

REPORT ON BOILERS.

No. 88299

Received at London Office 30 MAR 1932

Date of writing Report 19 When handed in at Local Office 23.3.10 32 Port of

NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Walker. Date, First Survey 19 June 31 Last Survey 22.3.1932

on the S.S. 78/44 "ANATOLIAN." (Number of Visits) Tons {Gross Net

Master Built at Walker By whom built Swan Hunter & W.R. Sims Yard No. 1414 When built 1931

Engines made at Walker. By whom made Swan Hunter & W.R. Sims, Ltd. Engine No. 1414 When made 1931

Boilers made at Walker. By whom made Swan Hunter & W.R. Sims Ltd Boiler No. 1414 When made 1931

Nominal Horse Power 292. Owners Swan Hunter & Wigham R'Sims Ltd. Port belonging to Lawsonville.
Westcott Lawrence & Co. Ltd. Managers.

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~

Manufacturers of Steel The Steel Co of Scotland. (Letter for Record S.)

Total Heating Surface of Boilers 4294 sq ft Is forced draught fitted yes Coal or Oil fired Coal.

No. and Description of Boilers Two single end main marine Working Pressure 200 lbs

Tested by hydraulic pressure to 300 lbs Date of test 28.9.31. No. of Certificate 559 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 59 sq ft No. and Description of safety valves to each boiler Two spring loaded 1.4.6. type.

Area of each set of valves per boiler {per Rule 4.49 sq ft as fitted 4.94 sq ft Pressure to which they are adjusted 200 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 11" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating open floors Is the bottom of the boiler insulated no

Largest internal dia. of boilers 14'-3 9/16" Length 11'-6" Shell plates: Material S. Tensile strength 30/36 T.

Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D. R. Exp. inter. 4 3/4"

long. seams T. R. D. B. S. Diameter of rivet holes in {circ. seams 1 3/8" long. seams 1 1/4" Pitch of rivets {8 1/2"

Percentage of strength of circ. end seams {plate 68.58% rivets 43.64% Percentage of strength of circ. intermediate seam {plate — rivets —

Percentage of strength of longitudinal joint {plate 83.29% rivets 85.15% combined 84.61. Working pressure of shell by Rules 200 lbs

Thickness of butt straps {outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 3 Deiphian

Material S. Tensile strength 26/30 T Smallest outside diameter 4 1/8"

Length of plain part {top — bottom — Thickness of plates {crown 1 9/32" bottom — Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom none. Working pressure of furnace by Rules 200 lbs

End plates in steam space: Material S. Tensile strength 26/30 T. Thickness 1 1/32" Pitch of stays 18 1/2" x 18 1/2"

How are stays secured D. nuts Working pressure by Rules 200 lbs

Tube plates: Material {front S. back S. Tensile strength {26/30 T. Thickness {1 1/16" 1 3/16"

Mean pitch of stay tubes in nests 10 5/8" Pitch across wide water spaces 14" Working pressure {front 210 lbs back —

Girders to combustion chamber tops: Material S. Tensile strength 28/32 T. Depth and thickness of girder

at centre 8 3/4" x 13/8" Length as per Rule 32 1/2" Distance apart 8 1/2" No. and pitch of stays

in each 2 @ 10" Working pressure by Rules 200 lbs Combustion chamber plates: Material S.

Tensile strength 26/30 T. Thickness: Sides 2 3/32" Back 2 1/32" Top 2 3/32" Bottom 2 3/32"

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

Working pressure by Rules 204 lbs Front plate at bottom: Material S. Tensile strength 26/30 T

Thickness 1 1/16" Lower back plate: Material S. Tensile strength 26/30 T Thickness 1 5/16"

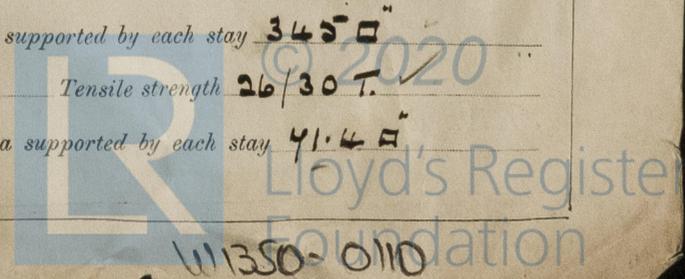
Pitch of stays at wide water space 14" (16) x 8" Are stays fitted with nuts or riveted over nuts

Working Pressure 226 lbs Main stays: Material S. Tensile strength 28/32 T.

Diameter {At body of stay, 3 1/8" or — No. of threads per inch 6 Area supported by each stay 345 sq in

Working pressure by Rules 213 lbs Screw stays: Material S. Tensile strength 26/30 T.

Diameter {At turned off part, 1 5/8" or 1 3/4" No. of threads per inch 9 Area supported by each stay 41.4 sq in



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Working pressure by Rules $2/2$ lbs. Are the stays drilled at the outer ends No Margin stays: Diameter $13/4$ "
 No. of threads per inch 9 Area supported by each stay 89.30 Working pressure by Rules 202 lbs.
 Tubes: Material *Iron* External diameter 3 " Thickness $11/4, 5/16, 3/8$ " No. of threads per inch 9
 Pitch of tubes $4 1/4, 4 1/4$ " Working pressure by Rules 203 lbs. Manhole compensation: Size of opening in shell plate *None. E. Plate*
 Section of compensating ring No. of rivets and diameter of rivet holes
 Outer row rivet pitch at ends Depth of flange if manhole flanged Steam Dome: Material *Iron*
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 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 *Smokestack* Manufacturers of Tubes *The Superheater Co. Ltd.*
 Number of elements *52 E. Boiler* Material of tubes *S. D. Steel* Steel castings *Manchester*
 Material of headers *Forged steel* Tensile strength *26/30 T.* Thickness *1"* Internal diameter and thickness of tubes *1 1/4" = 2 1/2" x 1/4"*
 Can the superheater be shut off and the boiler be worked separately *No.* Is a safety valve fitted to every part of the superheater *which is to shut off from boiler* *yes.*
 Area of each safety valve *1.460"* Are the safety valves fitted with easing gear *yes* Working pressure as per Rules
 Pressure to which the safety valves are adjusted *205 lbs.* Hydraulic test pressure: tubes *1000 lbs.* castings *600 lbs.* and after assembly in place *400 lbs.* Are drain cocks or valves fitted to free the superheater from water where necessary *yes*

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *yes.*

The foregoing is a correct description,
 FOR SWAN, HUNTER & WILKINSON, LTD. Manufacturer.
W. A. Wright

Dates of Survey *See Machinery Report*
 During progress of work in shops --
 while building *See Machinery Report*
 During erection on board vessel --
 Are the approved plans of boiler and superheater forwarded herewith *yes*
 (If not state date of approval.)
 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.) *The Boilers have been built under special survey in accordance with the approved plans & the Rules of the Society. The Boilers have been securely fitted on board the vessel & their safety valves adjusted under steam, found satisfactory. The workmanship, materials are of good quality throughout.*

Survey Fee ... £ *on March* When applied for, 19
 Travelling Expenses (if any) £ *Repaid* When received, 19

Fred. A. Ferguson
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 1 APR 1932*

Assigned *See F. A. Rpt.*

