

REPORT ON BOILERS.

No. 86497

-2 DEC 1930

Received at London Office

Date of writing Report 19 When handed in at Local Office 28/11/30 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at Reg. Book. 39443. on the M.V. "ATTILA" Date, First Survey 28 March Last Survey 26 Nov 1930 (Number of Visits) Gross 7913 Tons Net 4729

Master Built at Walker By whom built Sir W.G. Armstrong Whitworth & Co. Ltd. and No. 1066 When built 1930.

Engines made at Scotswood By whom made Messrs Sir W.G. Armstrong Whitworth & Co. Ltd. Engine No. 94. When made 1930.

Boilers made at Scotswood By whom made Messrs Sir W.G. Armstrong Whitworth & Co. Ltd. Boiler No. 94. When made 1930.

Nominal Horse Power 776. Owners JAKHELLN. Port belonging to OSLO.

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

Manufacturers of Steel D. Colville & Sons Glasgow (Plate) J. Thompson & Sons Wolverhampton (Furnaces) (Letter for Record S.)

Total Heating Surface of Boilers 2175 sq ft. Is forced draught fitted Yes. Coal or Oil fired oil.

No. and Description of Boilers One S.E. Multitubular Working Pressure 150 lb/sq in.

Tested by hydraulic pressure to 275 lb/sq in. Date of test 24/9/30. No. of Certificate 503. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 Spring loaded. High lift.

Area of each set of valves per boiler {per Rule 9.8 as fitted Pressure to which they are adjusted 150 lb/sq in. Are they fitted with easing gear Yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 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 13'-10 1/8" Length 12'-0" Shell plates: Material Steel Tensile strength 29-33 tons D.R. Lap. Yes.

Thickness 1 1/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams 3-27" inter. 7 3/16" long. seams T.R. Double Butt Straps Diameter of rivet holes in {circ. seams 1 1/16" long. seams 1" Pitch of rivets 7 3/16"

Percentage of strength of circ. end seams {plate 67.0% rivets 46.0% Percentage of strength of circ. intermediate seam {plate 86.0% rivets 87.0% Working pressure of shell by Rules 152 lb/sq in.

Percentage of strength of longitudinal joint {plate 86.0% rivets 87.0% combined 89.4% Working pressure of shell by Rules 152 lb/sq in.

Thickness of butt straps {outer 3/4" inner 7/8" No. and Description of Furnaces in each Boiler 3 Brighton Section.

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-5"

Length of plain part {top Thickness of plates {crown 7/16" bottom Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom none. Working pressure of furnace by Rules 152 lb/sq in.

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/16" Pitch of stays 19 3/4" x 17 1/4"

How are stays secured Nuts & Washers inside & outside Working pressure by Rules 152 lb/sq in.

Tube plates: Material {front Steel Tensile strength 26-30 tons Thickness 7/8" back Steel Tensile strength 26-30 tons Thickness 1 1/16"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure {front 159 lb/sq in. back 191 lb/sq in.

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'-10" Distance apart 9 1/2" No. and pitch of stays 3 @ 8"

Working pressure by Rules 153 lb/sq in. Combustion chamber plates: Material Steel Tensile strength 26-30 tons Thickness: Sides 19/32" Back 5/8" Top 19/32" Bottom 7/8"

Pitch of stays to ditto: Sides 9" x 8 1/2" Back 9 1/2" x 8 5/8" Top 9 1/2" x 8" Are stays fitted with nuts or riveted over Nuts.

Working pressure by Rules 157 lb/sq in. 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 25/32"

Pitch of stays at wide water space 14" x 9 1/2" Are stays fitted with nuts or riveted over Nuts.

Working Pressure 173 lb/sq in. Main stays: Material Steel Tensile strength 28-32 tons Diameter {At body of stay, 2 3/4" No. of threads per inch 6. Area supported by each stay 341 sq ins.

Working pressure by Rules 162 lb/sq in. Screw stays: Material Steel Tensile strength 26-30 tons Diameter {At turned off part, 1 1/2" No. of threads per inch 9. Area supported by each stay 82 sq ins.

Rpt. 5a
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Working pressure by Rules 152 1/2 lb. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 3/4" x 1 7/8"
Over threads
No. of threads per inch 9. Area supported by each stay 107.50" x 126.0" Working pressure by Rules 168 1/2 lb.
Tubes: Material Steel External diameter { Plain 2 1/2" Thickness { 10 W.G.
Stay 2 1/2" 1/4" x 5/16" No. of threads per inch 9.
Pitch of tubes 3 3/4" Working pressure by Rules Plain 175 lb. Stay 176 lb. Manhole compensation: Size of opening in
shell plate 20 1/2" x 16 1/2" Section of compensating ring 20" x 5/16" No. of rivets and diameter of rivet holes 44 @ 1 1/8"
Outer row rivet pitch at ends 8 1/4" Depth of flange if manhole flanged 3 3/8" 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 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 None. Manufacturers of { Tubes
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 Working pressure as per
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:
tubes, 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 Yes.

The foregoing is a correct description,
FOR W. & A. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED Manufacturer.
Dates of Survey { During progress of work in shops - - -
while building { During erection on board vessel - - -
See Index Report Are the approved plans of boiler and superheater forwarded herewith 8.5.30.
(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 boiler has been built under Special Survey and in accordance with the Society's Rules & approved plan. The materials & workmanship are sound & good. The boiler was hydraulically tested as per Rules & found satisfactory. The safety valves were adjusted under steam to the approved working pressure.

Survey Fee ... £ For Fee When applied for, 19
Travelling Expenses (if any) £ See Index Rpt When received, 19

L. Pesket.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 9 DEC 1930
Assigned See other J.E. Rpt