

## REPORT ON BOILERS.

No. 68172

Received at London Office

16 MAR 1944

Date of writing Report 8-3-1944 When handed in at Local Office 11.3.1944 Port of GLASSGOW

No. in Survey held at GLASSGOW Date, First Survey 29.6.43 Last Survey 10-3-1944  
 Reg. Book. on the M.V. "MEGNA" (Number of Visits 72) Tons { Gross 6595  
 Net 4391.

Built at GLASSGOW By whom built CHARLES CONNELLY & CO. LD. Yard No. 745 When built 1944

Engines made at GLASSGOW By whom made BARCLAY CURRIE & CO. LD. Engine No. EW139 When made 1944

Boilers made at ~ D ~ By whom made ~ D ~ Boiler No. EW139 When made 1944

Nominal Horse Power 449 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 sq 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 17-11-43 No. of Certificate 21573 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" I.H.H. Double ✓

Area of each set of valves per boiler { per Rule 6.86 ✓  
 as fitted 7.94 ✓ 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 ✓ Is oil fuel carried in the double bottom under boilers ✓

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

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. 2.72" ✓

long. seams D.B.S. TR.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 ✓  
 rivets ✓

Percentage of strength of longitudinal joint { plate 86.3 ✓  
 rivets 90.5 ✓  
 combined 91.0 ✓

Thickness of butt straps { outer 1/2" ✓  
 inner 3/8" ✓ No. and Description of Furnaces in each Boiler 2 Doughton ✓

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

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

Dimensions of stiffening rings on furnace or c.c. bottom -

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 D.N. ✓

Tube plates: Material { front S ✓  
 back S ✓ Tensile strength { 26/30 Tons ✓ Thickness { 1 1/6" ✓  
 1 1/6" ✓

Mean pitch of stay tubes in nests 8.43" ✓ Pitch across wide water spaces 13 1/2" ✓

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" x 8 1/2" ✓ No. and pitch of stays

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

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 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 ✓

Front plate at bottom: Material S ✓ Tensile strength 26/30 Tons ✓

Thickness 1 1/6" ✓ 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 ✓

Main stays: Material S ✓ Tensile strength 28/32 Tons ✓

Diameter { At body of stay, 2 1/8" ✓  
 or  
 Over threads - ✓ No. of threads per inch 6 ✓

Screw stays: Material S ✓ Tensile strength 26/30 Tons ✓

Diameter { At turned off part, 1 1/2" ✓  
 or  
 Over threads - ✓ No. of threads per inch 9 ✓



Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1.58" or Over threads 1.58"

No. of threads per inch 9

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

Pitch of tubes 3 3/4" x 3 3/4" Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 9 1/2" x 3/4" No. of rivets and diameter of rivet holes 44 x 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 \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_

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 \_\_\_\_\_

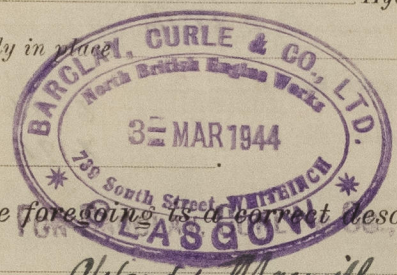
Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_

Material of headers \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Can the superheater be shut off and the boiler be worked separately \_\_\_\_\_

Area of each safety valve \_\_\_\_\_ Are the safety valves fitted with easing gear \_\_\_\_\_

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,  
*Alasdair Macaull* Manufacturer.

Dates of Survey { During progress of work in shops - - - } See attached 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 1

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. M/V HUGHAI GLASGOW Rpt. N° 67373

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 the working pressure

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

*M. Russell*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 MAR 1944

Assigned \_\_\_\_\_