

REPORT ON BOILERS.

No. 19219

Received at London Office

Date of writing Report 1.7.1930 When handed in at Local Office 25.7.1930 Port of GREENOCK

No. in Reg. Book. 116 Survey held at GREENOCK on the M/S "Atheneum"

Date, First Survey 18th November 1929 Last Survey 24.4.1930

(Number of Visits /) Gross 8940.98 Tons Net 5240.91

Master Built at P. Elongou By whom built 10th Hamilton Yard No. 413 When built 1930

Engines made at GREENOCK By whom made John & Kneaid CO. LTD Engine No. 1755 When made 1930

Boilers made at ditto By whom made ditto Boiler No. 1755 When made 1930

Nominal Horse Power Owners United Oil Co. Ltd Port belonging to Liverpool

MULTITUBULAR BOILERS [REDACTED], AUXILIARY, [REDACTED].

Manufacturers of Steel D. Colville Scottish Iron & Steel Co. Ltd of Scotland & Glasgow (Letter for Record S)

Total Heating Surface of Boilers 1220.95 # Is forced draught fitted Yes Oil fired oil

No. and Description of Boilers One Single Ended Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 18.4.30 No. of Certificate 1942 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 9.38 # No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler {per Rule 9.81 # as fitted Pressure to which they are adjusted 185 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 or woodwork 5'-0" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 14 1/2" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 11'-2 1/16" Length 10'-6" Shell plates: Material S Tensile strength 28-32

Thickness 15 1/16" Are the shell plates welded or flanged - Description of riveting: circ. seams {end 3.85" inner 4" DR

long. seams TRIDBS Diameter of rivet holes in {circ. seams 1 1/8" long. seams 1" Pitch of rivets {plate 3.85" rivets 4"

Percentage of strength of circ. end seams {plate 40.8% rivets 45.4% Percentage of strength of circ. intermediate seam {plate 85.4% rivets 92.1% combined 98.1%

Percentage of strength of longitudinal joint {plate 92.1% rivets 98.1% combined 98.1% Working pressure of shell by Rules 182

Thickness of butt straps {outer 23/32" inner 24/32" No. and Description of Furnaces in each Boiler 2 Deighton

Material S Tensile strength 26-30 Smallest outside diameter 3'-0 1/16"

Length of plain part {top 15 1/32" bottom 15 1/32" Thickness of plates {crown 15 1/32" bottom 15 1/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 182

End plates in steam space: Material S Tensile strength 26-30 Thickness 1 1/32" Pitch of stays 6 1/2" x 16 1/2"

How are stays secured DN Working pressure by Rules 182

Tube plates: Material {front S back S Tensile strength { 26-30 Thickness { 23/32"

Mean pitch of stay tubes in nests 9 1/4" Pitch across wide water spaces 14" Working pressure {front 184 back 192

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

at centre 8 1/4" x 3/4" (2) Length as per Rule 2'-4 1/2" Distance apart 8" No. and pitch of stays

in each 2 at 18" Working pressure by Rules 183 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 8" x 10" Back 9" x 9 1/4" Top 8" x 10" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 180 Front plate at bottom: Material S Tensile strength 26-30 Thickness 25/32"

Thickness 1" Lower back plate: Material S Tensile strength 26-30 Thickness 25/32"

Pitch of stays at wide water space 13 3/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure 183 Main stays: Material S Tensile strength 28-32

Diameter {At body of stay, or Over threads 2 5/8" No. of threads per inch 6 Area supported by each stay 243.5 #

Working pressure by Rules 184 Screw stays: Material S Tensile strength 26-30

Diameter {At turned off part, or Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 80 #

Working pressure by Rules 190 Are the stays drilled at the outer ends NO Margin stays: Diameter { At turned off part, 1 3/4"
 No. of threads per inch 9 Area supported by each stay 103.5 sq" Working pressure by Rules 2 1/4
 Tubes: Material Iron External diameter { Plain 3" Thickness 9/16" No. of threads per inch 9
 Pitch of tubes 4 1/4" x 4 3/16" Working pressure by Rules 183 Manhole compensation: Size of opening in
 shell plate 20" x 16" Section of compensating ring 2.83 1/4" x 2.43 1/4" x 1 1/2" No. of rivets and diameter of rivet holes 38 at 1 1/8"
 Outer row rivet pitch at ends 7 1/2" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate
 Internal diameter Working pressure by Rules Thickness of crown Rivets 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 Manufacturers of { Tubes
 Number of elements Material of tubes Steel castings 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

The foregoing is a correct description,
 For John G. Kincaid & Co. Ltd.
W. C. Carter Director. Manufacturer.

Dates of Survey { During progress of work in shops - -
 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 ✓

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. M/S "Åkeltun" No 192054rk

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This boiler has been built under special survey in accordance with the approved plans. The workmanship is of good quality. It is now securely fitted on board. This Report accompanies that of the Machinery

Survey Fee Charged on Machinery Report When applied for, 19
 Travelling Expenses (if any) £ : : When received, 19

W. C. Carter
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 JUL 1930

Assigned See accompanying report.