

## REPORT ON BOILERS.

No. 34639

Received at London Office

4-MAR-1947

MAR - 3 1947

Port of

Sunderland.

Writing Report

19

When handed in at Local Office

Date, First Survey

Last Survey

Feb 27 1947

Survey held at

(Number of Visits)

Gross 5381  
Net 3178

on the

Sunderland By whom built

Short Bros L<sup>td</sup>

Yard No.

When built 1947

made at

Sunderland

By whom made

G. Clark (1938) L<sup>td</sup>

Engine No.

When made 1947

made at

Sunderland

By whom made

G. Clark (1938) L<sup>td</sup>

Boiler No.

When made 1947

at Horse Power

528 m.h.p.

Owners

Holia Descante del Estado

Port belonging to

Buenos Aires.

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

Manufacturers of Steel

Colville L<sup>td</sup> & Steel Company of Scotland

(Letter for Record)

S. ✓

Heating Surface of Boilers

6699 sq ft

Is forced draught fitted

Yes ✓

Coal or Oil fired

oil ✓

Description of Boilers

Three Single Ended multitubular return tube marine

Working Pressure

220 lbs ✓

Tested by hydraulic pressure to

380 lbs

Date of test

15/11/46

No. of Certificate

4655

Can each boiler be worked separately

Yes ✓

No. and Description of safety valves to each boiler

5.94 sq in

Pressure to which they are adjusted

Two imp' high lift

Yes ✓

Of each set of valves per boiler

as fitted

6.28 sq in

Are they fitted with easing gear

220 lbs

Yes ✓

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

-

Least distance between boilers or uptakes and bunkers or woodwork

2'-0" ✓

Is oil fuel carried in the double bottom under boilers

No ✓

Least distance between shell of boiler and tank top plating

2'-6" ✓

Is the bottom of the boiler insulated

Yes ✓

Least internal dia. of boilers

13'-9 1/32"

Length

12'-6" ✓

Shell plates: Material

Steel ✓

Tensile strength

29/33 ✓

Thickness

12/64 ✓

Are the shell plates welded or flanged

No ✓

Description of riveting: circ. seams

end

D.R. lap

Seams

T.R.D.B.S. ✓

Diameter of rivet holes in

circ. seams

F. 15/16 B. 17/16

Pitch of rivets

F. 3 3/4 B. 4 1/8

9 1/4 32 ✓

Percentage of strength of circ. end seams

plate

F. 65.0 B. 65.1

rivets

43

44.1

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.16

rivets

92.3

combined

88.95

Thickness of butt straps

outer

1 1/16 ✓

inner

1 3/16 ✓

No. and Description of Furnaces in each Boiler

Three Corrugated (Keightley) ✓

Material

Steel ✓

Tensile strength

26/30 ✓

Smallest outside diameter

3'-5 1/2" ✓

Thickness of plain part

top

5/8" ✓

bottom

5/8" ✓

Description of longitudinal joint

welded ✓

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

-

Plates in steam space: Material

Steel ✓

Tensile strength

26/30 ✓

Thickness

17/16 ✓

Pitch of stays

23 1/2" x 18" ✓

Are stays secured

Double nuts ✓

Front plates: Material

Steel ✓

Tensile strength

26/30 ✓

Thickness

15/16 ✓

4/8" ✓

Pitch of stay tubes in nests

11 1/4" x 4 1/4" ✓

Pitch across wide water spaces

14 1/2" x 4 1/4" ✓

Boards to combustion chamber tops: Material

Steel ✓

Tensile strength

29/33 ✓

Depth and thickness of girder

Centre

11 3/4" x 1" (2) ✓

Length as per Rule

3'-10 1/2" ✓

Distance apart

9 3/8" ✓

No. and pitch of stays

Each

3 @ 11/8" ✓

Combustion chamber plates: Material

Steel ✓

Tensile strength

26/30 ✓

Thickness: Sides

53/64" ✓

Back

23/32" ✓

Top

53/64" ✓

Centre

4/8" ✓

Bottom

welded in backs ✓

Pitch of stays to ditto: Sides

11 1/8" x 8 5/8" ✓

Back

10" x 8" ✓

Top

11 1/8" x 9 3/8" ✓

Are stays fitted with nuts or riveted over

Yes ✓

Shell end ✓

Front plate at bottom: Material

Steel ✓

Tensile strength

26/30 ✓

Thickness

15/16 ✓

Thickness

15/16 ✓

Lower back plate: Material

Steel ✓

Tensile strength

26/30 ✓

Thickness

15/16 ✓

Pitch of stays at wide water space

14 1/2" x 9 9/16" ✓

Are stays fitted with nuts or riveted over

welded ✓

Shipping in stays: Material

Steel ✓

Tensile strength

28/32 ✓

Diameter

At body of stay, 3 1/8" - 3 3/8" (Deprow) ✓

Over threads

3 1/2" - 3 3/4" ✓

No. of threads per inch

6 ✓

New stays: Material

Steel ✓

Tensile strength

26/30 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At turned off part, 1 5/8" - 1 7/8" ✓

Over threads

No. of threads per inch

6 ✓

Shipping in stays: Material

Steel ✓

Tensile strength

28/32 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At body of stay, 3 1/8" - 3 3/8" (Deprow) ✓

Over threads

3 1/2" - 3 3/4" ✓

No. of threads per inch

6 ✓

New stays: Material

Steel ✓

Tensile strength

26/30 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At turned off part, 1 5/8" - 1 7/8" ✓

Over threads

No. of threads per inch

6 ✓

Shipping in stays: Material

Steel ✓

Tensile strength

28/32 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At body of stay, 3 1/8" - 3 3/8" (Deprow) ✓

Over threads

3 1/2" - 3 3/4" ✓

No. of threads per inch

6 ✓

New stays: Material

Steel ✓

Tensile strength

26/30 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At turned off part, 1 5/8" - 1 7/8" ✓

Over threads

No. of threads per inch

6 ✓

Shipping in stays: Material

Steel ✓

Tensile strength

28/32 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At body of stay, 3 1/8" - 3 3/8" (Deprow) ✓

Over threads

3 1/2" - 3 3/4" ✓

No. of threads per inch

6 ✓

New stays: Material

Steel ✓

Tensile strength

26/30 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At turned off part, 1 5/8" - 1 7/8" ✓

Over threads

No. of threads per inch

6 ✓

Shipping in stays: Material

Steel ✓

Tensile strength

28/32 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At body of stay, 3 1/8" - 3 3/8" (Deprow) ✓

Over threads

3 1/2" - 3 3/4" ✓

No. of threads per inch

6 ✓

New stays: Material

Steel ✓

Tensile strength

26/30 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter

At turned off part, 1 5/8" - 1 7/8" ✓

Over threads

No. of threads per inch

6 ✓

Shipping in stays: Material

Steel ✓

Tensile strength

28/32 ✓

Plain bars in backs ✓

9 in. Partitions ✓

Stays ✓

Diameter



Are the stays drilled at the outer ends *No.*  
No. of threads per inch *9.*  
Margin stays: Diameter { At turned off part, *1 1/8* or *2* Over threads  
Tubes: Material *S.D. Steel* External diameter { Plain *2 1/2* Stay *2 1/2* Thickness { *8 W.C.* *5/16 3/8 7/16* No. of threads per inch *9.*  
Pitch of tubes *3 3/4" x 3 7/8"* Manhole compensation: Size of opening  
shell plate *(In end plate)* Section of compensating ring *-* No. of rivets and diameter of rivet holes *-*  
Outer row rivet pitch at ends *4 1/4"* Depth of flange if manhole flanged *4 1/4"* 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 of stays *-*  
How connected to shell *-* Size of doubling plate under dome *-* Diameter of rivet holes in dome connection to shell *-*

Type of Superheater *NEM Combustion Chamber* Manufacturers of { Tubes *Steel P.* Headers *Stewart & Lloyd* Steel forgings *-* Steel castings *-*  
Number of elements *30* Material of tubes *S.D. Steel* Internal diameter and thickness of tubes *1.148" x 4 W.C.*  
Material of headers *S.D. Steel tubes* Tensile strength *96/30.* Thickness *1"* Can the superheater be shut off from the boiler *Yes.*  
the boiler be worked separately *Yes.* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes.*  
Area of each safety valve *3.14* Are the safety valves fitted with easing gear *Yes.*  
Pressure to which the safety valves are adjusted *220 lbs.* Hydraulic test pressure *440 lbs.*  
tubes *1500 lbs.* Headers *6600 lbs.* forgings and castings *Yes.* and after assembly in place *Yes.* Are drain valves fitted to free the superheater from water where necessary *Yes.*

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *Yes.*  
*note: Superheater area 1188 sq ft*  
The foregoing is a correct description,  
*George Clark (1958) Ltd.*  
*A. J. Schaeffer* Manuf.  
*RESIDENT MANAGER*

Dates of Survey { During progress of work in shops - - - while building { During erection on board vessel - - -  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
Total No. of visits

Is this Boiler a duplicate of a previous case *Yes.* If so, state Vessel's name and Report No. *R.O. DIAMANTE Sd Rpt*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been constructed in accordance with the approved plan & the rules of the Society. The materials & workmanship are good. On completion they have been tested by hydraulic pressure of 380 lbs. & found tight & sound at that pressure. Combustion Chamber type Superheaters have been fitted. The boilers have been securely fixed on board the vessel, fitted to burn oil fuel (F.P. above 150°F). Section 20 of the rules has been complied with & safety valves of boilers & superheaters adjusted and set to working pressure as above.*

*For recommendation please see Machinery Rpt.*

Survey Fee ... *see mach* When applied for, 19  
Travelling Expenses (if any) £ *Rpt.* When received, 19

*J. St. Lawrence*

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *FRI. 7 MAR 1947*

Assigned *For minute see J.E. Webb Rpt.*