

REPORT ON BOILERS.

No. 44160

26 OCT 1933

Date of writing Report 19 When handed in at Local Office 19 Port of **HULL**
 No. in Survey held at **Hull** Date, First Survey **13.6.33** Last Survey **21.10.1933**
 on the **Steam Trawler "LORD PLENDER"** (Number of Visits **✓**) Tons { Gross **396.31** Net **153.08**
 Master Built at **Selly** By whom built **Cochrane Bros & Co** Yard No. **1117** When built **1933**
 Engines made at **Hull** By whom made **Charles D.** Engine No. **1440** When made **1933**
 Boilers made at **Hull** By whom made **Holmes & Co Ltd** Boiler No. **1440** When made **1933**
 Nominal Horse Power **101** Owners **Pickering & Holmes Steam Trawling Co Ltd** Port belonging to **Hull**

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Appledy Lim & Co Ltd** (Letter for Record **S**)
 Total Heating Surface of Boilers **1804 Sq. ft.** Is forced draught fitted **Yes** Coal or Oil fired **Coal**
 and Description of Boilers **One single ended** Working Pressure **210 Lbs.**
 Tested by hydraulic pressure to **365 Lbs** Date of test **5.8.33** No. of Certificate **3864** Can each boiler be worked separately **✓**
 Area of Firegrate in each Boiler **50 sq ft** No. and Description of safety valves to each boiler **Two spring loaded**
 Area of each set of valves per boiler { per Rule **10.2 sq ft** as fitted **11.88 -** Pressure to which they are adjusted **210 Lbs** 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 **10 1/2"** Is oil fuel carried in the double bottom under boilers **✓**
 Smallest distance between shell of boiler and tank top plating **✓** Is the bottom of the boiler insulated **✓**
 Largest internal dia. of boilers **17 1/4"** Length **10' - 8"** Shell plates: Material **Steel** Tensile strength **29/33 Tons.**
 Thickness **1 1/32"** Are the shell plates welded or flanged **✓** Description of riveting: circ. seams { end **BR.** inter. **✓**
 No. of seams **T.R. S.B.S.** Diameter of rivet holes in { circ. seams **1 3/8"** long. seams **✓** Pitch of rivets { **3 1/4"** **4 1/8"**
 Percentage of strength of circ. end seams { plate **63.2** rivets **46.7** Percentage of strength of circ. intermediate seam { plate **✓** rivets **✓**
 Percentage of strength of longitudinal joint { plate **85.13** rivets **86.8** combined **87.6** Working pressure of shell by Rules **212 Lbs.**
 Thickness of butt straps { outer **1 1/32"** inner **1 5/32"** No. and Description of Furnaces in each Boiler **Three plain**
 Material **Steel** Tensile strength **26/30 Tons** Smallest outside diameter **41.66"**
 Length of plain part { top **78.875"** bottom **✓** Thickness of plates { crown **5 3/16"** bottom **5 1/16"** 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 3/16"** Pitch of stays **19 3/4" x 18 1/4"**
 How are stays secured **Bowden nuts & washers** Working pressure by Rules **212 Lbs.**
 Head plates: Material { front **Steel** back **-** Tensile strength { **26/30 Tons** Thickness { **7/8"**
 An pitch of stay tubes in nests **11.2"** Pitch across wide water spaces **15"** Working pressure { front **215 Lbs.** back **224 "**
 Orders to combustion chamber tops: Material **Steel** Tensile strength **29/33 Tons** Depth and thickness of girder
 centre **13 1/4" x 10"** Length as per Rule **36.9"** Distance apart **9 1/2"** No. and pitch of stays
 each **3 @ 8"** Working pressure by Rules **212 Lbs.** Combustion chamber plates: Material **Steel**
 Tensile strength **26/30 Tons** Thickness: Sides **3/4"** Back **2 3/32"** Top **2 3/32"** Bottom **3/4"**
 Pitch of stays to ditto: Sides **9 1/2" x 8"** Back **9 1/2" x 8 1/2"** Top **9 1/2" x 8"** Are stays fitted with nuts or riveted over **Nuts**
 Working pressure by Rules **224 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 **2 9/32"**
 Pitch of stays at wide water space **15" x 8 1/2"** Are stays fitted with nuts or riveted over **Nuts.**
 Working Pressure **226 Lbs** Main stays: Material **Steel** Tensile strength **26/32 Tons.**
 Diameter { At body of stay, **3 1/4"** No. of threads per inch **8** Area supported by each stay **360 sq in**
 Working pressure by Rules **220 Lbs.** Screw stays: Material **Steel** Tensile strength **26/30 Tons**
 Diameter { At turned off part, **1 1/4"** No. of threads per inch **16** Area supported by each stay **81 sq in**

Working pressure by Rules 223 Lbs. Are the stays drilled at the outer ends 60 Margin stays: Diameter { At turned off part, or Over threads 17/8" + 2" ✓
No. of threads per inch 10 Area supported by each stay 98 sq. in. Working pressure by Rules 217 Lbs.
Tubes: Material Iron External diameter { Plain 3 1/2" Thickness { 9/16" + 3/8" No. of threads per inch 9
Pitch of tubes 4 1/4" x 4 7/8" Working pressure by Rules 215 Lbs. Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 24" x 27" x 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 3/8"
Outer row rivet pitch at ends 9 1/4" Depth of flange if manhole flanged ✓ 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 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 10 1/2
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 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 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

The foregoing is a correct description,
FOR CHARLES B. HOLMES & CO., LTD. Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith Yr
while building { During erection on board vessel - - - } (If not state date of approval.)
Total No. of visits ✓

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Rockflow, No 44106.

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.

The approved plan & steel invoices sent with above report on the sister vessel, St. Rockflow.

Charged on engine report,
Survey Fee £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

John Mackenzie
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 OCT 1933

Assigned See attached rpt