

REPORT ON BOILERS.

No. 43038

Received at London Office 13 AUG 1932

Date of writing Report

19

When handed in at Local Office

12.8.32

Port of

HULL

No. in Reg. Book

Survey held at

Hull.

Date, First Survey

22.7.32

Last Survey

5.8.

1932

1594 on the Steam Trawler "SIR MARK SYKES" (E. CYMREA)

(Number of Visits

5)

Gross

277

Tons

Net

113

Master

Built at

Ayr

By whom built

Ailsa S.S. Co. Ltd

Yard No.

When built 1918

Engines made at

Liverpool

By whom made

Lawrence & Son Ltd

Engine No.

When made 1918

Boilers made at

✓

By whom made

✓

Boiler No.

When made 1918

Nominal Horse Power

Owners

The Farnol Steam Fishing Co. Ltd

Port belonging to

Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(Letter for Record

S)

Total Heating Surface of Boilers

1616.8

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended return tube

Working Pressure

180 lbs.

Tested by hydraulic pressure to

✓

Date of test

✓

No. of Certificate

✓

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

58.8

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule

as fitted

9.8 sq. ft.

Pressure to which they are adjusted

180 lbs.

Are they fitted with easing gear

✓

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 tank top plating

Is the bottom of the boiler insulated

✓

Largest internal dia. of boilers

62"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

58

Thickness

1 1/16"

Are the shell plates welded or flanged

✓

Description of riveting: circ. seams

end

inter.

long. seams

T.R. 58.8

Diameter of rivet holes in

circ. seams

1 3/16"

long. seams

1 3/16"

Pitch of rivets

4"

Percentage of strength of circ. end seams

plate

95

rivets

92

Percentage of strength of circ. intermediate seam

plate

88

rivets

Percentage of strength of longitudinal joint

plate

92

rivets

combined

Working pressure of shell by Rules

181 lbs.

Thickness of butt straps

outer

1"

No. and Description of Furnaces in each Boiler

Three plain

Material

Steel

Tensile strength

Smallest outside diameter

40 3/16"

Length of plain part

top

45"

Thickness of plates

crown

25 3/32"

Description of longitudinal joint

beamed

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

Working pressure of furnace by Rules

208 lbs.

End plates in steam space: Material

Steel

Tensile strength

Thickness

1 3/16"

Pitch of stays

19" x 18"

How are stays secured

Double nuts & washers

Working pressure by Rules

193 lbs.

Tube plates: Material

front

Steel

Tensile strength

Thickness

1 1/16"

1 3/16"

Mean pitch of stay tubes in nests

9 1/2"

Pitch across wide water spaces

14 1/2"

Working pressure

front

back

Girders to combustion chamber tops: Material

Steel

Tensile strength

Depth and thickness of girder

at centre

8 1/4" x 13 1/4"

Length as per Rule

26 1/2"

Distance apart

9' x 9 1/2"

No. and pitch of stays

in each

2 @ 9 1/2"

Working pressure by Rules

250 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

10 1/2" x 8"

Back

9" x 8 3/8"

Top

9 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

184 lbs.

Front plate at bottom: Material

Steel

Tensile strength

Thickness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

Thickness

3/32"

Pitch of stays at wide water space

14 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

258 lbs.

Main stays: Material

Steel

Tensile strength

Diameter

At body of stay,

or

Over threads

3"

No. of threads per inch

6

Area supported by each stay

342 sq. in.

Working pressure by Rules

196 lbs.

Screw stays: Material

Steel

Tensile strength

Diameter

At turned off part,

or

Over threads

1 1/8"

No. of threads per inch

9

Area supported by each stay

84 sq. in.

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Working pressure by Rules 106 Lb. Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 17/8 or Over threads 17/8
No. of threads per inch 9 Area supported by each stay 100.6 Working pressure by Rules 100 Lb.
Tubes: Material lin External diameter { Plain 9 1/2 Stay 9 1/2 Thickness { 5/16 + 3/8 No. of threads per inch 9
Pitch of tubes 9 1/2 Working pressure by Rules 215 Lb. Manhole compensation: Size of opening in shell plate 15" x 11" Section of compensating ring 32 1/2" x 29" No. of rivets and diameter of rivet holes 32 @ 1 1/8"
Outer row rivet pitch at ends 1 1/2 Depth of flange if manhole flanged 1 1/2 Steam Dome: Material lin
Tensile strength 60,000 Thickness of shell 5/16 Description of longitudinal joint Butt joint
Diameter of rivet holes 1 1/8 Pitch of rivets 2 1/2 Percentage of strength of joint { Plate 100 Rivets 100
Internal diameter 30 Working pressure by Rules 215 Lb. Thickness of crown 5/16 No. and diameter of stays 10 @ 1 1/8"
How connected to shell By stays Size of doubling plate under dome 15" x 11" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/8" @ 2 1/2"

Type of Superheater Water tube Manufacturers of { Tubes W. & A. Mitchell Steel castings W. & A. Mitchell
Number of elements 10 Material of tubes lin Internal diameter and thickness of tubes 3 1/2" x 5/16"
Material of headers lin Tensile strength 60,000 Thickness 5/16 Can the superheater be shut off and 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 1 1/2" Are the safety valves fitted with easing gear Yes Working pressure as per Rules 106 Lb.
Pressure to which the safety valves are adjusted 106 Lb. Hydraulic test pressure: tubes 150 Lb. castings 150 Lb. and after assembly in place 150 Lb. Are drain cocks or 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

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - 1932 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - July 22, 26, 28, 29, Aug 5 Total No. of visits 5

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No. See plan No. 43003
(Please see note below).

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been examined throughout & found in good condition. Its scantlings have been compared with those on the plan of the boiler sent with the above mentioned report. They found to agree generally, and the only material difference is in the stay pitches, which are underlined in red. The boiler was built under B.C. Survey, and the particulars are sent for the information of the Committee & with a view to the machinery being classed L.M.C. with date.

Survey Fee ... £ See J.E. (H.) When applied for, 19
Travelling Expenses (if any) £ 10/6 When received, 19

Shadrach & Co. E. Mills
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 26 AUG 1932

Assigned See J.E. Rpt.



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