

Rpt. 5a.

REPORT ON BOILERS.

No. 39591.

Received at London Office

2 FEB 1929

Date of writing Report

192

When handed in at Local Office

Port of

HULL.

No. in Survey held at
Reg. Book.

Hull.

Date, First Survey

7 June 28

Last Survey

28 Jan'y 1929.

(Number of Visits

24.)

Gross

306.94

Tons

Net

116.69

Master

Built at

Selby

By whom built

Graham & Sons Ltd

Yard No.

1035

When built

Engines made at

Hull

By whom made

Amos & Smith Ltd

Engine No.

565

When made

Boilers made at

Hull

By whom made

Amos & Smith Ltd

Boiler No.

565

When made

Nominal Horse Power

96

Owners

Consolidated Fisheries Ltd

Port belonging to

Swansea

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Apperby & Co Ltd

(Letter for Record

Total Heating Surface of Boilers

1546 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended return tube

15B.

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

15/1/29

No. of Certificate

3689

Can each boiler be worked separately

Area of Firegrate in each Boiler

50 sq. ft.

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

{per Rule

8.89 sq. ft.

{as fitted

9.8

Pressure to which they are adjusted

200 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

4"

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

14'-0"

Length

10'-9"

Shell plates: Material

Steel

Tensile strength

29/33 Tons

Thickness

1 1/4"

Are the shell plates welded or flanged

Description of riveting: circ. seams

{end

37/8"

long. seams

T.R. 5B.S.

Diameter of rivet holes in

{circ. seams

1 1/2"

{long. seams

Pitch of rivets

{end

37/8"

{inter.

8 1/2"

Percentage of strength of circ. end seams

{plate

66.9

{rivets

42.2

Percentage of strength of circ. intermediate seam

{plate

84.9

{rivets

84.2

Percentage of strength of longitudinal joint

{plate

84.9

{rivets

84.2

{combined

Working pressure of shell by Rules

200.8 lbs.

Thickness of butt straps

{outer

1"

{inner

1 1/4"

No. and Description of Furnaces in each Boiler

Three plain

Material

Steel

Tensile strength

26/30 Tons

Smallest outside diameter

41 7/8"

Length of plain part

{top

80"

{bottom

72"

Thickness of plates

{crown

13/16"

{bottom

13/16"

Description of longitudinal joint

Welded

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

3 1/2 x 3 1/2 x 13/16"

Working pressure of furnace by Rules

206 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 Tons

Thickness

13/16"

Pitch of stays

21 x 16"

How are stays secured

S.N. & Washers

Working pressure by Rules

213 lbs.

Tube plates: Material

{front

Steel

{back

-

Tensile strength

26/30 Tons

Thickness

15/16"

7/8"

Mean pitch of stay tubes in nests

9.75"

Pitch across wide water spaces

14"

Working pressure

{front

208 lbs.

{back

220

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 Tons

Depth and thickness of girder

at centre

9 1/4 x 13/4"

Length as per Rule

36"

Distance apart

9' x 9 1/8" (centre)

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

204 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tons

Thickness: Sides

1/4"

Back

1/4"

Top

1/4"

Bottom

1/4"

Pitch of stays to ditto: Sides

10' x 8"

Back

9' x 8 3/4"

Top

9' x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

205 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30 Tons

Thickness

7/8"

Pitch of stays at wide water space

14' x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

250 lbs.

Main stays: Material

Steel

Tensile strength

26/32 Tons

Diameter

{At body of stay,

3 1/4"

{Over threads

No. of threads per inch

6

Area supported by each stay

336 sq. in.

Working pressure by Rules

238 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 Tons

Diameter

{At turned off part,

17/8"

{Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

80 sq. in.

010631-010639-0084

Lloyd's Register
Foundation

Working pressure by Rules 220 Lbs Are the stays drilled at the outer ends Yes Margin stays: Diameter 1 7/8" At turned off part, 1 7/8"
 No. of threads per inch 9 Area supported by each stay 97.7 sq. in. Working pressure by Rules 200 Lbs.
 Tubes: Material Iron External diameter 3 1/2" Thickness 3/16" & 3/8" No. of threads per inch 9
 Pitch of tubes 4 7/8" Working pressure by Rules 215 Lbs. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 56 7/8" dia No. of rivets and diameter of rivet holes 32 @ 1 1/4"
 Outer row rivet pitch at ends 10 1/4" Depth of flange if manhole flanged - Steam Dome: Material Steel
 Tensile strength 24,320 tons Thickness of shell 3/4" Description of longitudinal joint S.R. Lap.
 Diameter of rivet holes 1 3/32" Pitch of rivets 2 1/4" Percentage of strength of joint 54.0%
 Internal diameter 36" Working pressure by Rules - Thickness of crown 7/8" No. and diameter of stays 2 @ 2 1/2" Inner radius of crown - Working pressure by Rules -
 How connected to shell Riveted Size of doubling plate under dome 56 7/8" dia Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/4" - 10 1/4" pitch

Type of Superheater - Manufacturers of - Tubes - 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 - 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 23 inclusive for boilers been complied with -

The foregoing is a correct description,
 For AMOS & SMITH LTD.
 Manufacturer.

Dates of Survey - During progress of work in shops - See attached report on Macky. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) -
 while building - During erection on board vessel - Total No. of visits 1

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 This boiler has been built under special survey and in accordance with the approved plan. The materials and workmanship are sound & good. It has been satisfactorily fitted on board, tried under steam and its safety valves adjusted as above.

Chapman engine report
 Survey Fee £ 192 When applied for, 192
 Travelling Expenses (if any) £ - When received, 192

Shut Mackinlay
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 5 FEB 1929
 Assigned See 1st. attached

For S.S.O.F. please see F.E. "Cicton Castle" Hull Ref 39317