

## REPORT ON BOILERS.

No. 45333

19 APR 1950

Received at London Office.

Date of writing Report 10. 4. 1950 When handed in at Local Office 11. 4. 1950 Port of GLASGOW

No. in Reg. Book. Survey held at GLASGOW. Date, First Survey 21. 4. 49 Last Survey 30. 3. 1950

on the SS "TREGLISSON" (Number of Visits.....) Tons { Gross..... Net.....

Master. Built at PORT GLASGOW By whom built Hamilton &amp; Co. Yard No. 484 When built 1950

Engines made at GLASGOW. By whom made S. Rowan &amp; Co. Ltd. Engine No. 1224 When made 1950

Boilers made at GLASGOW By whom made S. Rowan &amp; Co. Ltd. Boiler No. 1224 When made 1950

Nominal Horse Power. Owners HAIN SS. Co. Ltd. Port belonging to LONDON.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles, Ltd. (Letter for Record 5.)

Total Heating Surface of Boilers (2929 x 3) + 3915 sq. ft. Is forced draught fitted Yes. Coal or Oil fired OIL.

No. and Description of Boilers Three Single Ended Multitubular. Working Pressure 220 lba.

Tested by hydraulic pressure to 380 lba. Date of test 13. 12. 49 No. of Certificate 23062, 23045, 23034. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler. No. and Description of safety valves to each boiler Improved High lift double.

Area of each set of valves per boiler per Rule 15.60. Pressure to which they are adjusted 220 lba. 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 8 ft. Is oil fuel carried in the double bottom under boilers Yes.

Smallest distance between shell of boiler and tank top plating 2' 6". Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 15' 6". Length 11' 9". Shell plates: Material Steel. Tensile strength 29-33 tons.

Thickness 1 1/2". Are the shell plates welded or flanged. Description of riveting: circ. seams end D.R. inter.

long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams F. 1 5/16. B. 1 1/2". Pitch of rivets F. 3 1/4 in. B. 4 1/2 in.

Percentage of strength of circ. end seams plate F. 61.44. B. 64.86 rivets F. 42.02. B. 43.76 Percentage of strength of circ. intermediate seam plate 85 rivets 91.3

Percentage of strength of longitudinal joint rivets 88.26 Working pressure of shell by Rules 222 lba.

Thickness of butt straps outer 1 9/16. inner 1 7/16. No. and Description of Furnaces in each Boiler 3 Corrugated (Brighton).

Material Steel. Tensile strength 26-30 tons. Smallest outside diameter 46 in.

Length of plain part top 23/32. bottom 23/32. Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom. Working pressure of furnace by Rules 228 lba.

End plates in steam space: Material Steel. Tensile strength 26-30 tons. Thickness 1 3/8". Pitch of stays 20 1/2 x 19.

How are stays secured Nuts inside and outside. Working pressure by Rules 234 lba.

Tube plates: Material front Steel. Tensile strength 26-30 tons. Thickness 25/32. Working pressure front 230 lba. back 238 lba.

Mean pitch of stay tubes in nests 9' 6". Pitch across wide water spaces 14". Working pressure back 238 lba.

Girders to combustion chamber tops: Material Steel. Tensile strength 28-32 tons. Depth and thickness of girder

at centre (9 3/8 x 7/8) x 2 Length as per Rule 34.56". Distance apart 9". No. and pitch of stays

in each 3 @ 8 1/4". Working pressure by Rules 224 lba. Combustion chamber plates: Material Steel.

Tensile strength 26-30 tons. Thickness: Sides 1 1/16". Back 2 1/32". Top 1 1/16". Bottom 2 7/32".

Pitch of stays to ditto: Sides 8 1/4 x 9". Back 8 1/2 x 8". Top 8 1/4 x 9". Are stays fitted with nuts or riveted over 5 shells.

Working pressure by Rules 221 lba. Front plate at bottom: Material Steel. Tensile strength 26-30 tons.

Thickness 15/16". Lower back plate: Material Steel. Tensile strength 26-30 tons. Thickness 53/64".

Pitch of stays at wide water space 13 1/2 x 8". Are stays fitted with nuts or riveted over Nuts.

Working pressure 227 lba. Main stays: Material Steel. Tensile strength 28-32 tons.

Diameter At body of stay 3 3/4". No. of threads per inch 6 Area supported by each stay 20 1/2 x 19.

Working pressure by Rules 238 lba. Screw stays: Material Steel. Tensile strength 26-30 tons.

Diameter At turned off part 1 7/8, 1 3/4, 1 1/8. No. of threads per inch 9 Area supported by each stay 8 x 8 1/2.



Working pressure by Rules 224 lbo Are the stays drilled at the outer ends ho ✓ Margin stays: Diameter { At turned off part, 1 7/8 or Over threads.....  
No. of threads per inch 9 ✓ Area supported by each stay 11 x 8 ✓ Working pressure by Rules 242 lbo ✓  
Tubes: Material Steel External diameter { Plain 3 ✓ Stay 3 ✓ Thickness { 5/16 3/8 7/16 No. of threads per inch 9 ✓  
Pitch of tubes 4 7/16 x 4 1/8 ✓ Working pressure by Rules 250 lbo ✓ Manhole compensation: Size of opening  
BACK END 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  
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 Return tube ✓ Manufacturers of { Tubes..... Superheats Co. Manchester Steel forgings..... Steel castings.....  
Number of elements 177 ✓ Material of tubes Steel ✓ Internal diameter and thickness of tubes 20 7/8. 2.5 7/8 ✓  
Material of headers Steel ✓ Tensile strength See Manchester ✓ Thickness Ent 3008-9 ✓ Can the superheater be shut off and  
the boiler be worked separately yes ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes ✓  
Area of each safety valve 1.760 ✓ Are the safety valves fitted with easing gear yes ✓ Working pressure as per  
Rules as approved ✓ Pressure to which the safety valves are adjusted 220 lbo ✓ Hydraulic test pressure  
tubes 1000 lbo ✓ forgings and castings 660 lbo ✓ and after assembly in place 500 lbo ✓ Are drain cocks  
valves fitted to free the superheater from water where necessary yes ✓  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes ✓

The foregoing is a correct description,  
For David Rowan T.C. & Ld. Manufacturer  
Archd. H. Grerson

Dates of Survey { During progress of work in shops - - See Machy report Are the approved plans of boiler and superheater forwarded herewith yes ✓  
while building { During erection on board vessel - - Total No. of visits.....

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed  
under special Survey in accordance with the Society's Rules and the approved plan  
materials and workmanship are good  
The boilers have been efficiently installed on board the vessel, tested  
under full working conditions with satisfactory results.  
The safety valves have been adjusted to 220 lbo.

Survey Fee ... £ See : } When applied for.....19.....  
Travelling Expenses (if any) £ Machy : } When received.....19.....  
Rpt.

L. Shaw  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... GLASGOW 18 APR 1950

Assigned..... SEE ACCOMPANYING MACHINERY REPORT