

REPORT ON BOILERS.

No. 66573

Received at London Office

21 JAN 1943

5 MAY 1943

Date of writing Report 10 When handed in at Local Office 16. 1. 1943 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 1-6-1942 Last Survey 21-12-1942

on the ADMIRALTY OIL FUEL LIGHTER "C 606" (Number of Visits 22) Gross 501 Tons Net 227

Master Built at Hull By whom built H. Scarr Ltd Yard No. 5427 When built 1943

Engines made at Birmingham By whom made Bellis Morrison Engine No. 9960 When made

Boilers made at Glasgow By whom made Messrs John Thompson (Mar. Eng.) Ltd Boiler No. 5189 When made 1942

Approximate Horse Power Owners The Admiralty Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Robb & Co. Ltd. (Letter for Record (S))

Total Heating Surface of Boilers 1280 Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers 1 - Marine Working Pressure 200

Tested by hydraulic pressure to 350 Date of test 25-11-42 No. of Certificate 21273 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 1 - 2 1/2" Safety Spring

Area of each set of valves per boiler {per Rule 7.45 as fitted 9.8 Pressure to which they are adjusted 203 lb 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 18" Is oil fuel carried in the double bottom under boilers NONE

Smallest distance between shell of boiler and tank top plating NONE Is the bottom of the boiler insulated No

Largest internal dia. of boilers 11'6" Length 10'0" Shell plates: Material Steel Tensile strength 29-33

Thickness 1 1/2" Are the shell plates welded or flanged No Description of riveting: circ. seams {end DR as fitted 3.523 inter. 7 1/2

Long. seams TR.D.B.S. Diameter of rivet holes in {circ. seams 1 1/2 long. seams 1 1/2 Pitch of rivets { 7 1/2

Percentage of strength of circ. end seams {plate 68.06 rivets 43.39 Percentage of strength of circ. intermediate seam {plate 85.6 rivets 41.73 Working pressure of shell by Rules 202

Percentage of strength of longitudinal joint {plate 85.6 rivets 41.73 combined 89.5

Thickness of butt straps {outer 2 5/32 inner 2 9/32 No. and Description of Furnaces in each Boiler 2 - Leighton

Material Steel Tensile strength 26-30 Smallest outside diameter 3' 5 3/16

Length of plain part {top bottom Thickness of plates {crown 1 1/2 bottom 1 1/2 Description of longitudinal joint Welded

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

End plates in steam space: Material Steel Tensile strength 26-30 Thickness 1 1/2 Pitch of stays 14 1/2" x 14 1/2"

How are stays secured Double Nut Working pressure by Rules

Tube plates: Material {front back steel Tensile strength { 26-30 Thickness { 7/8 2 3/8

Mean pitch of stay tubes in nests 9.3" Pitch across wide water spaces 13 1/2" Working pressure {front back

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

At centre 2 @ 8' x 1" Length as per Rule 2' 2 3/4" Distance apart 8" No. and pitch of stays

In each 2 - 9" Working pressure by Rules Combustion chamber plates: Material Steel

Tensile strength 26-30 Thickness: Sides 1/6 Back 1/6 Top 2 1/2 Bottom 1/6

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

Working pressure by Rules Front plate at bottom: Material Steel Tensile strength 26-30

Thickness 7/8 Lower back plate: Material Steel Tensile strength 26-30 Thickness 1 1/6

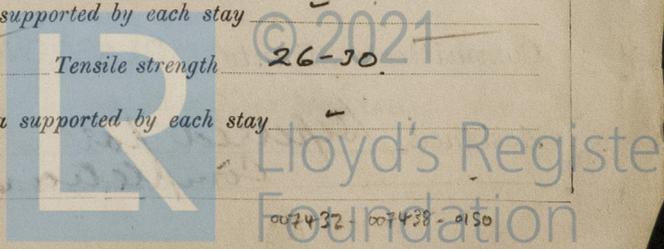
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over 1/2

Working Pressure 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 Area supported by each stay 26-30

Working pressure by Rules Screw stays: Material Steel Tensile strength 26-30

Diameter {At turned off part, or Over threads 1 5/8 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 $\left\{ \begin{array}{l} \text{At turned off part} \\ \text{or} \\ \text{Over threads} \end{array} \right. 1\frac{1}{8}$

No. of threads per inch *9* Area supported by each stay Working pressure by Rules

Tubes: Material *SP. Steel* External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. 3$ Thickness $\left\{ \begin{array}{l} 8 \text{ wg.} \\ 5/16 \end{array} \right.$ No. of threads per inch *9*

Pitch of tubes $4\frac{1}{2} \times 4\frac{1}{8}$ Working pressure by Rules Manhole compensation: Size of opening in shell plate 20×16 Section of compensating ring $15 \times 1\frac{1}{2}$ No. of rivets and diameter of rivet holes $44 - 1\frac{1}{8}$

Outer row rivet pitch at ends $8\frac{1}{2}$ Depth of flange if manhole flanged $3\frac{1}{2}$ Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right.$

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 casing gear Working pressure as per Rules

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 *Yes*

R. M. Arthur The foregoing is a correct description,
FOR JOHN THOMPSON (MARINE BOILERS) LTD. Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops} \end{array} \right. 1942 \text{ Jun } 1, 3 \text{ Aug } 4 \text{ Sep } 8, 15, 17, 22, 25$
 $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel} \end{array} \right. \text{ Oct } 3, 7, 14, 16, 20, 24 \text{ Nov } 10, 17, 18, 25 \text{ Dec } 3, 10, 15, 22$ Are the approved plans of boiler and superheater forwarded herewith *Yes*
(If not state date of approval.)

Total No. of visits *22*

Is this Boiler a duplicate of a previous case *Yes*. If so, state Vessel's name and Report No. *C 604 (Lighter) - Report 66312.*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under Special Survey in accordance with the approved plan and the Society's Rules. The material and workmanship are good.*

The boiler is intended for Messrs Richard Duroston & Co. Thorne for installation in Messrs H. Sear's Steel Yard, No 439.

The above boiler examined under steam, safety valves adjusted to 203 lb, accumulation test held, and afterwards examined on completion of tests. H.S.S.

Job 17/1/43

Survey Fee £ 8 : 10 : } When applied for, *19 JAN 1943*
Travelling Expenses (if any) £ : : } When received, *19*

J. R. Dale
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 19 JAN 1943*

Assigned *Refered for completion*