

# REPORT ON BOILERS.

No. 40337

Received at London Office

-5 NOV 1929

Date of writing Report 5<sup>th</sup> 11<sup>th</sup> 1929 When handed in at Local Office 5 Nov 1929 Port of

HULL.

No. in Survey held at Hull Date, First Survey 4 July 1929 Last Survey 31 Oct 1929

8809 on the Steam Trawler "DROMIO" (Number of Visits 24) Gross 379.92 Tons Net 143.34

21 ster Built at Beverley By whom built Cook, Weldon & Hemmell Card No. 528 When built 1929

Engines made at Hull By whom made Auro & Smith Ltd Engine No. 591 When made 1929

Boilers made at Hull By whom made do Boiler No. 591 When made 1929

29 Principal Horse Power Owners Hull Northern Fishing Co Ltd Port belonging to Hull

RETAIN

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

Manufacturers of Steel Appleby Iron Co Ltd. (Letter for Record (S))

21 Heating Surface of Boilers 1986 Sq. feet. Is forced draught fitted ho Coal or Oil fired Coal

21.10. and Description of Boilers One single ended return tube ISB Working Pressure 210 Lbs.

tested by hydraulic pressure to 365 Lbs. Date of test 25.9.29 No. of Certificate 3435 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 51.25 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded.

Area of each set of valves per boiler {per Rule 11.00 as fitted 11.88} Pressure to which they are adjusted 210 Lbs. Are they fitted with easing gear ✓

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

Smallest distance between boilers or uptakes and bunkers or woodwork 8" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated ✓

Largest internal dia. of boilers 145" Length 129" Shell plates: Material Steel Tensile strength 29/33 Tons

Thickness 1 11/32" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams {end 5R inter. 47/6} Pitch of rivets {94"}

Seams T.R. S.B.S. Diameter of rivet holes in {circ. seams 13/8" long. seams 13/8"} Percentage of strength of circ. intermediate seam {plate 66.4 rivets 42.1}

Percentage of strength of longitudinal joint {plate 85.1 rivets 87.0} Working pressure of shell by Rules 216 Lbs.

Thickness of butt straps {outer 1 1/2" inner 1 5/32"} No. and Description of Furnaces in each Boiler Three plain 3 p.f. ✓

Material Steel Tensile strength 26/30 Tons. Smallest outside diameter 42 5/8" ✓

Thickness of plain part {top 76 13/16" bottom 71 13/16"} Thickness of plates {crown 13/16" bottom 13/16"} Description of longitudinal joint welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 212 Lbs.

Plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 1 1/8" Pitch of stays 18" ✓

Are stays secured double nuts & washers. Working pressure by Rules 210 Lbs.

Plates: Material {front Steel back "} Tensile strength {26/30 Tons. Thickness {1" 7/8"}

Pitch of stay tubes in nests 11" Pitch across wide water spaces 13 3/4" Working pressure {front 238 Lbs. back 268 "}

Boards to combustion chamber tops: Material Steel Tensile strength 29/33 Tons. Depth and thickness of girder

Centre 9 3/4" x 13 1/4" Length as per Rule 37" Distance apart 9" (max.) No. and pitch of stays

3 @ 8" Working pressure by Rules 212 Lbs. Combustion chamber plates: Material Steel

Thickness: Sides 23/32" Back 23/32" 4" 1/6" Top 4 1/6" Bottom 3/4" ✓

of stays to ditto: Sides 9" x 8 1/2" Back 9 1/4" x 8" Top 9" x 8" max. Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 214 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 7/8" ✓

of stays at wide water space 13 3/4" x 8" Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 264 Lbs. Main stays: Material Steel Tensile strength 28/32 Tons. ✓

At body of stay, or Over threads 3" No. of threads per inch 6 Area supported by each stay 288 sq. in. ✓

Working pressure by Rules 232 Lbs. Screw stays: Material Steel Tensile strength 26/30 Tons. ✓

At turned off part, or Over threads 1 7/8" x 1 3/4" No. of threads per inch 9 Area supported by each stay 800 sq. in. max. ✓

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Working pressure by Rules **228 Lbs** Are the stays drilled at the outer ends **no** Margin stays: Diameter <sup>At turned off part,</sup> **17/8"** or <sup>Over threads</sup> **224 Lbs.**

No. of threads per inch **9** Area supported by each stay **95 sq"** Working pressure by Rules **224 Lbs.**

Tubes: Material **low** External diameter <sup>Plain</sup> **3 1/4"** Thickness <sup>Sub.</sup> **5/16"** No. of threads per inch **9**

Pitch of tubes **4 1/2" x 4 3/4"** Working pressure by Rules **230 Lbs.** Manhole compensation: Size of opening

shell plate **16" x 12"** Section of compensating ring **60 1/2" dia x 1 5/32"** No. of rivets and diameter of rivet holes **16 @ 1 1/32"**

Outer row rivet pitch at ends **10 1/4"** Depth of flange if manhole flanged **-** Steam Dome: Material **Steel**

Tensile strength **18/30 Tons** Thickness of shell **3/4"** Description of longitudinal joint **S. R. Lap.**

Diameter of rivet holes **1 1/32"** Pitch of rivets **2 1/4"** Percentage of strength of joint <sup>Plate</sup> **54.0** <sup>Rivets</sup> **43.6**

Internal diameter **36"** Working pressure by Rules **250 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 **60 1/2" dia x 1 1/32"** Diameter of rivet holes and

of rivets in outer row in dome connection to shell **1 1/32" @ 10 1/4"**

**Type of Superheater** Manufacturers of <sup>Tubes</sup> **-** <sup>Steel castings</sup> **-**

Number of elements **-** Material of tubes **-** Internal diameter and thickness of tubes **-**

Material of headers **-** Tensile strength **-** Thickness **-** Can the superheater be shut off

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 at

Rules **-** Pressure to which the safety valves are adjusted **-** Hydraulic test press

tubes **-** castings **-** and after assembly in place **-** Are drain cocks or valves

to free the superheater from water where necessary **-**

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with **-**

The foregoing is a correct description,  
**FOR AMOS & SMITH LTD.** Manufact

Dates of Survey <sup>During progress of work in shops - -</sup> **See attached report** Are the approved plans of boiler and superheater forwarded herewith **MANAGER**  
<sup>while building</sup> <sup>During erection on board vessel - - -</sup> **on Machy** Total No. of visits **1**

**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 **£** **Charged on engine report** When applied for, **192**  
 Travelling Expenses (if any) **£** **hewish.** When received, **192**

**John Shackirdy**  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **FRI. 8 NOV 1929**  
 Assigned **See Rpt attached**

