

## REPORT ON BOILERS.

No. 70069

Received at London Office 9 NOV 1945

Date of writing Report 18-10-45 When handed in at Local Office 22-10-45 Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 21-9-43 Last Survey 2-10-45

Reg. Book. APP. 34386 on the MOTOR VESSEL "TAPTI" (Number of Visits 112) Tons { Gross 6688 Net 4352 4800

Master J. M. Built at GLASGOW By whom built CHAS. CONNELLY & CO. LD. Yard No. When built 1945

Engines made at GLASGOW By whom made BARCLAY CURLE & CO. LD. Engine No. 143 When made 1945

Boilers made at - By whom made - Boiler No. 143 When made 1945

Nominal Horse Power 149 Owners JAMES NOURSE LD. Port belonging to LONDON

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record S. ✓)

Total Heating Surface of Boilers 1483 ft Is forced draught fitted Yes ✓ Coal or Oil fired Oil ✓

No. and Description of Boilers One Single Ended Working Pressure 120 lbs ✓

Tested by hydraulic pressure to 230 lbs Date of test 23-10-45 No. of Certificate 21806 Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler One - 2 1/4" S.H.S. Double ✓

Area of each set of valves per boiler { per Rule 6.86 sq. ft. as fitted 7.94 sq. ft. Pressure to which they are adjusted 120 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 Well clear Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Middle platform Is the bottom of the boiler insulated

Largest internal dia. of boilers 11'6" Length 11'0" Shell plates: Material S ✓ Tensile strength 29/33 tons ✓

Thickness 2 1/32" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end Double ✓ inter. 2" 7/8" ✓

long. seams D.B.S.L.R. ✓ Diameter of rivet holes in { circ. seams 13/16" ✓ long. seams 3/4" ✓ Pitch of rivets { 5 1/2" ✓

Percentage of strength of circ. end seams { plate 70.1 rivets 45.3 Percentage of strength of circ. intermediate seam { plate 86.3 rivets 90.5

Percentage of strength of longitudinal joint { plate 86.3 rivets 90.5 combined 91.0 Working pressure of shell by Rules

Thickness of butt straps { outer 1/2" ✓ inner 5/8" ✓ No. and Description of Furnaces in each Boiler 2 Draught ✓

Material S Tensile strength 26/30 tons ✓ Smallest outside diameter 3'4 1/4" ✓

Length of plain part { top Thickness of plates { crown 3/8" ✓ bottom Description of longitudinal joint Welded ✓

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

End plates in steam space: Material S Tensile strength 26/30 tons Thickness 5 5/64" Pitch of stays 17 7/8" x 15" ✓

How are stays secured Double nuts Working pressure by Rules

Tube plates: Material { front S ✓ back S Tensile strength { 26/30 tons ✓ Thickness { 1/16" ✓ 1/16" ✓

Mean pitch of stay tubes in nests 8'43" Pitch across wide water spaces 13 1/2" Working pressure { front back

Girders to combustion chamber tops: Material S Tensile strength 28/32 tons ✓ Depth and thickness of girder

at centre 2 @ 8 1/4" x 9 1/6" Length as per Rule 2'8 23/32" Distance apart 9 3/4" No. and pitch of stays

in each 2 @ 10 1/4" Working pressure by Rules Combustion chamber plates: Material S ✓

Tensile strength 26/30 tons Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 19/32" ✓

Pitch of stays to ditto: Sides 10 1/4" x 9 3/4" Back 10 1/4" x 9 3/4" Top 10 1/4" x 9 3/4" Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules Front plate at bottom: Material S Tensile strength 26/30 tons ✓

Thickness 1/16" Lower back plate: Material S Tensile strength 26/30 tons Thickness 2 1/32" ✓

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

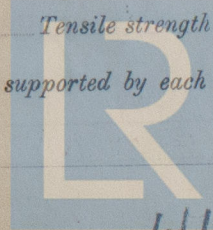
Working Pressure Main stays: Material S Tensile strength 28/32 tons ✓

Diameter { At body of stay, 2 1/8" ✓ or No. of threads per inch 6 ✓ Area supported by each stay

Over threads Working pressure by Rules Screw stays: Material S Tensile strength 26/30 tons ✓

Diameter { At turned off part, 1 1/2" ✓ or No. of threads per inch 9 ✓ Area supported by each stay

Over threads



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Working pressure by Rules Are the stays drilled at the outer ends. No Margin stays: Diameter { At turned off part, or Over threads 1 5/8"
No. of threads per inch 9 Area supported by each stay Working pressure by Rules
Tubes: Material S. External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 11 W.G. 3/8" 1/16" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 19" x 3/4" No. of rivets and diameter of rivet holes 44 @ 1 1/16"
Outer row rivet pitch at ends 7 1/2" Depth of flange if manhole flanged 3 1/2" 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
Type of Superheater Manufacturers of { Tubes Steel forgings 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 forgings and 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, A. Macneil? Manufacturer.

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

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. 41MEGNA GLS. RPT. N° 68172

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey in accordance with the Rules and approved plans. The materials and workmanship are good. The boiler has been satisfactorily installed in the vessel, and the safety valves adjusted under steam to 120 lb./sq. inch.

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

N. Russell Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6 NOV 1945
Assigned SEE ACCOMPANYING MACHINERY REPORT