

REPORT ON BOILERS.

No. 72654

APR 1948

Received at London Office

Date of writing Report 25.3.48 When handed in at Local Office 31.3.48 Port of GLASGOW.

Survey held at Motherwell Date, First Survey 10.7.47 Last Survey 19.3.48
on the M.T. SOYA MARIA (Number of Visits 13) Tons (Gross/Net)

By whom built KOCKUMS MEK. VERK. Yard No. 3045 When built
Engines made at By whom made Engine No. When made
Boilers made at MOTHERWELL. By whom made BROOMSIDE BOILER CO. LTD. Boiler No. 2145(3/4) When made 1948.
Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles, Ltd., (Letter for Record (s))

Total Heating Surface of Boilers 2784 sq.ft. Is forced draught fitted - Coal or Oil fired -

No. and Description of Boilers Two - Marine Return Tube. Working Pressure 170 lb.

Tested by hydraulic pressure to 350 lb. Date of test 4-3-48 No. of Certificate 22618
19-3-48 22627 Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler -

Area of each set of valves per boiler (per Rule/As fitted) Pressure to which they are adjusted - Are they fitted with easing gear -

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 -

Largest internal dia. of boilers 11'-1 7/8" Length 11'-9 3/4" Shell plates: Material Steel Tensile strength 28/32 Tons

Thickness 57/64" Are the shell plates welded or flanged No Description of riveting: circ. seams (end/inter) D.R. -

Long. seams T.R.D.B.S. Diameter of rivet holes in (circ. seams/long. seams) 15/16" Pitch of rivets (circ./inter) 2.86" 6.663"

Percentage of strength of circ. end seams (plate/rivets) 67.4/45.3 Percentage of strength of circ. intermediate seam (plate/rivets) -

Percentage of strength of longitudinal joint (plate/rivets/combined) 86.25/91.5/90.4

Thickness of butt straps (outer/inner) 5/4"/7/8" No. and Description of Furnaces in each Boiler Two-Morison.

Material Steel Tensile strength 26/30 Tons Smallest outside diameter 3'-6 1/2"

Length of plain part (top/bottom) - Thickness of plates (crown/bottom) 17/32" Description of longitudinal joint Welded.

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

End plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 7/8" Pitch of stays 16" x 14 1/2"

How are stays secured Welded. see plan

Tube plates: Material (front/back) Steel Tensile strength (circ./inter) 26/30 Tons Thickness (circ./inter) 7/8" 53/64"

Mean pitch of stay tubes in nests 8 7/8" Pitch across wide water spaces 13"

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

at centre 8 1/2" x 1 1/2" Length as per Rule 2'-4.27/32" Distance apart 8 1/4" No. and pitch of stays

in each 2 @ 9" welded. See Plan. Combustion chamber plates: Material Steel.

Tensile strength 26/30 Tons Thickness: Sides 53/64" Back 53/64" Top 53/64" Bottom 53/64"

Pitch of stays to ditto: Sides 9" x 8 1/2" Back 8 7/8" x 8 3/8" Top 9" x 8 1/4" Are stays fitted with nuts or rivets over Yes

Front plate at bottom: Material Steel Tensile strength 26/30 tons.

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26/30 Tons Thickness 7/8"

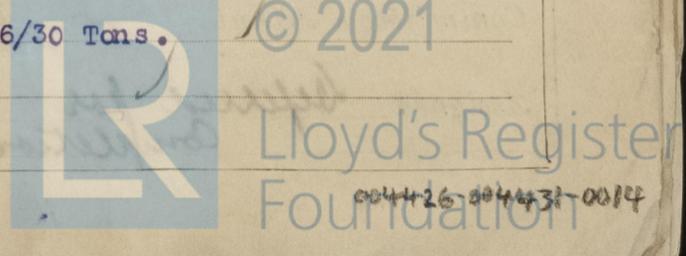
Pitch of stays at wide water space 13" Are stays fitted with nuts or rivets over Yes

Main stays: Material Steel Tensile strength 28/32 Tons.

Diameter (At body of stay/Over threads) 2 3/8" No. of threads per inch

Screw stays: Material Steel Tensile strength 26/30 Tons.

Diameter (At turned off part/Over threads) 1 5/8" No. of threads per inch 9



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Are the stays drilled at the outer ends No Yes Margin stays: Diameter At turned off part. Over threads 1 3/4"

No. of threads per inch 9

Tubes: Material S.D. Steel External diameter { Plain 2 1/2" Stay 2 1/8" Thickness { 9 w.g. 5/16" & 3/8" No. of threads per inch 9

Pitch of tubes 3 1/2" x 3 5/8" Manhole compensation: Size of opening

shell plate 16 x 20 Section of compensating ring 9 1/8" x 7/8" No. of rivets and diameter of rivet holes 54 - 15/16"

Outer row rivet pitch at ends 6 5/8" Depth of flange if manhole flanged 3" Steam Dome: Material None

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 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

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,
J. M. Chalkley Manufacturer

Dates of Survey { During progress of work in shops - - 1947 Jul 10 Aug 10 9 Sept 10 4 18 Oct 2 Nov 18 Dec 23 31 1948 Jan 23 Mar 4 19

while building { During erection on board vessel - - -

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits 13

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been constructed under Special Survey in accordance with the Society's rules and the approved plans. The materials and workmanship are good. The boilers were made to the order of Messrs. Kockums Mekanisk Verkstad A/B Malmo and intended for their Yard No. 304/5.**

Survey Fee ... £ 37 : - : - } When applied for, 30/2/48 19 48

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

C. E. Canshaw, M. Dal
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 31 MAR 1948

Assigned *Deferred for completion*