

REPORT ON BOILERS.

No. 9825

Received at London Office

9- JAN 1952

Date of printing Report

19

When handed in at Local Office

22nd DEC. 1951

Port of

DUNDEE.

No. in
Reg. Bk.

Survey held at

Dundee

Date, First Survey

Last Survey

7-12-1951

(Number of Visits)

Gross 2157

Net 905

on the

Single screw oil tanker "EDDYBEACH"

Built at

Dundee

By whom built

Messrs. Caldon S. B. & E. Co. Ltd.

Yard No.

474 When built 1951.

Engines made at

Renfrew, Glasgow.

By whom made

Messrs. Lobnitz & Co. Ltd.

Engine No.

When made 1951.

Boilers made at

Dundee.

By whom made

Messrs. Caldon S. B. & E. Co. Ltd.

Boiler No.

674 When made 1951.

Nominal Horse Power

400

Owners

The Admiralty.

Port belonging to

London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Messrs. Colvilles Ltd. Motherwell.

(Letter for Record

5.

Total Heating Surface of Boilers

7530 sq. ft. ✓

Is forced draught fitted

yes ✓

Coal or Oil fired

oil ✓

No. and Description of Boilers

Two cylindrical multitubular ✓

Working Pressure

250 lb./sq. in. ✓

Tested by hydraulic pressure to

125 lb./sq. in. ✓

Date of test

22.6.51.

No. of Certificate

1073/4

Can each boiler be worked separately

yes ✓

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One 2 1/2" Double spring Imp. H. L. ✓

Area of each set of valves per boiler

(per Rule

as fitted 9.68 sq. ins. ✓

Pressure to which they are adjusted

250 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

yes ✓

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

Is the bottom of the boiler insulated

Largest internal dia. of boilers

16'-3" ✓

Length

12'-3" ✓

Shell plates: Material

S. Y. steel

Tensile strength

30.34 tons/sq. in. ✓

Thickness

1 3/32" ✓

Are the shell plates welded or flanged

Flanged ✓

Description of riveting: circ. seams

end

long. seams

T. R. O. B. S. ✓

Diameter of rivet holes in

circ. seams

1 3/32" ✓

Pitch of rivets

11 3/8" ✓

Percentage of strength of circ. end seams

plate

60.5% ✓

rivets

47.5% ✓

Percentage of strength of circ. intermediate seam

plate

-

rivets

-

Percentage of strength of longitudinal joint

plate

84.89% ✓

rivets

85.2% ✓

combined

86.7% ✓

THESE BOILERS REINSTALLED

IN S. S. LEONIS

12/66.

Rml

4/5/66.

Thickness of butt straps

{ outer

1 5/16" ✓

{ inner

1 7/16" ✓

No. and Description of Furnaces in each Boiler

3 "Brighton" section Locomotive. ✓

Material

S. Y. steel

Tensile strength

26.30 tons/sq. in. ✓

Smallest outside diameter

4'-2 5/8" ✓

Length of plain part

{ top

{ bottom

Thickness of plates

{ crown

{ bottom

3/16" ✓

Description of longitudinal joint

welded. ✓

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

End plates in steam space: Material

S. Y. steel

Tensile strength

26.30 tons/sq. in. ✓

Thickness

29/32" ✓

Pitch of stays

8" x 9" ✓

How are stays secured

nuts inside and outside ✓

Tube plates: Material

{ front

S. Y. steel

{ back

S. Y. steel.

Tensile strength

26.30 tons/sq. in. ✓

Thickness

front 3/16" ✓

back 29/32" ✓

Mean pitch of stay tubes in nests

8.31" ✓

Pitch across wide water spaces

19" ✓

Girders to combustion chamber tops: Material

S. Y. steel

Tensile strength

28.32 tons/sq. in. ✓

Depth and thickness of girder

at centre

11" x 7/8" ✓

Length as per Rule

3'-4" ✓

Distance apart

9" ✓

No. and pitch of stays

in each

3 at 9" ✓

Combustion chamber plates: Material

S. Y. steel

Tensile strength

26.30 tons/sq. in. ✓

Thickness: Sides

25/32" ✓

Back

23/32" ✓

Top

25/32" ✓

Bottom

15/16" ✓

Pitch of stays to duffo: Sides

9" x 9" ✓

Back

9" x 8" ✓

Top

9" x 9" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Front plate at bottom: Material

S. Y. steel

Tensile strength

26.30 tons/sq. in. ✓

Thickness

15/16" ✓

Lower back plate: Material

S. Y. steel

Tensile strength

26.30 tons/sq. in. ✓

Thickness

29/32" ✓

Pitch of stays at wide water space

19" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Main stays: Material

S. Y. steel

Tensile strength

28.32 tons/sq. in. ✓

Diameter

{ At body of stay,

3" ✓

{ Over threads,

3 1/4" ✓

No. of threads per inch

6 threads per inch. ✓

Screw stays: Material

S. Y. steel

Tensile strength

26.30 tons/sq. in. ✓

Diameter

{ At turned off part,

1 1/8" ✓

{ Over threads,

1 1/8" ✓

No. of threads per inch

9 threads per inch. ✓

Are the stays drilled at the outer ends *No.* ✓ Margin stays: Diameter { At turned off part, *2"* ✓
or
Over threads *2"* ✓
No. of threads per inch *9.* ✓
Tubes: Material *S.D. STEEL.* ✓ External diameter { Plain *2 1/2"* ✓
Stay *2 1/2"* ✓ Thickness { *8 L.S.G.* ✓
5/16"; 3/8"; 7/16" No. of threads per inch *9.* ✓
Pitch of tubes *3 3/4" (HORIZ.); 3 5/8" (VERT.).* ✓ Manhole compensation: Size of opening in
shell plate *21" x 17"* ✓ Section of compensating ring *3'-0" x 3'-4" x 1 5/8" FLANGED 16" x 12" HOLE.* ✓ No. of rivets and diameter of rivet holes *26; 1 3/32" DIA.* ✓
Outer row rivet pitch at ends *4.352"* ✓ Depth of flange if manhole flanged *4 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 { 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 *None.* ✓ 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

Yes FOR AND ON BEHALF OF
THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.
The foregoing is a correct description,

J. J. Oak

Manufacturer.
DIRECTOR

Dates of Survey { During progress of 1950 - May 19. Nov. 21
work in shops - - - 1951 - April 13. 19 June 22. 29. July 18
while building { During erection on 1951 Oct 16. 23. Nov. 16. 23. 27. 30
board vessel - - - Dec 7
Are the approved plans of boiler ~~forwarded~~ forwarded herewith *Yes. (11-8-49)*
(If not state date of approval.)
Total No. of visits *14*

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.) *The two main boilers described herein, have been built to Special Survey, in accordance with the approved plans, the requirements of the Rules and the Secretary's letters, suitable for working pressure of 250 lbs/sq. in. They have been efficiently installed on board the vessel. Safety valves have been adjusted under steam and found satisfactory and are eligible in our opinion to be classed + L.M.C. 12, 51.*

Survey Fee *2/6.* ... £ *58* : 0 : 0. When applied for, *24.12.51*
SPECIFICATION, £ *58* : 0 : 0.
Travelling Expenses (if any) £ : : When received, *19*

R. W. Skinner, for self & J. McLaren.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

8 JAN 1952

Assigned *SEE ACCOMPANYING MACHINERY REPORT.*



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Foundation