

REPORT ON BOILERS.

Sld. No. 32744
Mch No. 16405.

Received at London Office

NOV 27 1939

Report of written report 12/9/1939 When handed in at Local Office 16/9/1939 Port of **MIDDLESBROUGH**
 Survey held at **Stockton-on-Tees** Date, First Survey **15th August** Last Survey **8/9/1939**
 on the **M/V BEIGNON** (Number of Visits **4**) Tons { Gross **5218**
 Net **3004**
 Built at **Sunderland** By whom built **B. W. D. & Co. Ltd.** Yard No. **653** When built **1939**
 Engines made at **Sunderland** By whom made **W. D. & Co. Ltd.** Engine No. **653** When made **1939**
 Boilers made at **Stockton** By whom made **Stockton Chemical Eng'g Co. Riley Booth** Boiler No. **6373** When made **1939**
 Nominal Horse Power _____ Owners **Colisement S. & Co. Ltd.** Port belonging to **London**

ULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Steel Company of Scotland Ltd** (Letter for Record **S**)
 Total Heating Surface of Boilers **1660 sq ft** Is forced draught fitted **No.** Coal or Oil fired **Oil**
 No. and Description of Boilers **1 - Single Ended** Working Pressure **120 lbs.**
 Tested by hydraulic pressure to **230 lbs** Date of test **8/9/39** No. of Certificate **6976** Can each boiler be worked separately **Yes.**
 Area of Firegrate in each Boiler _____ No. and Description of safety valves to each boiler **Two direct Spring.**
 No. of each set of valves per boiler { per Rule **15.340"** Pressure to which they are adjusted **120** Are they fitted with easing gear **Yes.**
 { as fitted **19.20"**
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **No.**
 Smallest distance between boilers or uptakes and bunkers or woodwork **2' 10"** Is oil fuel carried in the double bottom under boilers **No.**
 Smallest distance between shell of boiler and tank top plating **2' 10"** Is the bottom of the boiler insulated **No.**
 Largest internal dia. of boilers **11'-10 5/8"** Length **11'-6"** Shell plates: Material **Steel** Tensile strength **29-33**
 Thickness **1 1/16"** Are the shell plates welded or flanged **No** Description of riveting: circ. seams { end **DR**
 { inter **3 3/8"**
 Long. seams **T.R.D.B.S** Diameter of rivet holes in { circ. seams **1 1/16"** Pitch of rivets { **5 3/8"**
 { long. seams **1 3/16"**
 Percentage of strength of circ. end seams { plate **68.51** Percentage of strength of circ. intermediate seam { plate _____
 { rivets **45.45** { rivets _____
 Percentage of strength of longitudinal joint { plate **84.88** Working pressure of shell by Rules **123.5 lbs**
 { rivets **83.38**
 { combined _____
 Thickness of butt straps { outer **9 1/16"** No. and Description of Furnaces in each Boiler **2 - Corrugated (Dighton)**
 { inner **1 1/16"** Material **Steel** Tensile strength **26-30** Smallest outside diameter **3'-8 1/16"**
 Length of plain part { top _____ Thickness of plates { crown **13/32"** Description of longitudinal joint **Weld**
 { bottom _____ { bottom _____
 Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules **131 lbs.**
 End plates in steam space: Material **Steel** Tensile strength **26-30** Thickness **27/32"** Pitch of stays **17" x 16"**
 How are stays secured **D. Nuts & washers** Working pressure by Rules **142 lbs**
 Tube plates: Material { front **Steel** Tensile strength { **26-30** Thickness { **13/16"**
 { back _____ { _____
 Lean pitch of stay tubes in nests **9 7/8"** Pitch across wide water spaces **14"** Working pressure { front **139 lbs**
 { back **244**
 Girders to combustion chamber tops: Material **Steel** Tensile strength **28-32** Depth and thickness of girder _____
 At centre **7 - 2 @ 5/8"** Length as per Rule **29 7/16"** Distance apart **9"** No. and pitch of stays _____
 In each **2 @ 9"** Working pressure by Rules **134 lbs** Combustion chamber plates: Material **Steel**
 Tensile strength **26-30** Thickness: Sides **19/32"** Back **9 1/16"** Top **19/32"** Bottom **7/8"**
 Pitch of stays to ditto: Sides **9" x 10"** Back **9 1/2" x 8 3/4"** Top **9" x 9"** Are stays fitted with nuts or riveted over **Nuts**
 Working pressure by Rules **125 lbs** Front plate at bottom: Material **Steel** Tensile strength **26-30**
 Thickness **27/32"** Lower back plate: Material **Steel** Tensile strength **26-30** Thickness **27/32"**
 Pitch of stays at wide water space **13 1/2" x 9 1/2"** Are stays fitted with nuts or riveted over **Nuts.**
 Working Pressure **210 lbs** Main stays: Material **Steel** Tensile strength **28-32**
 Diameter { At body of stay, _____ No. of threads per inch **6** Area supported by each stay **2470"**
 { Over threads **2 1/4"** Screw stays: Material **Steel** Tensile strength **26-30**
 Working pressure by Rules **121 lbs** Diameter { At turned off part, _____ No. of threads per inch **9** Area supported by each stay **900"**
 { Over threads **1 1/2" Sides; 1 3/8" top**

Working pressure by Rules 125 lb Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 15/16"
No. of threads per inch 9 Area supported by each stay 100 sq" Working pressure by Rules 148 lb
Tubes: Material L. W. Iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 10 W.G. No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 5.274 lbs. P 160 lbs Manhole compensation: Size of opening
shell plate 20" x 16" Section of compensating ring 4" x 1" No. of rivets and diameter of rivet holes 44 - 15/16"
Outer row rivet pitch at ends 6 1/2" Depth of flange if manhole flanged ✓ Steam Dome: Material None
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 _____
stays _____ Inner radius of crown _____ Working pressure by Rules _____
How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and _____
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 _____
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 _____
Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____
tubes _____, castings _____ and after assembly in place _____ 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 and on behalf of
STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS LTD.
The foregoing is a correct description,
S. H. Riley Manufacture
DIRECTOR.

Dates of Survey { During progress of work in shops - - Aug. 15. 22. Sept. 1. 8.
while building { During erection on board vessel - - -

Are the approved plans of boiler and superheater forwarded herewith 28-5-39
(If not state date of approval.)
Total No. of visits Four

Is this Boiler a duplicate of a previous case ✓ 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 Rule Requirements & approved plan, & was found satisfactory under an hydraulic pressure of 230 lbs/sq. in.

The materials & workmanship are good.
The boiler is to be forwarded to Sunderland to be fitted on board.

This boiler has been securely fixed on board the vessel.
Examined under Steam & safety valves adjusted to working pressure in accordance with rule requirements.

In recommendation please see Mch. Rpt.

W. H. Rasm.

Survey Fee £ 11 : 2 : - When applied for, 16-9-1939
Travelling Expenses (if any) £ 02 : 05 : - When received, 13-11-1939

R. J. Easthope
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 1 DEC 1939

Assigned See F.E. machy
rpt.



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Foundation