

REPORT ON BOILERS.

No. 71426

5 FEB 1947

Received at London Office

Date of writing Report 31-1-1947 When handed in at Local Office 3.2.47 Port of GLASGOW

No. in Reg. Book. GLASGOW Date, First Survey 21.8.45 Last Survey 27.1.47

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

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

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

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

Nominal Horse Power 516 Owners JAMES NOURSE LTD. Port belonging to LONDON

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Cochran & Co. Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 1370 ^{608 oil} Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers One oil fired exhaust gas boiler Working Pressure 120 lbs

Tested by hydraulic pressure to 230 lbs Date of test 12-11-46 No. of Certificate 22301 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" J. H. H. Double

Area of each set of valves per boiler ^{per Rule} 6.8040" ^{4.58 for 1 H. V.} 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 2'9" 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 10'0" Length 10'6" Shell plates: Material Steel Tensile strength 29/33 ton

Thickness 1 9/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams ^{end} Double

long. seams D. B. S. L. R. Diameter of rivet holes in ^{circ. seams} 13/16" ^{long. seams} 3/4" Pitch of rivets ^{inter.} 2.87" 5 1/2"

Percentage of strength of circ. end seams ^{plate} 71.6 ^{rivets} 48.2 Percentage of strength of circ. intermediate seam ^{plate} ^{rivets}

Percentage of strength of longitudinal joint ^{plate} 85.3 ^{rivets} 107.6 ^{combined} 92.2 Working pressure of shell by Rules 127 lbs

Thickness of butt straps ^{outer} 1/2" ^{inner} 5/8" No. and Description of Furnaces in each Boiler 1-Deighton

Material Steel Tensile strength 26/30 ton Smallest outside diameter 37 1/4"

Length of plain part ^{top} ^{bottom} Thickness of plates ^{crone} 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 25/32" Pitch of stays 16" x 14"

How are stays secured Double nuts Working pressure by Rules App. 25/32"

Tube plates: Material ^{front} Steel ^{back} Steel Tensile strength 26/30 ton Thickness 1/16"

Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13 1/4" Working pressure ^{front} App. ^{back} App.

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

at centre 2 @ 8" x 1 1/32" Length as per Rule 2'5 23/32" Distance apart 10 1/2", 10" 9" No. and pitch of stays

in each 2 @ 9 1/2" Working pressure by Rules App. Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 1 9/32" Back 1 9/32" Top 1 9/32" Bottom 1 9/32"

Pitch of stays to ditto: Sides 9 1/2" x 10 1/2" Back 9 1/2" x 10 1/2" Top 9 1/2" x 10 1/2" 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 25/32" Lower back plate: Material Steel Tensile strength 26/30 ton Thickness 25/32"

Pitch of stays at wide water space 13 1/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure App. Main stays: Material Steel Tensile strength 28/32 tons

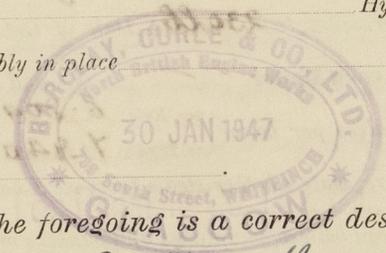
Diameter ^{At body of stay,} 2 1/8" ^{or} No. of threads per inch 6 Area supported by each stay App.

Working pressure by Rules App. Screw stays: Material Steel Tensile strength 26/30 ton

Diameter ^{At turned off part,} 1 1/2" ^{or} 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, or Over threads *1 3/8"* ✓
 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" x 1 3/4"* ✓ Thickness { *11 w.g.* ✓ No. of threads per inch *9* ✓
 Stay *2 1/2"* ✓
 Pitch of tubes *3 3/4" x 3 3/4"* / *2 3/4" x 2 3/8"* Working pressure by Rules *app.* ✓ Manhole compensation: Size of opening in shell plate *20" x 16"* ✓ Section of compensating ring *19" x 1 1/16"* ✓ No. of rivets and diameter of rivet holes *44 @ 1 1/16"* ✓
 Outer row rivet pitch at ends *4 1/2"* ✓ Depth of flange if manhole flanged *3 1/4"* ✓ 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 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 casing 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* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 while building { During erection on board vessel - - } *machinery report* 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. RPT. 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 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) £ *See Mach. Rpt.* _____ When received, _____ 19 _____

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

Committee's Minute *GLASGOW 4 FEB 1947*
 Assigned *SEE ACCOMPANYING MACHINERY REPORT*

