

REPORT ON BOILERS.

No. 47007

14 JUL 1936

Received at London Office

Date of writing Report

10

When handed in at Local Office

10 JUL 1936

10

Port of

No. in Survey held at

Kull

Date, First Survey

24.1.36

Last Survey

2.7.1936

on the

Steam Trawler "KIRKELLA"

(Number of Visits

Gross 436
Net 170

Master

Built at

Selly

By whom built

Cochrane & Sons Ltd

Yard No.

1159

When built

1936

Engines made at

Kull

By whom made

Amos & Smith

Engine No.

648

When made

1936

Boilers made at

Kull

By whom made

La

Boiler No.

648

When made

1936

Nominal Horse Power

Owners

J. Mann & Sons Ltd

Port belonging to

Flitwood

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley, Tinsley & Sons Ltd

(Letter for Record 5)

Total Heating Surface of Boilers

2060 sq ft.

Is forced draught fitted

no

Coal or Oil fired

Coal

No. and Description of Boilers

one single ended

Working Pressure 215 lbs.

Tested by hydraulic pressure to

3 1/2 lbs.

Date of test

12.5.36

No. of Certificate

3940

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

53 sq ft.

No. and Description of safety valves to each boiler

2 Spring loaded.

Area of each set of valves per boiler

11.86 sq ft.

Pressure to which they are adjusted

215 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

9"

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

15'-0"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29.33 Tons

Thickness

1 1/32"

Are the shell plates welded or flanged

✓

Description of riveting: circ. seams

end 6R

long. seams

T.R. 5/8"

Diameter of rivet holes in

1 1/32"

Pitch of rivets

4 5/16"

Percentage of strength of circ. end seams

66.6

Percentage of strength of circ. intermediate seam

✓

Percentage of strength of longitudinal joint

88.3

Working pressure of shell by Rules

215 lbs.

Thickness of butt straps

1 1/16"

No. and Description of Furnaces in each Boiler

three, Brighton's

Material

Steel

Tensile strength

26/30 Tons

Smallest outside diameter

43.8125"

Length of plain part

10"

Thickness of plates

2 1/32"

Description of longitudinal joint

beaded

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

✓

Working pressure of furnace by Rules

219 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 Tons

Thickness

1 1/4"

Pitch of stays 20" x 18"

How are stays secured

double nuts & washers.

Working pressure by Rules

226 lbs.

Tube plates: Material

Steel

Tensile strength

26/30 Tons.

Thickness

7/8"

Mean pitch of stay tubes in nests

11"

Pitch across wide water spaces

14 1/4"

Working pressure

236 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 Tons

Depth and thickness of girder

at centre

10" x 1 3/4"

Length as per Rule

36"

Distance apart

9 1/2" max.

No. and pitch of stays

in each

3 @ 8 1/2"

Working pressure by Rules

221 lbs (Centre)

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tons.

Thickness: Sides

3/4"

Back

2 3/32"

Top

2 3/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

9" x 8 1/2"

Back

9" x 8"

Top

9 1/2" x 8 1/2" (c.)

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

225 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tons.

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26/30 Tons

Thickness

29/32"

Pitch of stays at wide water space

14 1/4" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

253 lbs

Main stays: Material

Steel

Tensile strength

26/32 Tons.

Diameter

3 1/4"

No. of threads per inch

6

Area supported by each stay

360 sq"

Working pressure by Rules

224 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 Tons.

Diameter

1 7/8" + 1 3/4"

No. of threads per inch

9

Area supported by each stay

80.75 sq"

Working pressure by Rules 225 Lbs Are the stays drilled at the outer ends no Margin stays: Diameter 2" + 17/8"
 No. of threads per inch 9 Area supported by each stay 100 sq" Working pressure by Rules 215 Lbs
 Tubes: Material Iron External diameter 5 1/2" Thickness 3/8" + 5/16" No. of threads per inch 9
 Pitch of tubes 5" x 4 3/4" Working pressure by Rules 215 Lbs Manhole compensation: Size of opening
 shell plate 16" x 12" Section of compensating ring 5 1/2 dia x 1 1/2" No. of rivets and diameter of rivet holes 94 @ 1 3/32"
 Outer row rivet pitch at ends 9 7/8" Depth of flange if manhole flanged - Steam Dome: Material Steel
 Tensile strength 26/30 Tons Thickness of shell 3/4" Description of longitudinal joint S.R. Lap
 Diameter of rivet holes 1 1/2" Pitch of rivets 2 1/4" Percentage of strength of joint Plate 54.2
 Internal diameter 36" Working pressure by Rules 215 Lbs Thickness of crown 1" No. and diameter
 stays 2 @ 2 1/2" Inner radius of crown - Working pressure by Rules -
 How connected to shell Riveted Size of doubling plate under dome 5 1/2 dia x 1 1/2" Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell 1 3/32" 9 7/8"

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 22 inclusive for boilers been complied with For AMOS & SMITH LTD.
 The foregoing is a correct description,
A. A. Lawrence Manufacturer

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

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.)
This boiler has been built under special survey & in accordance with the approved plan, & the materials & workmanship are sound & good. It has been satisfactorily fitted on board, tried under steam & its safety valves adjusted as above

Survey Fee £ 10 When applied for, 10
 Travelling Expenses (if any) £ 10 When received, 10

John H. Mackintosh
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 21 JUL 1936

Assigned See other J.E
Sub. 47007

