

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 1931. Last Survey 22.3. 1932

on the S.S. 78/414. S. "ANATOLIAN."

(Number of Visits)

Tons { Gross
Net

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

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

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

Nominal Horse Power 292. Owners Swan Hunter & Wigham R. Smith, Ltd. Port belonging to Newcastle.

Westcott Lawrence & Co. London. 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. sq. in.

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 1.5 lb. 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 6 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. Emp. inter. 4 3/4" 7

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 68.38% rivets 42.64 Percentage of strength of circ. intermediate seam { plate 85.29 rivets 84.61

Percentage of strength of longitudinal joint { plate 85.15% rivets 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 Deplexion

Material S. Tensile strength 26/30 T. Smallest outside diameter 41 7/8"

Length of plain part { top 19 3/32" bottom 19 3/32" Thickness of plates { crown 19 3/32" bottom 19 3/32" Description of longitudinal joint welded.

Dimensions of stiffening rings on furnace or c.c. bottom 4 one. 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" 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" 13/16"

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

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

at centre 8 3/4" x 13 1/8" Length as per Rule 32 1 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 23/32" Back 21/32" Top 23/32" Bottom 23/32"

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 Yes.

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 Yes.

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

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

Working pressure by Rules 212 lbs Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part,} 1 3/4"
^{or}
^{Over threads}
No. of threads per inch 9 Area supported by each stay 89.3 sq Working pressure by Rules 202 lbs
Tubes: Material Iron External diameter ^{Plain} 3" Thickness ^{Stay} 3/16" No. of threads per inch 9
Pitch of tubes 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 ^{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 Smokestack Manufacturers of Tubes The Superheater Co. Ltd.
Manchester
Number of elements 525 coils Material of tubes S. D. Steel Internal diameter and thickness of tubes 1 1/4" x 2 1/4"
Material of headers Forged steel Tensile strength 26/30 T. Thickness 1" Can the superheater be shut off and
the boiler be worked separately No Is a safety valve fitted to every part of the superheater yes
Area of each safety valve 1.46 sq 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 & WILLY RICHARDSON, LTD. Manufacturer.
Not Wrought.

Dates of Survey ^{During progress of}
^{work in shops - -}
^{while}
^{building} ^{During erection on}
^{board vessel - - -}

See Mch Report

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 ... £ 100 marks When applied for, 19
Travelling Expenses (if any) £ 100 marks When received, 19

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

Committee's Minute FRI. 1 APR 1932

Assigned See J. B. Rpl.



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Foundation