

REPORT ON BOILERS.

No. 17555

Received at London Office

27 APR 1936

Date of writing Report 21-4-36 When handed in at Local Office 25-4-36 Port of West Hartlepool

No. in Survey held at

Hartlepool

Date, First Survey

13-2-36

Last Survey

8-4-

1936

Reg. Book.

on the

Steam trawler LOCH MONTEITH

(Number of Visits 15)

Tons

Gross 530

Net 194

Master

Built at

South Barr

By whom built

Smiths Dock & Co. Ltd

Yard No. 1003

When built 1936

Engines made at

South Barr

By whom made

Smiths Dock & Co. Ltd

Engine No. 461

When made 1936

Boilers made at

Hartlepool

By whom made

Messrs Richardson Westgarth & Co. Ltd

Boiler No. 461

When made 1936

Nominal Horse Power

Owners

Loch Fishing Co. of Hull Ltd

Port belonging to

Hull

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland

(Letter for Record S ✓)

Total Heating Surface of Boilers

2450 sq. ft.

Is forced draught fitted

yes ✓

Coal or Oil fired

coal ✓

No. and Description of Boilers

One, single ended ✓

150

Working Pressure

225 lbs. ✓

Tested by hydraulic pressure to

387 lbs.

Date of test

20-3-36

No. of Certificate

3838 ✓

Can each boiler be worked separately ✓

Area of Firegrate in each Boiler

62 sq. ft.

No. and Description of safety valves to each boiler

Pair Cockburns Improved High Lift

Area of each set of valves per boiler

per Rule 7.19

as fitted 9.80

Pressure to which they are adjusted

230 lbs

Are they fitted with easing gear

L ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers

uptakes and bunkers or woodwork

1'-0"

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

No ✓

Largest internal dia. of boilers

15' 5 5/16"

Length

12' 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

D.R. ✓

long. seams

Y.R.D.B.S ✓

Diameter of rivet holes in

circ. seams 1 7/16"

long. seams 1 1/2"

Pitch of rivets

3 7/8"

inter. 10 1/8"

Percentage of strength of circ. end seams

plate 62.9

rivets 43.2

Percentage of strength of circ. intermediate seam

plate

rivets ✓

Percentage of strength of longitudinal joint

plate 85.18

rivets 84.74

combined 87.27

Working pressure of shell by Rules

225.8 lbs. ✓

Thickness of butt straps

outer 1 3/16"

inner 1 5/16"

No. and Description of Furnaces in each Boiler

3, Morison

30 ✓

Material

steel ✓

Tensile strength

26-30 tons ✓

Smallest outside diameter

3' 8 3/8"

Length of plain part

top

bottom

Thickness of plates

crown 1 1/16"

bottom 1 1/16"

Description of longitudinal joint

welded ✓

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

✓

Working pressure of furnace by Rules

227 lbs. ✓

End plates in steam space: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

1 5/16"

Pitch of stays 20" x 17 1/2"

How are stays secured

double nuts & washers ✓

Working pressure by Rules

228 lbs. ✓

Tube plates: Material

front steel ✓

back

Tensile strength

26-30 tons ✓

Thickness

3 1/32"

57/64"

Mean pitch of stay tubes in nests

11 1/4"

Pitch across wide water spaces

14 1/4"

Working pressure

front 228 lbs.

back 227 lbs.

Girders to combustion chamber tops: Material

steel ✓

Tensile strength

28-32 tons ✓

Depth and thickness of girder

at centre

9 7/8" x 7/8"

Length as per Rule

2' 11 5/16"

Distance apart

9"

No. and pitch of stays

in each

3 x 8 1/2"

Working pressure by Rules

225 lbs. ✓

Combustion chamber plates: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness: Sides

1 1/16"

Back

1 1/16" x 2 1/32"

Top

2 3/32"

Bottom

1" ✓

Pitch of stays to ditto: Sides

8 1/2" x 8 1/2"

Back

9" x 8"

Top

9" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

228 lbs. ✓

Front plate at bottom: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

3 1/32"

Lower back plate: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

1 5/16"

Pitch of stays at wide water space

14 3/4" x 8"

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

231 lbs. ✓

Main stays: Material

steel ✓

Tensile strength

28-32 tons ✓

Diameter

At body of stay, or over threads

3 1/4" x 3 1/8"

No. of threads per inch

6 ✓

Area supported by each stay 357 sq. ins., 327 sq. ins.

Working pressure by Rules

229 lbs. 240 lbs. ✓

Screw stays: Material

steel ✓

Tensile strength

26-30 tons ✓

Diameter

At turned off part, or over threads

1 3/4"

No. of threads per inch

9 ✓

Area supported by each stay 80.6 sq. ins.

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Working pressure by Rules 237 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8"
Over threads
No. of threads per inch 9 Area supported by each stay 94.8 sq. ins. Working pressure by Rules 239 lbs.
Tubes: Material Iron External diameter { Plain 3 1/4" Thickness { 8 w.c. No. of threads per inch 9
Stay 3 1/4" 7/16" 3/8" 5/16"
Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 230 lbs. Manhole compensation: Size of opening in
shell plate 20 1/2" x 14" Section of compensating ring 36" x 32" x 1 7/32" No. of rivets and diameter of rivet holes 30 1 1/2" dia.
Outer row rivet pitch at ends 10 1/8" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material steel
Tensile strength 26-30 tons Thickness of shell 15/16" Description of longitudinal joint Lap, treble riveted.
Diameter of rivet holes 1 3/16" Pitch of rivets 4 1/4" Percentage of strength of joint { Plate 72.05
Rivets 73.7
Internal diameter 36" Working pressure by Rules 515 lbs. Thickness of crown 1" No. and diameter of
stays ✓ Inner radius of crown 36" Working pressure by Rules 292 lbs.
How connected to shell By neck ring. Size of doubling plate under dome neck ring 1 1/8" thick Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 1 5/16" x 9.07"

Type of Superheater Smoke tube Manufacturers of { Tubes Superheater to bod.
Steel castings
Number of elements 64 Material of tubes steel Internal diameter and thickness of tubes 17 m/m. 3 m/m.
Material of headers forged steel Tensile strength Thickness Can the superheater be shut off and
the boiler be worked separately Yls. Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yls.
Area of each safety valve 1.76 sq. ft. Are the safety valves fitted with easing gear Yls. Working pressure as per
Rules approx 225 lbs. Pressure to which the safety valves are adjusted 230 lbs. Hydraulic test pressure:
tubes ✓ castings ✓ and after assembly in place 675 lbs. 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

For RICHARDSONS, WESTGARTH & Co. LIMITED.
The foregoing is a correct description,
W. E. Forridge Manufacturer.
DIRECTOR

Dates { During progress of
of Survey { work in shops - - -
while { During erection on
building { board vessel - - -

Are the approved plans of boiler and superheater forwarded herewith no
(If not state date of approval.) 21-12-35. 9-1-36.
Total No. of visits

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been constructed
under Special Survey in accordance with the approved plans for a working pressure of
225 lbs per square inch. The materials and workmanship have been found good.
Upon completion the boiler tested by hydraulic pressure 387 lbs per square inch
with satisfactory results.

The Boiler is to be dispatched to Middlesbrough for fitting on board.

This boiler has been securely fitted aboard and its safety valves
adjusted under steam

P. J. McA

Mid 27. 6. 36

Survey Fee ... £ 18 : 6 : 0 When applied for, 25-4-1936

Travelling Expenses (if any) £ : : When received, 5-5-1936 abs

J. Brooke-Smith

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 17 JUL 1936

Assigned

See Ind. L.E. 15737



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