

REPORT ON BOILERS.

Std. No. 33531

No. 14306.

AUG 1942

18 NOV 1942

Date of writing Report

1st Aug. 1942.

When handed in at Local Office

11 August 42 Port of

MIDDLESBROUGH.

No. in Survey held at

Stockton

Date, First Survey 7th January Last Survey 28th July, 1942.

"MIDDLESEX TRADER"

(Number of Boats 16)

Gross 7241

Net 4291

on the

Built at Sunderland

By whom built

J. P. Thompson & Co. Ld.

Yard No. 621

When built 1942

Engines made at

Sunderland

By whom made Messrs. G. Clark (1930/4).

Engine No. 1269.

When made 1942.

Boilers made at

Stockton

By whom made Stockton Chem. Eng. & Refry Boilers Ltd.

Boiler No. 6613.

When made 1942

Nominal Horse Power

Owners Admiralty A/Ms M 229.

Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley & Hodgkinson Steel Co. Ltd.

Total Heating Surface of Boilers

1786 sq ft

Is forced draught fitted

Yes.

(Letter for Record S.)

Coal or Oil fired Coal

No. and Description of Boilers

1. SE. Marine.

Working Pressure 220 1/2 lb

Tested by hydraulic pressure to

380.

Date of test 28/7/42

No. of Certificate 7053

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

45 sq ft

No. and Description of safety valves to each boiler

See Imp? High Lift (Loddington)

Area of each set of valves per boiler

per Rule

6.280"

Pressure to which they are adjusted

220

Are they fitted with casing 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

Smallest distance between shell of boiler and tank top plating

2' 4"

Is the bottom of the boiler insulated

Largest internal dia. of boilers

12' 9 1/2"

Length

11' 6"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

1 1/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR.

Long. seams

TR. - D.B.S.

Diameter of rivet holes in

circ. seams

1 5/16"

Pitch of rivets

3.79"

Percentage of strength of circ. end seams

plate 65.3%

rivets 45.2%

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.6%

rivets 87.8%

combined 87.2%

Thickness of butt straps

outer 1"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

3 - Doughton.

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3' 1 1/4"

Length of plain part

top

Thickness of plates

crown 1 1/32"

bottom 1 1/32"

Description of longitudinal joint

Lapped

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

✓

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 7/32"

Pitch of stays

19 x 16"

How are stays secured

D nuts + washers.

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

15/16"

25/32"

Mean pitch of stay tubes in nests

10 1/4"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

8 1/2" - 2 @ 5/8"

Length as per Rule

2' 7 17/32"

Distance apart

7"

No. and pitch of stays

in each

2 - 10"

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

3/4"

Pitch of stays to ditto: Sides

10" x 7"

Back

9 1/4" x 8"

Top

10" x 7"

Are stays fitted with nuts or riveted over

nuts.

Front plate at bottom: Material

Steel

Tensile strength

26/30.

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27/32"

Pitch of stays at wide water space

14" x 8"

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

3"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, or over threads

2" - 17/8" - 1 3/4"

No. of threads per inch

9.



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Are the stays drilled at the outer ends ho.
No. of threads per inch 9. Margin stays: Diameter { At turned off part, 17/8"
Over threads
Tubes: Material Seawater Steel External diameter { Plain 3"
Stay Thickness { 8 10.7.
3/8 - 5/16" No. of threads per inch 9.
Pitch of tubes 4'8" x 4'4" Manhole compensation: Size of opening
shell plate 20'2" x 16'2" Section of compensating ring 9'4" x 1'4" No. of rivets and diameter of rivet holes 40 - 1 5/16"
Outer row rivet pitch at ends 9'6" 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
stays Inner radius of crown
How connected to shell Size of doubling plate under dome
of rivets in outer row in dome connection to shell Diameter of rivet holes and p

Type of Superheater
Number of elements Material of tubes Manufacturers of { Tubes
Steel forgings
Steel castings
Material of headers Tensile strength Internal diameter and thickness of tubes
Thickness
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
tubes forgings and castings and after assembly in place Hydraulic test pressure
valves fitted to free the superheater from water where necessary Are drain cocks

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with for and on behalf of
STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS LTD.
The foregoing is a correct description,
G. N. Riley
DIRECTOR.
Manufacture

Dates { During progress of work in shops - - - 1942 Jan 7, 19, 23 Feb 6, 19 March 3, 17, 21
while building { During erection on board vessel - - - May 16, 28. June 2, 10, 22, July 6, 17, 28
Are the approved plans of boiler and superheater forwarded herewith No. 21/10/41
(If not state date of approval.)
Total No. of visits Sixteen

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 & in accordance with the Rule Requirements & approved plans. The materials & workmanship are good & on completion the boiler was hydraulically tested at 380 lbs p.s.i. & found satisfactory. This boiler has been forwarded to Messrs Geo. Clarke (1930) Ltd. for Contract No. 1269.269. This boiler has been securely fixed on board the vessel & the safety valves adjusted to working pressure. In recommendation please see Machinery Logbook.
P. J. Fraser.

Survey Fee ... £ 11 : 18 : When applied for, 1942
Travelling Expenses (if any) £ : : When received, 19
Committee's Minute FRL 27 NOV 1942
Assigned See Id. 7E 33531
Engineer Surveyor to Lloyd's Register of Shipping.