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REPORT ON BOILERS.

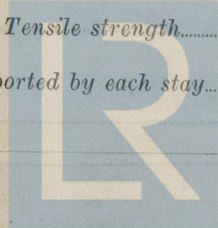
No. 5217

Received at London Office 13 MAR 1950

Date of writing Report 13 March 1950 When handed in at Local Office 14th Mar 1950 Port of GLASGOW.
No. in Survey held at GLASGOW Date, First Survey 26th Nov 1948 Last Survey 28th Feb 1950
on the MV. "WAZIRISTAN" (Number of Visits 53) Tons { Gross... Net...
Built at PORT GLASGOW By whom built LITHGOW'S L^D. Yard No 1051 When built 1950
Engines made at GLASGOW By whom made D. ROWAN & CO L^D Engine No 1214 When made 1950
Boilers made at GLASGOW By whom made D. ROWAN & CO L^D Boiler No 1214 When made 1950
Nominal Horse Power 417. Owners COMMONBROS L^D. Port belonging to SUNDERLAND

MULTITUBULAR BOILERS ~~MAIN~~ AUXILIARY OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record 5)
Total Heating Surface of Boilers 2505 x 2 Is forced draught fitted yes. Coal or Oil fired OIL
No. and Description of Boilers 4 No Single ended Multitubular Working Pressure 180 lba
Tested by hydraulic pressure to 320 lba Date of test 5.10.1.50. No. of Certificate 23056. Can each boiler be worked separately yes.
Area of Firegrate in each Boiler 8.3 sq ft No. and Description of safety valves to each boiler 2 Dup High lift double.
Area of each set of valves per boiler 440 sq ft Pressure to which they are adjusted Are they fitted with easing gear.
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. Is oil fuel carried in the double bottom under boilers. no.
Smallest distance between shell of boiler and tank top plating Separate Hole Flat Is the bottom of the boiler insulated yes.
Largest internal dia. of boilers 14'-0" Length 12'-0" Shell plates: Material Steel Tensile strength 29-33 lba.
Thickness 1 1/8" Are the shell plates welded or flanged Description of riveting: circ. seams { end... inter...
Long. seams TR. DBS Diameter of rivet holes in { circ. seams 1 3/16 long. seams 1 3/16 Pitch of rivets { 3 1/2 8 5/16
Percentage of strength of circ. end seams { plate 62.91% rivets 48.81% Percentage of strength of circ. intermediate seam { plate 85.9% rivets 87.98%
Percentage of strength of longitudinal joint { plate 87.98% rivets 89.04% Working pressure of shell by Rules 181.5 lba
Thickness of butt straps { outer 27/32 inner 27/32 No. and Description of Furnaces in each Boiler 3 Corrugated (Doughton)
Material Steel Tensile strength 26-30 lba Smallest outside diameter 3'-5 1/32
Length of plain part { top 27/32 bottom 27/32 Thickness of plates { crown 3/16 bottom 3/16 Description of longitudinal joint Weld.
Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 181 lba
End plates in steam space: Material Steel Tensile strength 26-30 lba Thickness 1 1/8 Pitch of stays 19 1/2 20 1/2
How are stays secured Nuts inside and outside Working pressure by Rules 180 lba
Tube plates: Material { front Steel back Steel Tensile strength { 26-30 lba 26-30 lba Thickness { 27/32 1 1/16
Can pitch of stay tubes in nests 9.25 Pitch across wide water spaces 13 1/2 Working pressure { front 207 lba back 195 lba
Girders to combustion chamber tops: Material Steel Tensile strength 28-32 lba Depth and thickness of girder
centre (8 1/8 x 7/8) x 2 Length as per Rule 32.7 Distance apart 9 1/8 No. and pitch of stays
each 3 @ 8 Working pressure by Rules 186 lba Combustion chamber plates: Material Steel
Tensile strength 26-30 lba Thickness: Sides 1 1/16 Back 5/8 Top 1 1/16 Bottom 1 1/16
Pitch of stays to ditto: Sides 10 1/2 x 8 1/4 Back 9 x 8 Top 9 x 9 1/8 Are stays fitted with nuts or riveted over Nuts except to shell.
Working pressure by Rules 187 lba Front plate at bottom: Material Steel Tensile strength 26-30 lba
Thickness 27/32 Lower back plate: Material Steel Tensile strength 26-30 lba Thickness 3/4
Pitch of stays at wide water space 13 1/2 x 8 Are stays fitted with nuts or riveted over Nuts.
Working pressure Main stays: Material Steel Tensile strength 28-32 lba
Diameter { At body of stay 2 3/4 Over threads 2 No. of threads per inch 6 Area supported by each stay 19 3/4 x 18 1/2
Working pressure by Rules Screw stays Material Steel Tensile strength 26-30 lba
Diameter { At turned off part 1 5/8 Over threads 1 3/4 No. of threads per inch 9 Area supported by each stay 10 1/2 x 8 1/4



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Working pressure by Rules 185/60 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part 1 3/4 or Over threads 1 3/4 }
No. of threads per inch 9 Area supported by each stay 11 1/4 x 8 Working pressure by Rules 201 160
Tubes: Material Steel External diameter { Plain 2 1/2 Stay 2 1/2 } Thickness { 5/16 3/8 1/2 } No. of threads per inch 9
Pitch of tubes 3 3/4 x 3 3/8 Working pressure by Rules 201 160 Manhole compensation: Size of opening No. 1 1/2
shell plate 14 1/2 x 15 1/2 Section of compensating ring 17 1/2 x 1 1/8 No. of rivets and diameter of rivet holes 36 @ 1 1/16
Outer row rivet pitch at ends 7 7/8 Depth of flange if manhole flanged 3 Steam Dome: Material Steel
Tensile strength 1001 Thickness of shell 5/16 Description of longitudinal joint Butt
Diameter of rivet holes 1/8 Pitch of rivets 1 1/2 Percentage of strength of joint { Plate 100 Rivets 100 }
Internal diameter 14 1/2 Working pressure by Rules 201 160 Thickness of crown 5/16 No. and diameter of rivets 36 @ 1 1/16
stays 11 1/4 x 8 Inner radius of crown 17 1/2 Working pressure by Rules 201 160
How connected to shell By doubler plate Size of doubler plate under dome 17 1/2 x 1 1/8 Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/16 @ 1 1/2

Type of Superheater Water tube Manufacturers of W. & A. Mitchell
Number of elements 12 Material of tubes Steel Internal diameter and thickness of tubes 2 1/2 x 5/16
Material of headers Steel Tensile strength 1001 Thickness 5/16 Can the superheater be shut off at the boiler be worked separately Yes
Area of each safety valve 1 1/2 Are the safety valves fitted with easing gear Yes Working pressure as per Rules 201 160
Pressure to which the safety valves are adjusted 201 160 Hydraulic test pressure 241 920
tubes Steel forgings and castings Steel and after assembly in place Yes Are drain cocks Yes
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 & Co. Ltd.
Greenock Manufacturer

Dates of Survey while building { During progress of work in shops - - } See machinery report. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) Yes.
{ During erection on board vessel - - }
Total No. of visits 1

Is this Boiler a duplicate of a previous case no. If so, state Vessel's name and Report No. 1

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 plans. Materials and workmanship are good.
The boilers have been efficiently installed on board the vessel which has been taken to Port Glasgow for completion.

These boilers have been efficiently installed in the vessel & their safety valves adjusted under steam for a working pressure of 180 lbs/sq in.
Please see Greenock first entry ref No for recommendations

Charles W. Hunter
Greenock

Survey Fee ... £ : : When applied for, 19...
Travelling Expenses (if any) £ : : When received 19...

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

Committee's Minute GLASGOW 5 MAR 1900

Assigned SEE ACCOMPANYING MACHINERY REPORT