

Rpt. 5a.

REPORT ON BOILERS.

No. 18445.

SUNDERLAND RPT. NO. 35044

Received at London Office 27 FEB 1948

Date of writing Report 21st Feb. 1948. When handed in at Local Office 25th Feb. 1948. Port of MIDDLESBROUGH.

No. in Reg. Book. Survey held at STOCKTON-on-TEES.

Date, First Survey Sept. 4. (1947). Last Survey 17th Feb. 1948.

(Number of Visits 8.) Gross 6108 Tons Net 3334

on the

"BRITISH FORTUNE"

Built at Sunderland By whom built Wm. Leasford & Sons Ld.

Yard No. 463 When built 1949

Engines made at Sunderland. By whom made Wm. Boxford & Sons.

Engine No. 763 When made 1949.

Boilers made at Stockton-on-Teess. By whom made Stockton C.E. & Riley Boilers Ltd.

Boiler No. 7049 When made

Nominal Horse Power 516

Owners British Tanker Co Ld.

Boiler belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby-Frodingham Steel Co. Ltd.

(Letter for Record Alternative Coal or Oil fired Exhaust Gas

Total Heating Surface of Boilers 2020 sq. ft.

Is forced draught fitted Yes

Working Pressure 150 lbs per sq. in.

No. and Description of Boilers 1 S.E. Multitubular

Tested by hydraulic pressure to 275 lbs Date of test 17.2.48 No. of Certificate 7232 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 3" double high lift

Area of each set of valves per boiler (per Rule 14.12 as fitted 15.4 Pressure to which they are adjusted 150 lb Are they fitted with easing gear

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

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 12' 10.3/16" Length 11' 6" Shell plates: Material Steel Tensile strength 29 - 33

Thickness 20/32" Are the shell plates welded or flanged Description of riveting: riv. seams {end DR. Lap inter.

long. seams TR. DBS Diameter of rivet holes in {circ. seams 1.1/16" long. seams 1.1/16" Pitch of rivets 7.1/16"

Percentage of strength of circ. end seams {plate 36.6% rivets 48.7 Percentage of strength of circ. intermediate seams {plate 84.9 rivets 103

Percentage of strength of longitudinal joint {plate 84.9 rivets 103 combined

Thickness of butt straps {outer 23/32" inner 20/32" No. and Description of Furnaces in each Boiler 2 Deighton Corrugated

Material Steel Tensile strength 26-30 Smallest outside diameter 3' 10"

Length of plain part {top Thickness of plates {crown 8" bottom Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.e. bottom

End plates in steam space: Material Steel Tensile strength 26 - 30 Thickness 1" Pitch of stays 12" x 17"

How are stays secured Double nuts and washers screwed into both plates.

Tube plates: Material {front Steel Tensile strength 26 - 30 Thickness 7/8" back 3/4"

Mean pitch of stay tubes in nests 9.3/8" Pitch across wide water spaces 13 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 28 - 32 Depth and thickness of girder

at centre 7" - 2 @ 5/8" Length as per Rule 2' 4 1/2" Distance apart 9" No. and pitch of stays

in each 2 @ 9" Combustion chamber plates: Material Steel Tensile strength 26 - 30 Thickness: Sides 21/32" Back 19/32" Top 21/32" Bottom 21/32"

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

Front plate at bottom: Material Steel Tensile strength 26 - 30 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" Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel Tensile strength 28 - 32

Diameter {At body of stay, or Over threads 2 1/2" No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26 - 30

Diameter {At turned off part, or Over threads 1 1/2" No. of threads per inch 9

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

Tubes: Material Seamless Steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 10 S.W.G. 5/16" No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Manhole compensation: Size of opening in shell plate 21" x 17" Section of compensating ring 8 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 52 - 1.1/16"

Outer row rivet pitch at ends 7.1/16" Depth of flange if manhole flanged - 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 - Thickness of crown - No. and diameter of stays - Inner radius of crown -

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 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 -

Pressure to which the safety valves are adjusted - Hydraulic test pressure: tubes forgings and 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 22 inclusive for boilers been complied with -

The foregoing is a correct description,
Stockton Chemical Engineers & Riley Boilers Ltd. Manufacturer.

Dates of Survey { During progress of work in shops - - 1947, Sept. 4, Oct. 1, 28, Nov. 12, 1948, Jan. 20, 29, Feb. 9, 17, Are the approved plans of boiler and superheater forwarded herewith 9.2.45. (If not state date of approval.) DIRECTOR

while building { During erection on board vessel - - - } Total No. of visits 8

Is this Boiler a duplicate of a previous case - If so, state Vessel's name and Report No. -

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

This boiler has been constructed under special survey and in accordance with the Rule requirements and approved plan.

The materials and workmanship are good, and on completion the boiler was hydraulically tested to 275 lbs per sq. inch and found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Dorriford's Contract 733.

This boiler has been securely fitted on board the vessel, fitted to burn oil fuel (F.P. above 150°F), Safety valves adjusted to working pressure under steam. Section 20 of rules complied with.

In recommendation please see Machy Rpt.

W. H. Haver.

Survey Fee ... £ 35 : 12 : 0 When applied for 26. 2. 19 48.

Travelling Expenses (if any) £ : : When received, 19

C. Norman Stuart

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 25 FEB 1949

Assigned For minute see H.E. Rpt.



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