

5a.

# REPORT ON BOILERS.

No. 17273.

26.6.42.

Received at London Office

of writing Report 23/6/1942 When handed in at Local Office 24/6/1942 Port of

Huddersfield

in Survey held at

Stockton-on-Tees.

Date, First Survey 21<sup>st</sup> April

Last Survey

14<sup>th</sup> June, 1942.

(Number of Visits five)

Gross

Tons

Net

on the M.V. LAMBROOK.

at Burntisland By whom built Burntisland S.B. Co.

Yard No. 260 When built 1942

Diameter of boiler made at Sunderland

By whom made Wm. Donohoe &amp; Sons Ltd.

Engine No. 224 When made

Boilers made at Stockton

By whom made Stockton Chem. Engrs. &amp; Riley / Boilers Ltd.

Boiler No. 6625 When made 1942.

Indicated Horse Power

Owners

Port belonging to LONDON.

Composite

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley-Hodgkinson Steel Co. Ltd.

(Letter for Record 5.)

Total Heating Surface of Boilers

1582 sq ft

Is forced draught fitted

Coal or Oil fired Exhaust Gas

and Description of Boilers

1. Composite.

Working Pressure 120 1/2

Tested by hydraulic pressure to

230 lb

Date of test

17/6/42

No. of Certificate

7049.

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 - Spring

Area of each set of valves per boiler

per Rule

14.65

Pressure to which they are adjusted

120 lb/sq in.

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

Fitted in tween deck.

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

yes.

Largest internal dia. of boilers

10'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29/33.

Thickness

5/8"

Are the shell plates welded or flanged

Yes.

Description of riveting: circ. seams

end

3"

Long. seams

TR. D.B.S.

Diameter of rivet holes in

circ. seams

15/16"

Pitch of rivets

3"

Percentage of strength of circ. end seams

plate

68.75%

rivets

43.8%

Percentage of strength of circ. intermediate seam

plate

84.0%

rivets

Percentage of strength of longitudinal joint

plate

97.5%

rivets

91.0%

Thickness of butt straps

outer 1/2"

inner 5/8"

No. and Description of Furnaces in each Boiler

1. Corrugated - Dighton

Material

Steel

Tensile strength

26/30

Smallest outside diameter

2'-10 1/2"

Length of plain part

top

Thickness of plates

crown

3/8"

Description of longitudinal joint

welded.

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

and plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

7/8"

Pitch of stays 18" x 18"

How are stays secured

D. Nuts &amp; washers.

Tube plates: Material

front Steel

Tensile strength

26/30

Thickness

7/8"

13/16"

Lean pitch of stay tubes in nests

10 9/32"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

6'2" - 2 @ 5/8"

Length as per Rule

28 9/32"

Distance apart

8 3/4"

No. and pitch of stays

in each

2 @ 9"

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

9/32"

Back

9/32"

Top

9/32"

Bottom

9/32"

Pitch of stays to ditto: Sides

8 3/4" x 10"

Back

9" x 10"

Top

8 3/4" 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

7/8"

Pitch of stays at wide water space

14" x 10"

Are stays fitted with nuts or riveted over

nuts.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

2 1/2"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30.

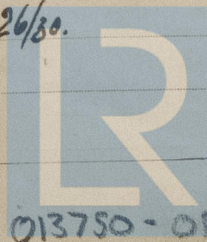
Diameter

At turned off part,

1 1/2"

No. of threads per inch

9.



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Are the stays drilled at the outer ends 20. ✓ Margin stays: Diameter { At turned off part, or Over threads 1 5/8" ✓

No. of threads per inch 9. ✓

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

Pitch of tubes 3 5/8" + 3 5/8" & 3 3/4" + 3 5/8" ✓ Manhole compensation: Size of opening in shell plate 20" x 16" ✓ Section of compensating ring 7" x 7/8" ✓ No. of rivets and diameter of rivet holes 36 - 1 5/16" ✓

Outer row rivet pitch at ends 6" ✓ Depth of flange if manhole flanged ✓ ✓ Steam Dome: Material Iron ✓

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 \_\_\_\_\_

and on behalf of STOCKTON CHEMICAL ENGINEERS & BOILER MAKERS Ltd.  
The foregoing is a correct description,  
Geo W Riley Manufacturer.  
DIRECTOR

Dates of Survey { During progress of work in shops - - 1942. Apr. 21. May 15. June 2. 10. 14. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓  
while building { During erection on board vessel - - - } Total No. of visits 5. 22/10/41

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 plan.

The materials & workmanship are good & on completion of construction the boiler was hydraulically tested to 230 lbs/sq. & found satisfactory.

This boiler has been forwarded to Burntisland Shipbuilding Co.

This boiler has been efficiently fitted on board and the safety valves adjusted to 120 lbs/sq.

J. F. Campbell.

Survey Fee ... £ 10 : 10 : - When applied for, 24/6/1942.

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

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

Committee's Minute

Assigned See Lit. J.E 20771