

## REPORT ON BOILERS.

No. 71426

Received at London Office

5 FEB 1947

Date of writing Report 31-1-1947 When handed in at Local Office 3.2.10 4) Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 2.8.45 Last Survey 27.1.1947

Reg. Book. on the MOTOR VESSEL "MUTLAH" (Number of Visits 61) Gross 6652 Tons Net 4457

Master Built at GLASGOW By whom built CHAS. CONNELL & CO. LTD. Yard No. 453 When built 1947

Engines made at GLASGOW By whom made BARCLAY CURLEY & CO. LTD. Engine No. 162 When made 1947

Boilers made at D° By whom made D° Boiler No. 162 When made 1947

Nominal Horse Power 376 Owners JAMES NOURSE LTD. 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 sq ft Is forced draught fitted Yes Coal or Oil fired Oil ✓

No. and Description of Boilers One S.E. Multitubular Working Pressure 120 lbs ✓

Tested by hydraulic pressure to 230 lbs Date of test 7-11-46 No. of Certificate 22298 Can each boiler be worked separately Yes ✓

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

Area of each set of valves per boiler {per Rule 6.86 sq" as fitted 7.94 sq" 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 No main boilers ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 3'0" Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating Fitted on upper platform Is the bottom of the boiler insulated Yes ✓

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

Thickness 2 1/32" Are the shell plates welded or flanged No Description of riveting: circ. seams {end Double inter. 2.72" ✓

long. seams D.B.S.I.R. 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 125 lbs ✓

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

Material Steel Tensile strength 26/30 ton Smallest outside diameter 3'4 1/4" ✓

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

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules app. ✓

End plates in steam space: Material Steel Tensile strength 26/30 ton Thickness 5 5/64" Pitch of stays 17 1/8" x 15" ✓

How are stays secured Double nuts Working pressure by Rules app. 11/16" ✓

Tube plates: Material {front Steel back Steel Tensile strength { 26/30 ton Thickness { 11/16" ✓

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

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 ton Depth and thickness of girder at centre 2 @ 8 1/4" x 9/16" Length as per Rule 2' 8 23/32" Distance apart 9 3/4" x 8 1/2" No. and pitch of stays in each 2 @ 10 1/4" Working pressure by Rules app. Combustion chamber plates: Material Steel Tensile strength 26/30 ton 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 app. Front plate at bottom: Material Steel Tensile strength 26/30 ton Thickness 11/16" Lower back plate: Material Steel Tensile strength 26/30 ton 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 app. Main stays: Material Steel Tensile strength 28/32 ton Diameter {At body of stay, or Over threads 2 1/8" No. of threads per inch 6 Area supported by each stay app. Working pressure by Rules app. Screw stays: Material Steel Tensile strength 26/30 ton Diameter {At turned off part, or Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay app.



Working pressure by Rules *app.* Are the stays drilled at the outer ends *No.* Margin stays: Diameter { At turned off part, *1 5/8"* or Over threads

No. of threads per inch *9* Area supported by each stay *app.* Working pressure by Rules *app.*

Tubes: Material *Steel* External diameter { Plain *2 1/2"* Stay *2 1/2"* Thickness { *11 W.G.* *3/8" x 5/16"* No. of threads per inch *9*

Pitch of tubes *3 3/4" x 3 3/4"* Working pressure by Rules *app.* 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 accompanying machinery report Are the approved plans of boiler and superheater forwarded herewith (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. *"V. MARJATA GLS. REP. N° 71183"*

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 now been installed in the vessel, generally examined under steam and found satisfactory. The safety valves have been adjusted to 120 lb./sq. inch.*

Survey Fee ... £ *See main Rpt.* When applied for, 19

Travelling Expenses (if any) £ : When received, 19

*H. Vissell*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 4-55-1947*

Assigned *SEE ACCOMPANYING MACHINERY REPORT*



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