

REPORT ON BOILERS.

No. 40784

30 APR 1930

Received at London Office

Date of writing Report 29.4.30 When handed in at Local Office 29 April 1930 Port of **HULL**

Reg. No. 11714 on the **Steam Trawler "MALMATA"** Date, First Survey 14 Dec 29 Last Survey 22 April 1930

Survey held at **Hull** (Number of Visits 19) Gross Tons 355.68 Net Tons 169.13

Master **Burley** Built at **Burley** By whom built **Cox, Nelson & Co. Ltd** Yard No. 543 When built 1930

Engines made at **Hull** By whom made **Ams & Smith Ltd** Engine No. 602 When made 1930

Boilers made at **Hull** By whom made **do** Boiler No. 602 When made 1930

Nominal Horse Power 91. Owners **Malmata Fishing Co. Ltd.** Port belonging to **Grimsby.**

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Appley Iron Works** (Letter for Record **S**)

Total Heating Surface of Boilers **1546 sq. ft.** Is forced draught fitted **Yes** Coal or Oil fired **Coal**

No. and Description of Boilers **One single ended return tube** Working Pressure **200 lbs.**

Tested by hydraulic pressure to **350 lbs.** Date of test **26.2.30** No. of Certificate **3463.** Can each boiler be worked separately **Yes**

Area of Firegrate in each Boiler **45 sq. ft.** No. and Description of safety valves to each boiler **2 Spring loaded**

Area of each set of valves per boiler **per Rule 9.0 sq. ft.** as fitted **9.8 sq. ft.** Pressure to which they are adjusted **200 lbs.** Are they fitted with easing gear **Yes**

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

Smallest distance between boilers or uptakes and bunkers or woodwork **4"** Is oil fuel carried in the double bottom under boilers **Yes**

Smallest distance between shell of boiler and tank top plating **4"** Is the bottom of the boiler insulated **Yes**

Largest internal dia. of boilers **14'-0"** Length **10'-9"** Shell plates: Material **Steel** Tensile strength **29/33 Tons**

Thickness **1 1/4"** Are the shell plates welded or flanged **Yes** Description of riveting: circ. seams **3 7/8"** end **3 7/8"** inter. **3 7/8"**

long. seams **T.R. 5/8"** Diameter of rivet holes in **circ. seams 1 9/32"** long. seams **1 9/32"** Pitch of rivets **8 1/2"**

Percentage of strength of circ. end seams **plate 66.9** rivets **42.2** Percentage of strength of circ. intermediate seam **plate 84.9** rivets **90.3**

Percentage of strength of longitudinal joint **plate 84.9** rivets **90.3** combined **Working pressure of shell by Rules 201 lbs.**

Thickness of butt straps **outer 1 1/4"** inner **1 1/4"** No. and Description of Furnaces in each Boiler **Three plain**

Material **Steel** Tensile strength **26/30 Tons** Smallest outside diameter **41 5/8"**

Length of plain part **top 80"** bottom **82"** Thickness of plates **top 1 3/4"** bottom **1 1/4"** Description of longitudinal joint **Welded**

Dimensions of stiffening rings on furnace or c.c. bottom **33 x 3 1/2 x 1 3/4"** Working pressure of furnace by Rules **208 lbs.**

End plates in steam space: Material **Steel** Tensile strength **26/30 Tons** Thickness **1 3/4"** Pitch of stays **21" x 16"**

How are stays secured **Double nuts & washers** Working pressure by Rules **200 lbs.**

Tube plates: Material **Steel** Tensile strength **26/30 Tons** Thickness **1 5/16"** **7/8"**

Mean pitch of stay tubes in nests **10'-1"** Pitch across wide water spaces **14"** Working pressure **front 208 lbs.** back **220**

Girders to combustion chamber tops: Material **Steel** Tensile strength **29/33 Tons** Depth and thickness of girder **9" x 14"**

at centre **9 1/4" x 1 3/4"** Length as per Rule **36"** Distance apart **9"** No. and pitch of stays **3 @ 8"**

Working pressure by Rules **204 lbs.** Combustion chamber plates: Material **Steel**

Tensile strength **26/30 Tons** Thickness: Sides **1 1/4"** Back **1 1/4"** Top **1 1/4"** Bottom **1 1/4"**

Pitch of stays to ditto: Sides **10" x 8"** Back **9 7/8" x 8 1/2"** Top **9" x 8"** Are stays fitted with nuts or riveted over **Nuts**

Working pressure by Rules **205 lbs.** Front plate at bottom: Material **Steel** Tensile strength **26/30 Tons**

Thickness **1 5/16"** Lower back plate: Material **Steel** Tensile strength **26/30 Tons** Thickness **7/8"**

Pitch of stays at wide water space **14" x 9"** Are stays fitted with nuts or riveted over **Nuts**

Working Pressure **250 lbs.** Main stays: Material **Steel** Tensile strength **28/32 Tons**

Diameter **At body of stay, 3 1/4"** or **Over threads 3 1/4"** No. of threads per inch **6** Area supported by each stay **336 sq. in.**

Working pressure by Rules **240 lbs.** Screw stays: Material **Steel** Tensile strength **26/30 Tons**

Diameter **At turned off part, 1 7/8"** or **Over threads 1 3/4"** No. of threads per inch **9** Area supported by each stay **81.75 sq. in.**

Working pressure by Rules 222 Lb Are the stays drilled at the outer ends 40 Margin stays: Diameter { At turned off part, 1 7/8" x 2"
or Over threads
No. of threads per inch 9 Area supported by each stay 101.25 sq Working pressure by Rules 200 Lb
Tubes: Material Iron External diameter { Plain 3 1/2" Thickness { 3/8" x 9/16" No. of threads per inch 9
Stay
Pitch of tubes 5 1/2" x 5" Working pressure by Rules 215 Lb Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 56 7/8" dia No. of rivets and diameter of rivet holes 50 @ 1 1/4"
Outer row rivet pitch at ends 10 1/4" Depth of flange if manhole flanged - Steam Dome: Material Steel
Tensile strength 36,000 Tons Thickness of shell 3/4" Description of longitudinal joint S. R. Lap.
Diameter of rivet holes 1" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54.0
Rivet 43.6
Internal diameter 36" Working pressure by Rules 215 Lb Thickness of crown 1 5/16" No. and diameter of
stays 2 @ 2 1/2" Inner radius of crown - Working pressure by Rules 215 Lb
How connected to shell Riveted Size of doubling plate under dome 56 7/8" dia Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 1 1/4" @ 10 1/4"

Type of Superheater

Manufacturers of { Tubes
Steel castings
Number of elements 1 Material of tubes Iron Internal diameter and thickness of tubes 3 1/2" x 3/8"
Material of headers Iron Tensile strength 36,000 Tons Thickness 3/4" Can the superheater be shut off and
the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes
Area of each safety valve 1 sq in Are the safety valves fitted with easing gear Yes Working pressure as per
Rules 222 Lb Pressure to which the safety valves are adjusted 222 Lb Hydraulic test pressure:
tubes 264 Lb castings 264 Lb and after assembly in place 264 Lb Are drain cocks or valves fitted
to free the superheater from water where necessary Yes

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

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

Manufacturer.

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

See attached reports
on Machy.

Are the approved plans of boiler and superheater forwarded herewith
(If not state date of approval.)
Total No. of visits 1

MANAGER

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, examined under steam & its safety valves adjusted
under steam as above.

Chapman engine report

Survey Fee £ 100 : : When applied for, 192
Travelling Expenses (if any) £ 100 : : When received, 192

John Mackintosh

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 2 MAY 1930

Assigned

See F. E. Rpt.



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Foundation