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *GLASGOW* 20 APR 1949

Assigned *SEE ACCOMPANYING MACHINERY REPORT*



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