

REPORT ON BOILERS.

No. 96760

OCT 11 1938

Received at London Office

Date of writing Report 19 38 When handed in at Local Office 7/10/38 Port of **NEWCASTLE-ON-TYNE**

No. in Reg. Book. Walsend Survey held at Walsend Date, First Survey 22 Dec/1937 Last Survey 4 Oct 1938

on the Steamer "Master Elias Kulukundis" (Number of Visits) Tons { Gross Net

Master Built at Sunderland By whom built Short Bros Yard No. When built 1938

Engines made at Walsend By whom made H. E. Marnie Eng Co. Ltd. Engine No. 2914 When made 1938

Boilers made at Walsend By whom made H. E. Marnie Eng Co., Ltd. Boiler No. 2914 When made 1938

Nominal Horse Power 433 Owners Atlanticos S. S. Co. Ltd. Port belonging to Piraeus

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Co of Scotland. (Letter for Record S)

Total Heating Surface of Boilers 1400 sq ft Is forced draught fitted no Coal or Oil fired Oil

No. and Description of Boilers 1 single ended multitubular Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 22-8-38 No. of Certificate 794 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 36 sq ft No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler { per Rule 7.3 sq ft as fitted 7.9 sq ft Pressure to which they are adjusted 225 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 or woodwork 6-11" Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 17'-3 5/8" Length 10'-6" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 1 3/16" Are the shell plates welded or flanged no Description of riveting: circ. seams { end L.D.R. inter.

long. seams T.R. Straps Diameter of rivet holes in { circ. seams 1 1/4" long. seams 1 1/4" Pitch of rivets { 35/8" 8 21/32"

Percentage of strength of circ. end seams { plate 65.5 rivets 45.2 Percentage of strength of circ. intermediate seam { plate rivets

Percentage of strength of longitudinal joint { plate 85.5 rivets 88.8 combined 88.5 Working pressure of shell by Rules 220 lbs

Thickness of butt straps { outer 29/32" inner 1 1/32" No. and Description of Furnaces in each Boiler Two Corrugated (Deighton)

Material Steel Tensile strength 26-30 tons Smallest outside diameter 41 7/16"

Length of plain part { top bottom Thickness of plates { crown 2 1/32" bottom Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 230 lbs

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 13/32" Pitch of stays 23" x 16"

How are stays secured Double nuts Working pressure by Rules 226 lbs

Tube plates: Material { front Steel back Steel Tensile strength { 26-30 tons Thickness { 31/32" 25/32"

Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 14 1/2" Working pressure { front 222 lbs back 245 lbs

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

at centre 9 x 2 @ 13/16" Length as per Rule 29" Distance apart 11" No. and pitch of stays

in each 2 @ 8 1/2" Working pressure by Rules 247 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 25/32" Back 3/4" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10" x 8 1/2" Back 10" x 8 1/2" Top 11" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 223 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 31/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 15/16"

Pitch of stays at wide water space 15" x 10" Are stays fitted with nuts or riveted over nuts

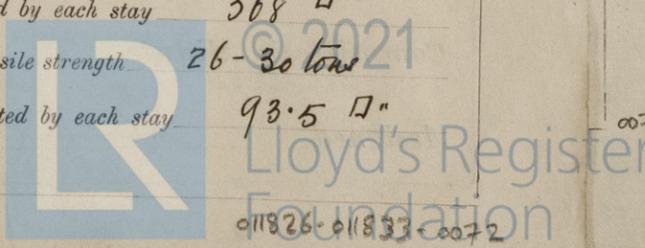
Working Pressure 222 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay, 3 1/4" or No. of threads per inch 6 Area supported by each stay 368 sq in

Working pressure by Rules 252 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part, or No. of threads per inch 9 Area supported by each stay 93.5 sq in

Over threads 1 7/8"



Working pressure by Rules 238 lbs Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part, 2 1/8"
 No. of threads per inch 9 Area supported by each stay 117.5 sq" Working pressure by Rules 250 lbs
 Tubes: Material S. D. Steel External diameter Plain 3 1/4" Thickness 5/16" & 3/8" No. of threads per inch 9
 Pitch of tubes 11 3/4" x 9" Working pressure by Rules 250 lbs Manhole compensation: Size of opening in
 shell plate 16" x 12" Section of compensating ring — No. of rivets and diameter of rivet holes —
 Outer row rivet pitch at ends — Depth of flange if manhole flanged 4 1/8" 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 none Manufacturers of —
 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 — forgings and 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,
 THE NORTH EASTERN MARINE ENGINEERING CO. (1888) LTD: Manufacturer.
John Neill

Dates of Survey See Mchly Report Are the approved plans of boiler and superheater forwarded herewith Yes
 while building See Mchly Report (If not state date of approval.)
 Total No. of visits —

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Helene Kulukundis. Rpt No 96451

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, in accordance with the rules and approved plans, the materials and workmanship are good. On completion it was tested by water pressure to 350 lbs per square inch and found tight and satisfactory. It has been fitted on board in a satisfactory manner, tried under working conditions and found in order.

Survey Fee £ Charged on } When applied for, 19
 Travelling Expenses (if any) £ Machly Rpt } When received, 19

J. Selles
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 14 OCT 1938
 Assigned See minute re J.E. Mack.

