

REPORT ON BOILERS.

No. 11895

Received at London Office 25 FEB 1937

Thickness by Rules *361* Actual *356* Writing Report *192* When handed in at Local Office *2nd 2. 1937* Port of *Belfast*
Survey held at Belfast Date, First Survey *—* Last Survey *—* 192
 on the *SINGLE SCREW "ERNEBANK" OIL ENGINE* (Number of Visits *—*) Gross Tons *—* Net Tons *—*
 Built at *Belfast* By whom built *Harland & Wolff* Yard No. *984* When built *1937*
 Made at *Belfast* By whom made *Harland & Wolff* Engine No. *984* When made *1937*
 Made at *Belfast* By whom made *Harland & Wolff* Boiler No. *984* When made *1937*
 Indicated Horse Power *616* Owners *—* Port belonging to *—*

TITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Colvilles Ltd* (Letter for Record *S* ✓)
 Heating Surface of Boilers *1590* ✓ Is forced draught fitted ✓ *Oil* fired *Oil*
 Description of Boilers *One single ended* ✓ Working Pressure *120 lbs* ✓
 Tested by hydraulic pressure to *230 lbs* ✓ Date of test *16-10-37* No. of Certificate *1024* ✓ Can each boiler be worked separately *Yes* ✓
 No. and Description of safety valves to each boiler *One 2 1/2" Improved H.L. Double opening* ✓
 of each set of valves per boiler (per Rule *7.35* ✓) Pressure to which they are adjusted *120 lbs* Are they fitted with easing gear *Yes* ✓
 (as fitted *9.82* ✓)
 Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓
 Least distance between boilers or uptakes and bunkers or woodwork ✓ Is oil fuel carried in the double bottom under boilers *No*
 Least distance between shell of boiler and tank top plating *2'-10"* ✓ Is the bottom of the boiler insulated *Yes* ✓
 Least internal dia. of boilers *13'-0"* ✓ Length *11'-0"* ✓ Shell plates: Material *S* ✓ Tensile strength *29/33* ✓
 Thickness *3/4"* ✓ Are the shell plates welded or flanged *No* ✓ Description of riveting: circ. seams (end *DR* ✓)
 seams *T.R. 405* ✓ Diameter of rivet holes in (circ. seams *15/16"* ✓) Pitch of rivets *3.002"* ✓
 (long. seams *15/16"* ✓) *6 1/8"* ✓
 Percentage of strength of circ. end seams (plate *69.5%* ✓) Percentage of strength of circ. intermediate seam (plate ✓)
 (rivets *48.5%* ✓) (rivets ✓)
 Percentage of strength of longitudinal joint (plate *84.5%* ✓) Working pressure of shell by Rules *125.5 lbs*
 (rivets *112.5%* ✓) (combined)
 Thickness of butt straps (outer *19/32"* ✓) No. and Description of Furnaces in each Boiler *3 Morrison* ✓ *39*
 (inner *23/32"* ✓) Tensile strength *24/30* ✓ Smallest outside diameter *3'-3 3/8"* ✓
 Material *S* ✓ Thickness of plates (crown *7/16"* ✓) Description of longitudinal joint *Weld* ✓
 (bottom) Thickness of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules *156 lbs* ✓
 Plates in steam space: Material *S* ✓ Tensile strength *24/30* ✓ Thickness *7/8"* ✓ Pitch of stays *19 x 16* ✓
 Are stays secured *double nuts* ✓ Working pressure by Rules *121.5 lbs* ✓
 Material (front *S* ✓) Tensile strength *24/30* ✓ Thickness *13/16"* ✓
 (back *3/4"* ✓) *3/4"* ✓
 Pitch of stay tubes in nests *11-375"* ✓ Pitch across wide water spaces *14 1/4" x 9"* ✓ Working pressure (front *138* ✓)
 (back *156* ✓)
 Stays to combustion chamber tops: Material *S* ✓ Tensile strength *28/32 tons* ✓ Depth and thickness of girder
 centre *7"* ✓ Length as per Rule *2'-7 1/2"* ✓ Distance apart *9 1/4"* ✓ No. and pitch of stays
 each *2 @ 11"* ✓ Working pressure by Rules *146 lbs* ✓ Combustion chamber plates: Material *S* ✓
 Tensile strength *24/30* ✓ Thickness: Sides *5/8"* ✓ Back *9/16"* ✓ Top *3/5"* ✓ Bottom *1 1/4"* ✓
 Pitch of stays to ditto: Sides *10 1/2" x 9"* ✓ Back *8 1/2" x 9"* ✓ Top *11 x 9 1/4"* ✓ Are stays fitted with nuts or riveted over *Nuts* ✓
 Working pressure by Rules *130* ✓ Front plate at bottom: Material *S* ✓ Tensile strength *24/30* ✓
 Thickness *1 1/4"* ✓ Lower back plate: Material *S* ✓ Tensile strength *24/30* ✓ Thickness *3/4"* ✓
 Pitch of stays at wide water space *12 3/4" x 8 1/2"* ✓ Are stays fitted with nuts or riveted over *Nuts* ✓
 Working Pressure *177* ✓ Main stays: Material *S* ✓ Tensile strength *25/32* ✓
 Diameter (At body of stay, *2 1/2"* ✓) No. of threads per inch *6* ✓ Area supported by each stay *320 sq in* ✓
 (Over threads) Working pressure by Rules *139 1/4* ✓ Screw stays: Material *S* ✓ Tensile strength *24/30* ✓
 Diameter (At turned off part, *2 1/2"* ✓) No. of threads per inch *9* ✓ Area supported by each stay *76.5, 94.5, 101.75* ✓
 (Over threads)



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Working pressure by Rules 132 ✓ Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, 1 1/2" ✓
 No. of threads per inch 9 ✓ Area supported by each stay 92.5" ✓ Working pressure by Rules 134 ✓
 Tubes: Material Woot iron External diameter { Plain 3 1/4" ✓ Stay 3 1/4" ✓ Thickness { 1/4" 9/32" 5/16" ✓ No. of threads per inch 9 ✓
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 180 ✓ Manhole compensation: Size of opening in Book 24
 shell plate 1 1/2" x 12" Section of compensating ring 2'5" x 3'0" x 1 1/2" No. of rivets and diameter of rivet holes 28 - 1 3/4" ✓
 Outer row rivet pitch at ends 9" 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 diam
 stays Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome
 of rivets in outer row in dome connection to shell Diameter of rivet holes and

Type of Superheater

Number of elements Material of tubes Manufacturers of { Tubes Steel castings
 Material of headers Tensile strength Internal diameter and thickness of tubes
 the boiler be worked separately Thickness Can the superheater be shut off from the boiler
 Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Rules Are the safety valves fitted with easing gear Working pressure
 tubes Pressure to which the safety valves are adjusted Hydraulic test pressure
 to free the superheater from water where necessary and after assembly in place Are drain cocks or valves
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,

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

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler was constructed under special survey and in accordance with the approved plan. The materials & workmanship are good. It has been tested by hydraulic pressure, efficiently installed in the engine room. The safety valves adjusted under steam & accumulation tests satisfactory. The boiler is adapted for oil fuel burning. In my opinion it is eligible for use on a classed vessel.

Survey Fee £

Travelling Expenses (if any) £

When applied for, 192

When received, 192

Committee's Minute

TUE 2 MAR 1937

Assigned See other F.E. report

Charles J. Hunter.

Engineer Surveyor to Lloyd's Register of Shipping.



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