

REPORT ON BOILERS.

No. 19920

6 MAR 1935

Received at London Office

Date of writing Report 8.1.35 When handed in at Local Office 2nd MARCH 1935 Port of LiverpoolNo. in Survey held at Liverpool Date, First Survey 28th DECEMBER 1935 Last Survey 1st MARCH 1935

Reg. Book. M/s "Amastria" (Number of Visits ✓) Tons { Gross 8030.44 Net 4444.23

Master Built at P. Glasgow By whom built L. Rogers & Co. Yard No. 870 When built 1935

Engines made at Liverpool By whom made John E. McCard & Co. Engine No. 1174 When made 1935

Boilers made at ditto By whom made ditto Boiler No. 1174 When made 1935

Nominal Horse Power Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS — DONKEY.

Manufacturers of Steel Scottish D. & C. Co. Ltd. (Letter for Record S ✓)

Total Heating Surface of Boilers 250.2 # Is forced draught fitted Yes Coal or Oil fired Oil

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

Tested by hydraulic pressure to 320 Date of test 29.11.34 No. of Certificate 2032 Can each boiler be worked separately —

Area of Firegrate in each Boiler 6.47 sq. ft. No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler { per Rule 16.2 as fitted 16.58 Pressure to which they are adjusted 18.5 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 2.6 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 17.0 Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14.6 Length 11.6 Shell plates: Material S Tensile strength 29.33

Thickness 1.532 Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end D E inter. —

long. seams T R + D B S Diameter of rivet holes in { circ. seams 1.732 long. seams 1.532 Pitch of rivets { 3.527 7.78

Percentage of strength of circ. end seams { plate 65.4 rivets 45.3 Percentage of strength of circ. intermediate seam { plate — rivets —

Percentage of strength of longitudinal joint { plate 85.32 rivets 85.45 Working pressure of shell by Rules 180

Thickness of butt straps { outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 Brightons

Material S Tensile strength 26-30 Smallest outside diameter 3.418

Length of plain part { top — bottom — Thickness of plates { crown 9.16 bottom 9.16 Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 189

End plates in steam space: Material S Tensile strength 26-30 Thickness 1.932 Pitch of stays 2.14 1.95

How are stays secured D N - Washdown Working pressure by Rules 191

Tube plates: Material { front Steel back Steel Tensile strength { 26-30 Thickness { 1.5716 1.116

Mean pitch of stay tubes in nests 9.375 Pitch across wide water spaces 13.12 Working pressure { front 22.5 back 191

Girders to combustion chamber tops: Material S Tensile strength 29-33 Depth and thickness of girder

at centre 8.5 x 3.4 (2) Length as per Rule 2.468 Distance apart 9 No. and pitch of stays

in each 3 at 4.12 Working pressure by Rules 193 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 1.116 Back 1.116 Top 1.116 Bottom 2.14

Pitch of stays to ditto: Sides 4.5 x 7.716 Back 4.716 x 7.5 Top 9 x 7.5 Are stays fitted with nuts or riveted over Riveted

Working pressure by Rules 184 Front plate at bottom: Material S Tensile strength 26-30

Thickness 1.5716 Lower back plate: Material S Tensile strength 26-30 Thickness 1.816

Pitch of stays at wide water space 14 Are stays fitted with nuts or riveted over Marginal stays riveted other riveted

Working Pressure 189 Main stays: Material S Tensile strength 28-32

Diameter { At body of stay, 3.12 3" in plan No. of threads per inch 6 Area supported by each stay 409.5

Working pressure by Rules 191 Screw stays: Material S Tensile strength 26-30

Diameter { At turned off part, 1.318 No. of threads per inch 9 Area supported by each stay 55.7

Working pressure by Rules 184 Are the stays drilled at the outer ends 90 Margin stays: Diameter { At turned off part, 1 5/8" or Over threads }
No. of threads per inch 9 Area supported by each stay 80.37" Working pressure by Rules 189
Tubes: Material Iron External diameter { Plain } 2 1/2" Thickness { 9 WG 9/32" 11/32" } No. of threads per inch 9
Pitch of tubes 33/4 + 33/4" Working pressure by Rules 210 Manhole compensation: Size of opening in shell plate 16 1/2 + 20 1/2" Section of compensating ring 2-11" 2-7" + 19/32" No. of rivets and diameter of rivet holes 38 at 1 5/16"
Outer row rivet pitch at ends 9 1/4" Depth of flange if manhole flanged 3 1/4" 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 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 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

The foregoing is a correct description,
For JOHN G. KINGAID & CO. LIMITED. DIRECTOR. Manufacturer.

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - - }
SEE MACHINERY REPORT. Are the approved plans of boiler forwarded herewith (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.) Plus boiler has been built under special survey in accordance with the approved plans & the workmanship & material are of good quality, & is now securely fitted on board.
Plus Report accompanying that of the Machinery.

Survey Fee charged on Machinery Report. When applied for, 19
Travelling Expenses (if any) When received, 19
W. Gordon-Mitchell
Engineer Surveyor to Lloyd's Register of Shipping.