

## REPORT ON BOILERS.

No. 47007

14 JUL 1936

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

No. in  
Reg. Book.

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

Tons

Net

170

Master

Built at

Lilly

By whom built

Cochrane &amp; Sons Ltd

Yard No.

1159

When built

1936

Engines made at

Kull

By whom made

Ams &amp; Smith

Engine No.

648

When made

1936

Boilers made at

Kull

By whom made

Ld

Boiler No.

648

When made

1936

Nominal Horse Power

Owners

J. Mann &amp; Sons Ltd

Port belonging to

Hutwood

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

Manufacturers of Steel

Apply. Birmingham Steel Co. Ltd

(Letter for Record

S

Total Heating Surface of Boilers

1060 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

375 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

per Rule

as fitted

11.86 sq ft.

Pressure to which they are adjusted

215 lbs.

Are they fitted with easing gear

No

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. 58.8

Diameter of rivet holes in

circ. seams

1 1/32"

Pitch of rivets

7/8"

Percentage of strength of circ. end seams

plate

66.6

rivets

42.4

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

88.4

rivets

86.8

combined

88.3

Working pressure of shell by Rules

215 lbs.

Thickness of butt straps

outer

1 1/16"

inner

1 3/16"

No. and Description of Furnaces in each Boiler

Steel, Brighton's

Material

Steel

Tensile strength

26/30 Tons

Smallest outside diameter

43.8125"

Length of plain part

top

10"

Thickness of plates

crown

2 1/32"

Description of longitudinal joint

Lapped

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 &amp; washers

Working pressure by Rules

226 lbs.

Tube plates: Material

front

Steel

back

"

Tensile strength

26/30 Tons

Thickness

1"

Mean pitch of stay tubes in nests

11"

Pitch across wide water spaces

14 1/4"

Working pressure

front

236 lbs

back

229 "

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 1/32"

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

2 1/32"

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

At body of stay,

3 1/4"

Over threads

No. of threads per inch

6

Area supported by each stay

360 sq in

Working pressure by Rules

224 lbs

Screw stays: Material

Steel

Tensile strength

26/30 Tons

Diameter

At turned off part,

1 7/8" + 1 3/4"

Over threads

No. of threads per inch

9

Area supported by each stay

80.75 sq in

003659-003670-0115



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 low 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 1/8" 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 1/8" 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  
 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. K. Hawley Manufacture

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 £ : : When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

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

Committee's Minute TUE. 21 JUL 1936

Assigned

See other J.E  
Serial 47007



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