

REPORT ON BOILERS.

No. 62

Received at London Office

30 JUN 1943

pt. 5a.

2-16-18-24-29-24-28-8
of writing Report 26-3-1943. When handed in at Local Office 31-3-1943 Port of **LEEDS.**

No. in Survey held at **LEEDS** Date, First Survey **14-10-42** Last Survey **18-3-1943**

Book. **"MOORFLY"** (Number of Visits **10**) Gross **457**
on the **MOORING VESSEL (J2512.)** Tons Net **172**

3-3-42
ilt at **Glasgow** By whom built **THE GOOLE SHIPBUILDING & REPAIRING Co** Yard No. **385** When built **1943**

Engines made at **Glasgow** By whom made **Blair & Co.** Engine No. **3810** When made **"**

Boilers made at **LEEDS** By whom made **CLAYTON, SON & Co LE** Boiler No. **6591/2** When made **1943**
(100 & 101)

nominal Horse Power **150** Owners **ADMIRALTY** Port belonging to **"**

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Material identified by Middlesbrough Surveyors who** (Letter for Record **S**)
Total Heating Surface of Boilers **1443 SQ. FT.** Is forced draught fitted **YES** Coal or Oil fired **COAL**

No. and Description of Boilers **TWO S.E. CYLINDRICAL MULTITUBULAR BOILERS** Working Pressure **180 LBS/SQ"**

tested by hydraulic pressure to **320 LBS/SQ"** Date of test **3-2-43** No. of Certificate **100 & 101** Can each boiler be worked separately **YES**

Area of Firegrate in each Boiler **39 SQ. FT.** No. and Description of safety valves to each boiler **1- 2 1/2" DOUBLE SPRING MARINE TYPE**

Area of each set of valves per boiler **9.25 SQ. INS.** Pressure to which they are adjusted **180 LBS.** Are they fitted with easing gear **YES**

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **YES**

Smallest distance between boilers or uptakes and bunkers or woodwork **6 ft.** Is oil fuel carried in the double bottom under boilers **NO**

Smallest distance between shell of boiler and tank top plating **Open floor under boilers** Is the bottom of the boiler insulated **NO**

Largest internal dia. of boilers **11'-3"** Length **10'-7 29/32"** Shell plates: Material **S.M. STEEL** Tensile strength **29/33 Tons/SQ"**

Thickness **29/32"** Are the shell plates welded or flanged **NO** Description of riveting: circ. seams **D.R. LAP**

Long. seams **D.B. STRAP 5R/PITCH** Diameter of rivet holes in **31/32"** Pitch of rivets **2.9049**

Percentage of strength of circ. end seams **66.6** Percentage of strength of circ. intermediate seam **44.5**

Percentage of strength of longitudinal joint **86.16**
86.5
89.6

Thickness of butt straps **11/16"** No. and Description of Furnaces in each Boiler **TWO "DEIGHTON" CORRUGATED FURNACES**

Material **S.M. STEEL** Tensile strength **26/30 Tons/SQ"** Smallest outside diameter **3'-3 1/2"**

Length of plain part **1/2"** Thickness of plates **1/2"** Description of longitudinal joint **WELDED.**

Dimensions of stiffening rings on furnace or c.c. bottom **NONE.**

End plates in steam space: Material **S.M. STEEL** Tensile strength **26/30 Tons/SQ"** Thickness **6 1/4"** Pitch of stays **16" x 14 3/8"**

How are stays secured **NUTS INSIDE & OUTSIDE OF PLATES.**

Tube plates: Material **S.M. STEEL** Tensile strength **26/30 Tons/SQ"** Thickness **6 1/4"**

Mean pitch of stay tubes in nests **9 1/16"** Pitch across wide water spaces **13 1/2"**

Girders to combustion chamber tops: Material **S.M. STEEL** Tensile strength **28/32 Tons/SQ"** Depth and thickness of girder

at centre **2 @ 7" x 5/8"** Length as per Rule **26.61"** Distance apart **7 1/2" AND 8 1/4"** No. and pitch of stays

in each **2 @ 8 1/4" PITCH** Combustion chamber plates: Material **S.M. STEEL**

Tensile strength **26/30 Tons/SQ"** Thickness: Sides **21/32"** Back **4 1/64"** Top **21/32"** Bottom **21/32"**

Pitch of stays to ditto: Sides **8 1/4" x 8 1/4"** Back **8 1/4" x 9 3/8"** Top **8 1/4" x 8 1/4"** Are stays fitted with nuts or riveted over **NUTS FITTED**

Front plate at bottom: Material **S.M. STEEL** Tensile strength **26/30 Tons/SQ"** Thickness **6 1/64"**

Lower back plate: Material **S.M. STEEL** Tensile strength **26/30 Tons/SQ"** Thickness **6 1/64"**

Pitch of stays at wide water space **14 1/2" x 8 1/4"** Are stays fitted with nuts or riveted over **NUTS FITTED.**

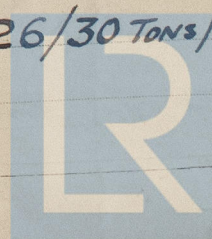
Main stays: Material **S.M. STEEL** Tensile strength **28/32 Tons/SQ"**

Diameter **2 1/4"** No. of threads per inch **6**

Screw stays: Material **S.M. STEEL** Tensile strength **26/30 Tons/SQ"**

Diameter **1 1/2"** No. of threads per inch **9**

At turned off part, **BACK 1 5/8" SIDES 1 1/2"**



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Are the stays drilled at the outer ends

NO

Margin stays: Diameter

At turned off part or Over threads

1 3/4" (CORNERS)

No. of threads per inch

9

Tubes: Material S.M. STEEL

External diameter

Plain

2 1/2"

Stay

2 1/2"

Thickness

8 WG

No. of threads per inch

9

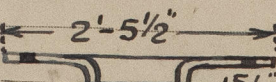
Pitch of tubes

3 5/8" x 3 5/8"

shell plate

20" x 16"

Section of compensating ring



Manhole compensation: Size of opening

Outer row rivet pitch at ends

7 3/4"

Depth of flange

LOWER

15/16"

No. of rivets and diameter of rivet holes

40 - 1 1/16"

Tensile strength

Thickness of shell

Description of longitudinal joint

Diameter of rivet holes

Pitch of rivets

Percentage of strength of joint

Plate

Internal diameter

Thickness of crown

No. and diameter

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

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 on

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

YES, WHERE APPLICABLE

CLAYTON, SON & CO. LIMITED,

The foregoing is a correct description,

R. Hartley

Manufacturer

Dates

During progress of

work in shops - - 14/10/42, 3 & 16/11/42, 1 & 12/12/42.

while

During erection on

board vessel - - - 1 & 5/1/43, 3, 13/2/43 & 18/3/43.

building

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

COPY OF

No 767

BY MIDDLE

SURVEYOR

Is this Boiler a duplicate of a previous case

NO

If so, state Vessel's name and Report No.

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

Furnace Grates, firebars, smokeboxes etc fitted, boilers lagged and mounting tried in position.

These boilers have been constructed under Special Survey, I tested materials and in accordance with the Secretary's letters, the stated approved plan and the requirements of the Rules.

The materials and workmanship are of good quality and the boilers when tested in the shops under an hydraulic pressure of three hundred and twenty pounds per square inch were found sound and tight.

These boilers are, in my opinion, suitable for fitting on board a vessel classed with this Society for the purpose intended.

MARKS ON BOILER SHELLS

AT L.H. SIDE NEAR FRONT END

Nº 100
LLOYDS TEST
320 LBS
WP 180 LBS
DRW 3-2-43

Nº 101
LLOYDS TEST
320 LBS
WP 180 LBS
DRW 3-2-43

Boilers examined under steam, safety valves adjusted, accumulation test held & boilers afterwards examined after trials at 200 lbs. W.S.S.

Survey Fee

Travelling Expenses (if any)

When applied for,

19

When received,

19

Inclusive Fee Arranged by Hull Office.

D. Chalmers

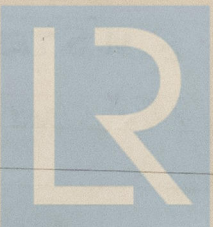
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 6 JUL 1943

Assigned

See fe. machy rpt. (Hul 52050)



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