

REPORT ON BOILERS.

No. 67107

Received at London Office 26 MAY 1943

Date of writing Report 19 ¹⁹ When handed in at Local Office 24.5.19 ⁵³ Port of Glasgow

No. in Reg. Book. Glasgow Date, First Survey 1st Oct 1941 Last Survey 18th May 1943

on the M/V. "SOCOTRA" (Number of Visits 86) Tons { Gross Net

Built at Glasgow By whom built Barclay Curle & Co. Ltd. Yard No. 691 When built 1943

Engines made at Glasgow By whom made -do- Engine No. 691 When made 1943

Boilers made at -do- By whom made -do- Boiler No. 691 When made 1943

Nominal Horse Power 1721 Owners P & O Steam Nav. Co. 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 4559 sq ft Is forced draught fitted Yes Coal or Oil fired Oil & Gas Working Pressure 120 lb.

No. and Description of Boilers One Oil Fired & Exhaust Gas Tested by hydraulic pressure to 230 lb. Date of test 26-10-42 No. of Certificate 21232 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1 - 3 3/4" I.H.L. ducts

Area of each set of valves per boiler { per Rule 210" as fitted 220" Pressure to which they are adjusted 120 lb. 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 will clear Is oil fuel carried in the double bottom under boilers Yes

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

Largest internal dia. of boilers 16'-0" Length 11'-9" Shell plates: Material S Tensile strength 29/33 tons

Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams { end inter. } 3.29" 6 7/8"

long. seams DBS. TR. Diameter of rivet holes in { circ. seams 1" long. seams 15/16" Pitch of rivets { plate rivets } 69.6 43.2

Percentage of strength of circ. end seams { plate rivets } 86.3 85.2 84.8

Percentage of strength of longitudinal joint { plate rivets combined } 2 No. and Description of Furnaces in each Boiler 2 Deighton

Thickness of butt straps { outer 11/16" inner 13/16" Material S Tensile strength 26/30 tons Smallest outside diameter 39 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 1 3/32" Pitch of stays 21" x 21 1/2"

How are stays secured D.M.

Tube plates: Material { front back } S Tensile strength { 26/30 tons Thickness { 11/16" }

Mean pitch of stay tubes in nests 7.94" 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 1/2" x 11/16" Length as per Rule 34 23/32" Distance apart 9 1/2" W 8 1/2" C No. and pitch of stays in each 2 @ 11"

Combustion chamber plates: Material S Tensile strength 26/30 tons Thickness: Sides 2 1/32" Back 19/32" Top 2 1/32" Bottom 2 1/32"

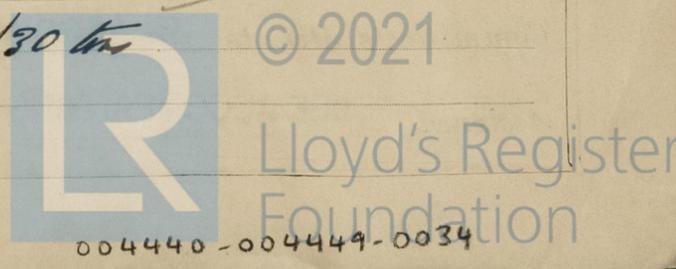
Pitch of stays to ditto: Sides 11" x 11 1/4" Back 10" x 10" Top 11" x 9 1/2" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material S Tensile strength 26/30 tons Thickness 11/16" 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

Main stays: Material S Tensile strength 28/32 tons Diameter { At body of stay, or Over threads } 2 5/8" No. of threads per inch 6

Screw stays: Material S Tensile strength 26/30 tons Diameter { At turned off part, or Over threads } 1 1/2" No. of threads per inch 9



Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part.} 1 5/8" + 1 3/4"
 No. of threads per inch 9
 Tubes: Material 5 External diameter ^{Plain} 2 1/2" + 1 3/4" Thickness ^{11 W.G.} 1/4" + 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 7/8" No. of rivets and diameter of rivet holes 40 @ 1 1/8"
 Outer row rivet pitch at ends 7 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} _____
 Internal diameter _____ Thickness of crown _____ No. and diameter of stays _____
 How connected to shell _____ Inner radius of crown _____
 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 _____
 Pressure to which the safety valves are adjusted _____
 tubes _____ forgings and castings _____ and after assembly in place _____
 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 Yes

The foregoing is a correct description,
Alvanor Macmillan Manufacturer.

Dates of Survey ^{During progress of work in shops - -} _____ Are the approved plans of boiler and superheater forwarded herewith Yes
^{while building} ^{During erection on board vessel - -} See attached machinery report Total No. of visits _____

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

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, and the materials and workmanship are good. It has been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure.

Survey Fee £ 27 : 14 : - } When applied for, 25 MAY 1943
 Travelling Expenses (if any) £ : : } When received, 19

A. J. Brown
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 25 MAY 1943

Assigned SEE ACCOMPANYING MACHINERY REPORT

