

REPORT ON BOILERS.

No. 96940

DEC -1 1938

Date of writing Report

19

When handed in at Local Office

25th Nov 1938

Port of

NEWCASTLE-ON-TYNE

No. in Reg. Book.

89480

Survey held at

Newcastle-on-Tyne

Date, First Survey

28 June

Last Survey

25th Nov

1938.

on the

Messrs Cantieri Riuniti dell'Adriatico Ship No 1214.

(Number of Visits

21.)

Gross 6307

Tons Net 3600

Master

Built at

Monfalcone

By whom built

Cantieri Riuniti dell'Adriatico

Yard No.

1214 When built

1938.

Engines made at

Trieste

By whom made

do

Engine No.

5272 When made

1939

Boilers made at

Newcastle-on-Tyne (Steel)

By whom made

R & W. Hawthorn Leslie & Co Ltd

Boiler No.

1049 When made

1938.

Nominal Horse Power

164.

Owners

Anglo Saxon Petroleum Comp Ltd

Port belonging to

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Plates)

The Steel Company of Scotland (Furnaces) Horsley Bridge & T. Riggall

(Letter for Record

S

Total Heating Surface of Boilers

2464 sq ft

Is forced draught fitted

yes.

Coal or Oil fired

oil.

No. and Description of Boilers

One Single Ended.

Working Pressure

180 lb/sq in.

Tested by hydraulic pressure to

320 lb/sq in.

Date of test

3/11/38

No. of Certificate

800

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 Double Spring Loaded.

Area of each set of valves per boiler

per Rule

16 sq in.

as fitted

16.58 sq in.

Pressure to which they are adjusted

185 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

✓

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and ^{deck} top plating

3'-0" ✓

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

14'-3 1/2"

Length

11'-6" ✓

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

1 3/16"

Are the shell plates welded or flanged

neither

Description of riveting: circ. seams

end

D.R. Lap.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/4"

long. seams

1 1/4"

Pitch of rivets

3 1/2"

8 3/4"

Percentage of strength of circ. end seams

plate

64.2%

rivets

48.4%

Percentage of strength of circ. intermediate seam

plate

85.7%

rivets

Percentage of strength of longitudinal joint

plate

91%

rivets

89.4%

Working pressure of shell by Rules

183 lb/sq in.

Thickness of butt straps

outer

2 1/2"

inner

1 1/2"

No. and Description of Furnaces in each Boiler

3 Morrison Section (Corrugated).

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-7 1/2"

Length of plain part

top

8 7/8"

bottom

Thickness of plates

crown

9/16"

bottom

Description of longitudinal joint

welded.

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

none

Working pressure of furnace by Rules

189 lb/sq in.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/2"

Pitch of stays

21" x 17 1/4"

How are stays secured

Double nuts

Working pressure by Rules

183 lb/sq in.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Thickness

1 3/16"

Mean pitch of stay tubes in nests

9 1/4"

Pitch across wide water spaces

13 3/4" x 7 3/4"

Working pressure

front 242 lb/sq in.
back 255 lb/sq in.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

10" @ 1 1/2"

Length as per Rule

2'-10 1/2"

Distance apart

10"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

194 lb/sq in.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

4 5/8"

Back

4 5/8"

Top

4 5/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

8" x 8"

Back

8" x 8"

Top

8" x 10"

Are stays fitted with nuts or riveted over

riveted

Working pressure by Rules

180 lb/sq in.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

2 7/32"

Pitch of stays at wide water space

15" x 8"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

200 lb/sq in.

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay

3"

No. of threads per inch

6

Area supported by each stay

372.75 sq in.

Working pressure by Rules

181 lb/sq in.

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part

1 1/2" x 1 5/8"

No. of threads per inch

9

Area supported by each stay

64 sq in.

Working pressure by Rules 196 lb/p Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 3/4"

No. of threads per inch 9 Area supported by each stay 92 Sq. in. Working pressure by Rules 197 lb/p

Tubes: Material IRON External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 9 w.g. 5/16" + 3/8" No. of threads per inch 9

Pitch of tubes 4" x 3 7/8" Working pressure by Rules Plain 215 lb/p Stay 205 lb/p Manhole compensation: Size of opening in shell plate 21" x 17" Section of compensating ring 21" x 1 3/16" No. of rivets and diameter of rivet holes 40 @ 1 1/4"

Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged 3 1/2" 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 { Plates Rivets _____

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

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 _____ 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

The foregoing is a correct description, J. B. Johnston Manufacturer.

Dates of Survey { During progress of work in shops - - June 28, July 11, 15, Aug 5, 12, 30. Are the approved plans of boiler and superheater forwarded herewith 28/12/37 DIRECTOR

while building { During erection on board vessel - - Sep. 1, 8, 15, 19, 22, 29, Oct. 10, 13, 18, 25, 31, Nov. 3, 9, 18, 25. (If not state date of approval.)

Total No. of visits 21 + 5

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. "DAPHNELLA" No. 96399.

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 and approved plan.

The materials & workmanship are good and the boiler was found satisfactory under hydraulic test.

The mountings were hydraulically tested to twice the working pressure.

The boiler is being sent to Messrs. Cantieri Riuniti dell' Adriatico Monfalcone to be fitted on board.

The boiler has been fitted on board and run on fuel. The arrangement for burning oil fuel has been fitted under special survey, tested as per Rules and found in order. The boiler has been examined at the inside and outside and found in good condition. The safety valves adjusted to blow at 185 lbs. - Trieste 17.7.39

Survey Fee ... £ 15 : 8 : When applied for, 30 NOV 1938

Travelling Expenses (if any) £ : : When received, 6/12/38 (Con. Memo)

L. Seckel
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 1 AUG 1939

Assigned See Tri. Apts 12604