

REPORT ON BOILERS.

No. 16598

Received at London Office

6 FEB 1928

Date of writing Report *21st Jan 1928* When handed in at Local Office *30.1.1928* Port of *WEST HARTLEPOOL*
 No. in Survey held at *West Hartlepool* Date, First Survey *25th Aug/27* Last Survey *26th Jan 1928*
 on the *S.S. "MANSEPOOL"* (Number of Visits *4*) Gross *4894* Tons Net *3614*
 Built at *West Hartlepool* By whom built *Wm Gray & Co. Ltd.* Yard No. *996* When built *1928*
 Engines made at *West Hartlepool* By whom made *Central Marine Engine* Engine No. *996* When made *1928*
 Boilers made at *ditto* By whom made *Works* Boiler No. *996* When made *1928*
 Nominal Horse Power *The Pool Shipping Co* Port belonging to *WEST HARTLEPOOL*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *D. Colville & Sons Ltd.* (Letter for Record *S*)
 Total Heating Surface of Boilers *7614 sq. ft.* Is forced draught fitted *yes* Coal or Oil fired *coal*
 No. and Description of Boilers *Three single ended* Working Pressure *180 lbs*
 Tested by hydraulic pressure to *320 lbs* Date of test *15.12.27* No. of Certificate *3723* Can each boiler be worked separately *yes*
 Area of Firegrate in each Boiler *57.5 sq. ft.* No. and Description of safety valves to each boiler *2 Cockburns improved high lift*
 Area of each set of valves per boiler *8.134* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *yes*
 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 *no side bunkers* oil fuel carried in the double bottom under boilers *no*
 Smallest distance between shell of boiler and tank top plating *yes* Is the bottom of the boiler insulated *yes*
 Largest internal dia. of boilers *15'-9 7/16"* Length *11'-0"* Shell plates: Material *Steel* Tensile strength *28/32*
 Thickness *1 3/32"* Are the shell plates welded or flanged *no* Description of riveting: circ. seams *end* *DR Lap*
 g. seams *J.R. D.B.S.* Diameter of rivet holes in *circ. seams* *1 3/8"* Pitch of rivets *4 3/8"*
 Percentage of strength of circ. end seams *plate* *68.5* Percentage of strength of circ. intermediate seam *plate* *61.7*
 Percentage of strength of longitudinal joint *plate* *85.8* Working pressure of shell by Rules *180 lbs*
 Thickness of butt straps *outer* *1 1/8"* No. and Description of Furnaces in each Boiler *3 Deighton's*
 Material *Steel* Tensile strength *26/30* Smallest outside diameter *46 7/16"*
 Length of plain part *top* *19"* Thickness of plates *bottom* *3/32"* Description of longitudinal joint *welded*
 Dimensions of stiffening rings on furnace or c.c. bottom *yes* Working pressure of furnace by Rules *188 lbs*
 Stays in steam space: Material *Steel* Tensile strength *26/30* Thickness *1 5/16"* Pitch of stays *21" x 21 1/2"*
 How are stays secured *double nuts & washers* Working pressure by Rules *181 lbs*
 Front plates: Material *Steel* Tensile strength *26/30* Thickness *7/8"*
 Pitch of stay tubes in nests *13 1/2" x 9"* Pitch across wide water spaces *14 1/4" x 9"* Working pressure *front* *185 lbs*
 Stays to combustion chamber tops: Material *Steel* Tensile strength *28/32* Depth and thickness of girder *back* *187 lbs*
 Centre *9 1/4" x 1 1/2"* Length as per Rule *35 1/2"* Distance apart *9"* No. and pitch of stays
 Each *Three* *9"* Working pressure by Rules *180 lbs* Combustion chamber plates: Material *Steel*
 Tensile strength *26/30* Thickness: Sides *2 1/32"* Back *2 1/32"* Top *2 1/32"* Bottom *3/4"*
 Pitch of stays to ditto: Sides *9 1/4" x 9"* Back *9 1/4" x 9"* Top *9" x 9"* Are stays fitted with nuts or riveted over *nuts*
 Working pressure by Rules *183 lbs* Front plate at bottom: Material *Steel* Tensile strength *26/30*
 Thickness *7/8"* Lower back plate: Material *Steel* Tensile strength *26/30* Thickness *7/8"*
 Pitch of stays at wide water space *16" x 9 1/4"* Are stays fitted with nuts or riveted over *nuts*
 Working Pressure *183 lbs* Main stays: Material *Steel* Tensile strength *28/32*
 Diameter *At body of stay* *3 3/8"* No. of threads per inch *6* Area supported by each stay *21 1/2" x 21"*
 Working pressure by Rules *194 lbs* Screw stays: Material *Steel* Tensile strength *26/30*
 Diameter *At turned off part* *1 5/8"* No. of threads per inch *9* Area supported by each stay *9 1/4" x 9"*

Working pressure by Rules 183 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part. 1 1/8" or Over threads. 1 1/8" ✓

No. of threads per inch 9 ✓ Area supported by each stay 11 1/2" x 9 1/4" Working pressure by Rules 200 lbs

Tubes: Material Iron ✓ External diameter { Plain 3 1/2" ✓ Stay 3 1/4" ✓ Thickness { 3/16" ✓ 1/4" ✓ 5/16" ✓ No. of threads per inch 9 ✓

Pitch of tubes 4 1/2" x 4 1/2" ✓ Working pressure by Rules 180 lbs Manhole compensation: Size of opening in shell plate 16" x 20" ✓ Section of compensating ring 21" x 1 1/2" ✓ No. of rivets and diameter of rivet holes 28 1 1/2" ✓

Outer row rivet pitch at ends 10" ✓ 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 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

Type of Superheater none ✓ 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 23 inclusive for boilers been complied with yes ✓

FOR THE CENTRAL MARINE ENGINE WORKS,
(W. Gray & Co. Ltd.)
The foregoing is a correct description.
MANAGING DIRECTOR C. H. [Signature]

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - - - } See machinery report Total No. of visits ✓

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

See accompanying machinery report.

Survey Fee ... £ : : When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

R. D. Shilston.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 7 FEB 1928

Assigned See other report
(Hpl. 16598)