

Rpt. 5a.

REPORT ON BOILERS.

No. 19238

Received at London Office.

Date of writing Report 15th Nov 50. When handed in at Local Office 20.11.19.50 Port of MIDDLESBROUGH.

No. in Reg. Book. Survey held at Stockton-on-Tees. Date, First Survey 26th July 1950 Last Survey 10th Nov 1950

on the

BRITISH CRAFTSMAN

(Number of Visits 12...)

Gross 8697

Tons Net 5008

Master Built at Sunderland By whom built Wm. Duxford & Sons. Yard No. 483 When built 1951

Engines made at Sunderland By whom made Wm. Duxford & Sons. Engine No. 483 When made 1950

Boilers made at Stockton-on-Tees By whom made Stockton Chemical Engineers & Riley Boilers Ltd. Boiler No. 7200 When made 1950

Nominal Horse Power Owners Britol Tanker Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby-Frodingham, Steel Co. (Letter for Record S)

Total Heating Surface of Boilers 2020 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil & Ex. Gas.

No. and Description of Boilers 1 S.E. Multitubular. Working Pressure 150 lbs. per sq. inch.

Tested by hydraulic pressure to 275 lbs. Date of test 10.11.50 No. of Certificate 7321. Can each boiler be worked separately Yes.

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 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 Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 12' 10 3/16" Length 11' 6" Shell plates Material steel Tensile strength 29.33

Thickness 29/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams end D.R. Lap

long seams TR. DBS. Diameter of rivet holes in circ. seams 1.1/16" Pitch of rivets 3.187

Percentage of strength of circ. end seams plate 66.6% rivets 48.7 Percentage of strength of circ. intermediate seam plate 84.9 rivets 103

Percentage of strength of longitudinal joint plate 84.9 rivets 103 Working pressure of shell by Rules 157 lbs.

Thickness of butt straps outer 23/32" inner 27/32" 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 bottom Thickness of plates 1/2" Description of longitudinal joint welded.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 156 lbs.

End plates in steam space: Material steel Tensile strength 26.30 Thickness 1" Pitch of stays 18" x 17"

How are stays secured double nuts and washers screwed into both plates. Working pressure by Rules 150 lbs.

Tubes plates: Material steel Tensile strength 26.30 Thickness 7/8"

Mean pitch of stay tubes in nests 9.3/8" Pitch across wide water spaces 13 1/2" Working pressure front 150 lbs. back 167 lbs.

Girders to combustion chamber tops: Material steel Tensile strength 28.32 26/30 Depth and thickness of girder

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

in case welded. Working pressure by Rules 174 lbs. 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 sides 10" x 9" Back 9 1/2" x 8 1/4" Top 9" x 9" Are stays fitted with nuts or riveted over nuts.

Working pressure by Rules 152 lbs. 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.

Working pressure 150 lbs. Main stays: Material steel Tensile strength 28-32

Diameter At body of stay 2 3/4" No. of threads per inch 6 Area supported by each stay 306 sq. in.

Working pressure by Rules 180 lbs. Screw stays: Material steel Tensile strength 326.30 in.

Diameter At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay 78.5

Working pressure by Rules 160 lbs. Are the stays drilled at the outer ends. No. Margin stays: Diameter { At turned off part, 1 3/4" or Over threads 1 3/4"
No. of threads per inch 9 Area supported by each stay 103.1 sq. in. Working pressure by Rules 176 lbs.
Tubes: Material seamless steel External diameter { Plain 2 1/2" Thickness { 10 S.W.G. No. of threads per inch 9
Stay 2 1/8" 5/16"
Pitch of tubes 3 5/8" x 3 5/8" Working pressure by Rules Plain 175 lbs. stay 182 lbs. hole compensation: Size of opening in
shell plate 21" x 17" Section of compensating ring 8 3/4" x 1 1/8" x 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 - 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 - 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 from
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 in
Rules - Pressure to which the safety valves are adjusted - Hydraulic test pressure
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 -

Dates of Survey { During progress of work in shops 1950 July:26 Aug:17.29. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval)
while building { During erection on board vessel Sep:28.Oct:2.6.12.18.24. Total No. of visits 12
Nov.: 2.6.10.

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 Messrs. Wm. Delford's 783 contract.

*This boiler has been securely fixed on board the vessel
& safety valves adjusted under steam to working pressure
In recommendation please see Tashy Rpt
D. L. Lash*

Survey Fee £ 33 13 - When applied for 20.11.50.
Travelling Expenses (if any) £ - - When received 20.11.50.

L. Adman Stuart.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUES 3 JUL 1951

Assigned See F.E. mch. rpt.



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Foundation