

REPORT ON BOILERS.

No. 84694

Received at London Office

7 SEP 1929

Date of writing Report

1929

When handed in at Local Office

6/9/1929

Port of Newcastle-on-Tyne

No. in Survey held at

Hebburn

Date, First Survey

18 June

Last Survey

29 August 1929

of Book.

(Number of Visits

10.

Gross 104.70

Tons

Net 1.45.

on steel single screw tug.

"FOSSA"

Master

Built at Aberdeen

By whom built

Alex. Hall & Co. Ltd

Yard No.

619

When built 1929

Engines made at

Aberdeen

By whom made

Alex. Hall & Co. Ltd.

Engine No.

319

When made 1929

Boilers made at

Hebburn

By whom made

Palmer's Co. Ltd.

Boiler No.

1132

When made 1929

Nominal Horse Power

87

Owners

Gasulu & Son

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Withowitz Bergbau- und Eisenhütten-Gesellschaft in Withowitz (Letter for Record S)

Total Heating Surface of Boilers

1610 sq

Is forced draught fitted

No

Coal or Oil fired

COAL

No. and Description of Boilers

ONE S.E. MULTITUBULAR

Tested by hydraulic pressure to

335 LBS

Date of test 29-8-29

No. of Certificate 381

Can each boiler be worked separately

Area of Firegrate in each Boiler

44 sq

No. and Description of safety valves to each boiler

2 spring loaded.

Area of each set of valves per boiler

per Rule 9.817
as fitted 9.817

Pressure to which they are adjusted

190 lb

Are they fitted with easing gear

yes

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

well clear

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

in tank.

Is the bottom of the boiler insulated

Largest internal dia. of boilers

13'

Length

10.6'

Shell plates: Material

STEEL

Tensile strength 28-32 TONS.

Thickness

Are the shell plates welded or flanged

NO

Description of riveting: circ. seams

DR

long. seams

TR DBS

Diameter of rivet holes in

circ. seams 1 3/16"

long. seams 1 3/16"

Pitch of rivets

3 5/8"

Percentage of strength of circ. end seams

plate 64.1%

ribs 40.1%

plate 85.8%

ribs 90.5%

Percentage of strength of circ. intermediate seam

plate

ribs

Percentage of strength of longitudinal joint

plate

ribs

combined

Working pressure of shell by Rules

190.5 LBS.

Thickness of butt straps

outer 1 1/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

TWO PLAIN

Material

STEEL

Tensile strength

26-30 TONS

Smallest outside diameter

3' 9 1/2"

Length of plain part

top

bottom

Thickness of plates

crown 1 3/16"

bottom 1 3/16"

Description of longitudinal joint

WELD

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

Working pressure of furnace by Rules

190 LBS.

End plates in steam space: Material

STEEL

Tensile strength

26-30 TONS

Working pressure by Rules

191 LBS.

How are stays secured

DOUBLE NUTS & WASHERS

Tube plates: Material

front

back

STEEL

Tensile strength

26-30 TONS

Thickness

3/32"

Mean pitch of stay tubes in nests

9 1/2" x 9 1/2"

Pitch across wide water spaces

14"

Working pressure

front 314 LBS.

back 211 "

Girders to combustion chamber tops: Material

STEEL

Tensile strength 28-32 TONS

Depth and thickness of girder

at centre

8 3/4" x 1 1/2"

Length as per Rule

2' 8 1/2"

Distance apart

8 3/4"

No. and pitch of stays

in each

2 @ 8 3/4"

Working pressure by Rules

206 LBS.

Combustion chamber plates: Material

STEEL

Tensile strength

26-30 TONS

Thickness: Sides

21/32"

Back

1/16"

Top

21/32"

Bottom

1"

Pitch of stays to ditto: Sides

8 3/4" x 8 3/4"

Back

9 1/4" x 9 1/4"

Top

8 3/4" x 8 3/4"

Are stays fitted with nuts or riveted over

NUTS

Working pressure by Rules

196 LBS.

Front plate at bottom: Material

STEEL

Tensile strength

26-30 TONS

Thickness

29/32"

Lower back plate: Material

STEEL

Tensile strength

26-30 TONS

Thickness

7/8"

Pitch of stays at wide water space

14" x 9 1/4"

Are stays fitted with nuts or riveted over

NUTS

Working Pressure

219 LBS.

Main stays: Material

STEEL

Tensile strength

28-32 TONS

Diameter

At body of stay, or over threads

3"

No. of threads per inch

6

Area supported by each stay

311.5 sq

Working pressure by Rules

203 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

85.5 sq



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Working pressure by Rules **212 LBS** Are the stays drilled at the outer ends **No** Margin stays: Diameter **1 7/8"** At turned off part. Over threads **1 7/8"**
No. of threads per inch **9** Area supported by each stay **74.1"** Working pressure by Rules **298 LBS**
Tubes: Material **IRON** External diameter **3 1/2"** Thickness **5/16"** No. of threads per inch **9**
Pitch of tubes **4 3/4" x 4 3/4"** Working pressure by Rules **215 LBS** Manhole compensation: Size of opening in shell plate **16" x 20"** Section of compensating ring **2' 9 1/2" x 2' 5 1/2" x 1 1/8"** No. of rivets and diameter of rivet holes **32 @ 1 1/2"**
Outer row rivet pitch at ends **8 1/2"** Depth of flange if manhole flanged **3 1/2"** 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 **-** 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 **-**
Area of each safety valve **-** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **-**
Rules **-** Are the safety valves fitted with easing gear **-** Working pressure as per **-**
tubes **-** Pressure to which the safety valves are adjusted **-** Hydraulic test pressure: **-**
to free the superheater from water where necessary **-** and after assembly in place **-** Are drain cocks or valves fitted **-**

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **Yes**

W. H. Shipbuilding & Iron Co., Ltd.
The foregoing is a correct description,
A. Cameron per 20/10 Manufacturer.
Manager, Hobbie Bell's Shop & Foundry.

Dates of Survey **1929** During progress of work in shops **June 13, July 8, 16, 31, Aug. 2, 7, 14, 21, 27, 29** Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Yes**
while building **Sept. 9, 16, 17** Total No. of visits **10**
board vessel **-** Installing **3**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under Special Survey, the materials and workmanship are good.**

The boiler has been fitted on the steel screw tug "FOSSA". The safety valves have been adjusted under steam and tried for accumulation. Boiler examined under steam & found satisfactory.

Survey Fee **10 : 15 : 0** When applied for **1929**
Travelling Expenses (if any) **£** When received **26.10.29**

Thomas Napier
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **Vol. 11 OCT 1929**

Assigned **See p. 8. ylt. attached (Abn No 15780)**



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