

# REPORT ON BOILERS.

No. 86497

-2 DEC 1930

Received at London Office

Date of writing Report 19 1930 When handed in at Local Office 28/11 1930 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Scotswood Date, First Survey 28 March Last Survey 26 Nov 1930

Reg. Book. 89443 on the M.V. "ATTILA" (Number of Visits —) Gross 7913 Tons Net 4729

Master Walker Built at Walker By whom built Sir W.G. Armstrong Whitworth & Co. Ltd 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 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 Yes Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating Yes 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

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end 3-27" inter. Yes

long. seams T.R. Double Butt Straps Diameter of rivet holes in circ. seams 1 7/16" 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%

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 7/16" 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 tubs + washers inside + outside Working pressure by Rules 152 lb/sq in

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

in each 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 nutted

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 2 5/32"

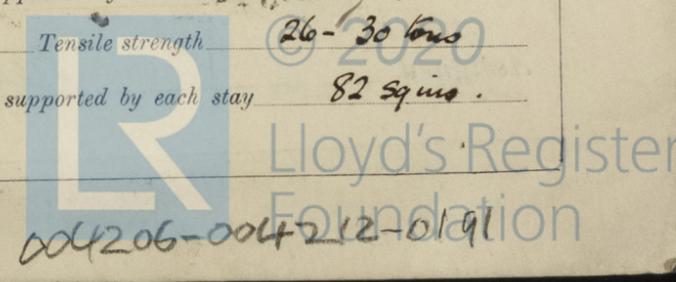
Pitch of stays at wide water space 14" x 9 1/2" Are stays fitted with nuts or riveted over nutted

Working Pressure 173 lb/sq in Main stays: Material Steel Tensile strength 28-32 tons

Diameter At body of stay, 2 3/4" or Over threads 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" or Over threads No. of threads per inch 9 Area supported by each stay 82 sq ins



Rpt. No. 89443.  
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Working pressure by Rules 152 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter 1 3/4" x 1 7/8"  
 No. of threads per inch 9. Area supported by each stay 107.50" x 126" Working pressure by Rules 168 lbs/0"  
 Tubes: Material Steel External diameter 2 1/2" Thickness 10 W.G. No. of threads per inch 9.  
 Pitch of tubes 3 3/4" Working pressure by Rules Rain 175 lbs Stay 176 lbs. 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  
 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 doms 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 L. J. FACILLO Manufacturer.  
 SIR W. & ARTHUR WHITWORTH & COMPANY (ENGINEERS) LIMITED

Dates of Survey See Incls 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 9 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 Incls Rpt When received, 19

L. J. Facillo  
 Engineer Surveyor to Lloyd's Register of Shipping.

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

