

# REPORT ON BOILERS.

No. 96680

15 SEP 1938

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2.16. Date of writing Report 19 When handed in at Local Office 19 Port of **NEWCASTLE-ON-TYNE**

No. in Reg. Book. Survey held at **Wallsend** Date, First Survey **21/3/38** Last Survey **8/9/38**

on the **"ITTERSUM"** (Number of Visits ) Gross Tons  Net Tons

Master Built at **Sunderland** By whom built **Wm. Doreford & Sons Ltd.** Yard No. **647** When built **1938**

Engines made at **Wallsend** By whom made **H. E. Marine Eng Co.** Engine No. **2919** When made **1938**

Boilers made at **Wallsend** By whom made **H. E. Marine Eng Co.** Boiler No. **2919** When made **1938**

Nominal Horse Power **455** Owners **Vinke & Co.** Port belonging to **Amsterdam**

**MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.**

Manufacturers of Steel **Cobilles Ltd. Appleby-Rodingham Steel Co. Steel Co of Scotland** (Letter for Record **S**)

8-38 Total Heating Surface of Boilers **1577 sq ft** Is forced draught fitted **Yes** Coal or Oil fired **oil**

No. and Description of Boilers **One single ended multitubular** Working Pressure **220 lbs**

Tested by hydraulic pressure to **380 lbs** Date of test **25-7-38** No. of Certificate **788** Can each boiler be worked separately **Yes**

Area of Firegrate in each Boiler **31 sq ft** No. and Description of safety valves to each boiler **Two Spring loaded**

Pressure of each set of valves per boiler { per Rule **872 sq in** as fitted **9.8 sq in** } Pressure to which they are adjusted **225 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 **7'-9"** Is oil fuel carried in the double bottom under boilers **Yes**

Smallest distance between shell of boiler and tank top plating **25"** Is the bottom of the boiler insulated **Yes**

Largest internal dia. of boilers **12'-3 5/8"** Length **11'-6"** Shell plates: Material **Steel** Tensile strength **29-33 tons**

Thickness **1 3/16"** Are the shell plates welded or flanged **No** Description of riveting: circ. seams { end **L.D.R** inter. **-** } **3 5/8"**

8-38 Long. seams **T.R. Double Straps** Diameter of rivet holes in { circ. seams **1 1/4"** long. seams **1 1/4"** } Pitch of rivets { **8 21/32"** }

Percentage of strength of circ. end seams { plate **65.5** rivets **45.2** } Percentage of strength of circ. intermediate seam { plate **-** rivets **-** }

Percentage of strength of longitudinal joint { plate **85.5** rivets **88.8** combined **88.8** } Working pressure of shell by Rules **220 lbs**

Thickness of butt straps { outer **29/32"** inner **1 1/32"** } No. and Description of Furnaces in each Boiler **Two Corrugated (Seighton)**

Material **Steel** Tensile strength **26-30 tons** Smallest outside diameter **41 7/8"**

Length of plain part { top **-** bottom **-** } Thickness of plates { crown **2 1/32"** bottom **2 1/32"** } Description of longitudinal joint **weld**

Dimensions of stiffening rings on furnace or c.c. bottom **None** Working pressure of furnace by Rules **230 lbs**

Diagonal plates in steam space: Material **Steam** Tensile strength **26-30 tons** Thickness **1 2 1/4"** Pitch of stays **22 x 16"**

How are stays secured **Double Nuts** Working pressure by Rules **223 lbs**

Diagonal plates: Material { front **Steel** back **Steel** } Tensile strength { } **26-30 tons** Thickness { } **3 1/32"** **25/32"**

Span pitch of stay tubes in nests **8'6"** Pitch across wide water spaces **14 3/4"** Working pressure { front **230 lbs** back **294 lbs** }

Orders to combustion chamber tops: Material **Steel** Tensile strength **29-33 tons** Depth and thickness of girder

centre **10" x 2 @ 25/32"** Length as per Rule **34"** Distance apart **9 1/2"** No. and pitch of stays

each **2 @ 10 3/16"** Working pressure by Rules **252 lbs** Combustion chamber plates: Material **Steel**

Tensile strength **26-30 tons** Thickness: Sides **25/32"** Back **25/32"** Top **25/32"** Bottom **25/32"**

Pitch of stays to ditto: Sides **10 3/16" x 9 1/2"** Back **10 3/16" x 9 1/2"** Top **10 3/16" x 9 1/2"** Are stays fitted with nuts or riveted over **Nuts**

Working pressure by Rules **222 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 **15/16"**

Pitch of stays at wide water space **15" x 9 1/2"** Are stays fitted with nuts or riveted over **Nuts**

Working Pressure **229 lbs** Main stays: Material **Steel** Tensile strength **28-32 tons**

Working pressure meter { At body of stay, **3"** or Over threads **-** } No. of threads per inch **6** Area supported by each stay **352 sq in**

Working pressure by Rules **223 lbs** Screw stays: Material **Steel** Tensile strength **26-30 tons**

Working pressure meter { At turned off part, **1 7/8"** or Over threads **-** } No. of threads per inch **9** Area supported by each stay **96.78 sq in**

Working pressure by Rules **220 lbs** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, **2 1/8"** or Over threads **2 1/8"**

No. of threads per inch **9** Area supported by each stay **119.6 sq"** Working pressure by Rules **238 lbs**

Tubes: Material **S. D. Steel** External diameter { Plain **2 3/4"** Stay **2 3/4"** Thickness { **7/8"** & **1/4"** No. of threads per inch **9**

Pitch of tubes **4" x 4"** Working pressure by Rules **226 lbs** Manhole compensation: Size of opening in END shell plate **16" x 12"** Section of compensating ring **—** No. of rivets and diameter of rivet holes **—**

Outer row rivet pitch at ends **—** Depth of flange if manhole flanged **4"** 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 Engine 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 **none** Manufacturers of { Tubes **—** Steel forgings **—** 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 **—** forgings and castings **—** and after assembly in place **—** Are drain cocks on 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 **—**

The foregoing is a correct description,  
 THE NORTH EASTERN MARINE ENGINEERING CO. (1933) LTD. Manufacturer  
**John Neill**

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith **Yes**  
 while building { During erection on board vessel - - - } (If not state date of approval.)  
**See Machinery Report** 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 built under Special Survey in accordance with the approved plan and the Rules, the materials and workmanship are good: on completion it was tested by hydraulic pressure to 380 lbs per square inch and found tight and satisfactory. It has been fitted on board in an efficient manner, tried under steam and found in order.**

Survey Fee ... .. £ **Charged on** When applied for, 10  
 Travelling Expenses (if any) £ **Machinery Rpt** When received, 10

**J. Sells**  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 23 SEP 1938**  
 Assigned **See F.B. Rpt**

