

## REPORT ON BOILERS.

No. 15783

Received at London Office

E 7 OCT 1929

Surveys Report 4-10-1929 When handed in at Local Office 4-10-1929 Port of Aberdeen

Survey held at Aberdeen

Date, First Survey 1-5-29

Last Survey 25-9-1929

on the steam trawler "STRATHALBYN"

(Number of Visits 14)

Gross 217.65  
Tons Net 93.44

Built at Aberdeen

By whom built Hall, Russell &amp; Co. Ltd. No. 701 When built 1929

made at Aberdeen

By whom made Hall, Russell &amp; Co. Ltd.

Engine No. 701 When made 1929.

made at Aberdeen

By whom made Hall, Russell &amp; Co. Ltd.

Boiler No. 701 When made 1929.

Horse Power 75.

Owners Aberdeen S.T. &amp; F. Co. Ltd. Port belonging to Aberdeen.

## TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland Ltd.

(Letter for Record T. -)

Painting Surface of Boilers

1350 sq. ft.

Is forced draught fitted no

Coal or Oil fired Coal.

Description of Boilers

One S.E. Main.

Working Pressure 180 lb.

Hydraulic pressure to

320 lb.

Date of test 26-7-29

No. of Certificate 1072

Can each boiler be worked separately

yes

Firegrate in each Boiler

41.5 sq. ft.

No. and Description of safety valves to each boiler

2 spring loaded.

Each set of valves per boiler

per Rule

8.65 sq. ft.

as fitted

11.88 sq. ft.

Pressure to which they are adjusted

180 lb.

Are they fitted with easing gear

yes

If donkey boilers, state whether steam from main boilers can enter the donkey boiler

yes

Distance between boilers or uptakes and bunkers or woodwork

8"

Is oil fuel carried in the double bottom under boilers

no

Distance between shell of boiler and tank top plating

no tank

Is the bottom of the boiler insulated

no

Internal dia. of boilers

12'-6"

Length 10'-0"

Shell plates: Material

Steel

Tensile strength

29/33 tons

1"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

OR.

T.R.D.S.S.

Diameter of rivet holes in

circ. seams

1 1/16"

long. seams

1 1/16"

Pitch of rivets

3 1/8"

7 7/8"

Percentage of strength of circ. end seams

plate

66

rivets

45

Percentage of strength of circ. intermediate seam

plate

Percentage of strength of longitudinal joint

plate

86.06

rivets

86.45

combined

89.47

Working pressure of shell by Rules

181.7 lb.

of butt straps

outer

3/4"

inner

7/8"

No. and Description of Furnaces in each Boiler

3 plain.

Steel.

Tensile strength

26/30 tons

Smallest outside diameter

36 1/2"

plain part

top

74.5"

bottom

67.25"

Thickness of plates

crown

3/4"

bottom

Description of longitudinal joint

welded.

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

Working pressure of furnace by Rules

213.5 lb.

Stays in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 1/16"

Pitch of stays

18 3/8" x 15 1/2"

Stays secured

Double nuts.

Working pressure by Rules

180.7 lb.

Stays: Material

front

Steel

back

Steel.

Tensile strength

26/30 tons

Thickness

29/32"

13/16"

Pitch of stay tubes in nests

10.97"

Pitch across wide water spaces

14 1/2"

Working pressure

front

187.8 lb.

back

197 "

Combustion chamber tops: Material

Steel

Tensile strength

29/33 tons

Depth and thickness of girder

7 1/8" x 1 3/4"

Length as per Rule

29.03"

Distance apart

10.125"

No. and pitch of stays

2 @ 9"

Working pressure by Rules

185.5 lb.

Combustion chamber plates: Material

Steel.

Length

26/30 tons

Thickness: Sides

11/16"

Back

21/32"

Top

11/16"

Bottom

11/16"

Stays to ditto: Sides

9" x 9 3/4"

Back

8" x 9 3/4"

Top

9" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts.

Pressure by Rules

180.2 lb.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

27/32"

Stays at wide water space

14 1/4"

Are stays fitted with nuts or riveted over

nuts.

Pressure

194.8 lb.

Main stays: Material

Steel

Tensile strength

28/32 tons

of stay body of stay

or

2 3/4"

No. of threads per inch

6.

Area supported by each stay

311 sq. in.

Pressure by Rules

177.5 lb.

Screw stays: Material

Iron

Tensile strength

21 1/2 tons

Stays turned off part

or

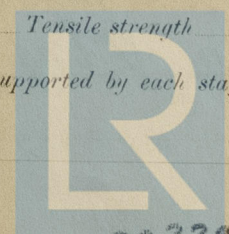
1 3/4"

No. of threads per inch

9.

Area supported by each stay

91.125 sq. in.



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Working pressure by Rules 199 lb. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads 2" ✓

No. of threads per inch 9 Area supported by each stay 108 sq Working pressure by Rules 228 lb.

Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 8. SWG. No. of threads per inch 9 ✓

Pitch of tubes 4 3/4" Working pressure by Rules 215 lb. Manhole compensation: Size of opening in shell plate 16 x 12 ✓ Section of compensating ring 2-4 dia x 1" No. of rivets and diameter of rivet holes 34 @ 1 1/8" ✓

Outer row rivet pitch at ends 7 5/8" Depth of flange if manhole flanged ✓ Steam Dome: Material \_\_\_\_\_

Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint { Plate 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 \_\_\_\_\_ 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 yes.

The foregoing is a correct description,  
**FOR HALL, RUSSELL & CO., LTD.**  
James H. Hunter Manufacturer.

Dates of Survey { During progress of work in shops - - May 1. 21-22. June 13-20-22-26 At the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes.

while building { During erection on board vessel - - - Sept. 2-11-25.

Total No. of visits 14.

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

This boiler has been constructed under special survey in accordance with the approved plan & the Rules of this Society. The materials & workmanship are good. The boiler has been satisfactorily fitted on board the vessel, the safety valves adjusted under steam and tried for accumulation, and the boiler examined under working conditions and found satisfactory.

Survey Fee ... .. £ See Report When applied for, 192

Travelling Expenses (if any) £ on Machinery When received, 192

P. Fitzgerald James H. Hunter  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 8 OCT 1928

Assigned See Report attached