

## REPORT ON BOILERS.

No. 63609

Received at London Office MAR 26 1941

Date of writing Report

19

When handed in at Local Office

25: 3: 1941

Port of GLASGOW

No. in Survey held at  
eg. Book.

Date, First Survey

Last Survey 12th March 1941

on the

M/V "CAPE HAWKE"

(Number of Visits

Gross 5081  
Net 2933

Built at Port Glasgow

By whom built

Lithgow's Ltd.

Yard No. 930

When built 1941

Engines made at

Glasgow

By whom made

David Brown &amp; Co. Ltd.

Engine No. 1037

When made 1941

Boilers made at

-do-

By whom made

-do-

Boiler No. 1037

When made 1941

Nominal Horse Power

599

Owners

Lyle Shipping Co.

Port belonging to

Glasgow

## MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Glenille Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

1686

Is forced draught fitted

no

Coal or Oil fired

oil

No. and Description of Boilers

One single-ended

Working Pressure

120 lb.

Tested by hydraulic pressure to

230 lb.

Date of test

6-12-40

No. of Certificate

20675

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

-

No. and Description of safety valves to each boiler

One 2 1/2" I.H.L. Antile

Area of each set of valves per boiler

{per Rule

7.8 sq"

{as fitted

9.8 sq"

Pressure to which they are adjusted

120 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

no bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

2'-5"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12'-9"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29/32 tons

Thickness

23/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

{end

double

Long. seams

DBS TR 4 rivets per pitch

Diameter of rivet holes in

{circ. seams

29/32"

{long. seams

Pitch of rivets

2.989"

Percentage of strength of circ. end seams

{plate

69.3

{rivets

48

Percentage of strength of circ. intermediate seam

{plate

83.14

{rivets

98.9

Percentage of strength of longitudinal joint

{combined

92.1

Thickness of butt straps

{outer

9/16"

{inner

11/16"

No. and Description of Furnaces in each Boiler

2 Right

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

3'-8 25/32"

Length of plain part

{top

/

{bottom

Thickness of plates

{crown

25/64"

{bottom

Description of longitudinal joint

Welded

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

✓

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 1/8"

Pitch of stays 28 1/2" x 1/8"

How are stays secured

D.H.

Tube plates: Material

{front

Steel

{back

Tensile strength

26/30 tons

Thickness

13/16"

11/16"

Mean pitch of stay tubes in nests

11 21/32"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre 2 @ 6 1/4" x 7/8"

Length as per Rule

31 3/4"

Distance apart

9 7/8"

No. and pitch of stays

in each 2 @ 10 1/4"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

19/32"

Back

9/16"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto:

Sides 10 1/4" x 9 7/8"

Back 8 3/4" x 9 1/2"

Top 10 1/4" x 9 7/8"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

13/16"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

5/8"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

{At body of stay,

2 1/4" + 2 1/2"

{Over threads

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30 tons

Diameter

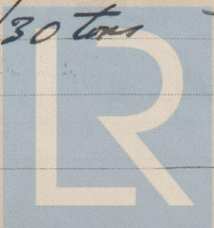
{At turned off part,

1 3/8" + 1 1/2"

{Over threads

No. of threads per inch

9



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Foundation



Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part, 1 1/2" + 1 7/8" or Over threads

No. of threads per inch 9 ✓

Tubes: Material steel External diameter { Plain 3" Stay 3" Thickness { 9WG 1/4" + 9/16" No. of threads per inch 9 ✓

Pitch of tubes 4 1/8" x 4 1/4" ✓ Manhole compensation: Size of opening

shell plate 15" x 19" ✓ Section of compensating ring 7" x 2 3/32" No. of rivets and diameter of rivet holes 36 @ 2 9/32" ✓

Outer row rivet pitch at ends 5 9/16" ✓ Depth of flange if manhole flanged 3" ✓ 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 \_\_\_\_\_ 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 \_\_\_\_\_

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 \_\_\_\_\_

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 ✓

The foregoing is a correct description,  
For David Rowan & Co. Ltd. Manufacturer  
Arch. N. Grierson

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith Yes ✓ (If not state date of approval.)

while building { During erection on board vessel - - - } Total No. of visits

SEE ACCOMPANYING MACHINERY REPORT.

Is this Boiler a duplicate of a previous case Yes ✓ If so, state Vessel's name and Report No. "CAPE CLEAR" GLS.R#61406

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure.

Job  
25/3/44

Survey Fee ... £ : When applied for, 19

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

See mach. rpt.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 25 MAR 1941

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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