

REPORT ON BOILERS.

No. 20662

Received at London Office

DEC 21 1938

Date of writing Report 31. 10 38 When handed in at Local Office 15th DEC. 1938 Port of Greenock

No. in Survey held at Greenock Date, First Survey 16th MARCH 1938 Last Survey 13th DECEMBER 1938

on the M/S 'San Demetrio' (Number of Visits) Tons { Gross 8073 Net 4815

Master Built at Glasgow By whom built Polythwood Stokely Yard No. 52 When built 1938
Engines made at Greenock By whom made John & Richard & Co Engine No. 1118 When made 1938
Boilers made at ditto By whom made ditto Boiler No. 1118 When made 1938
Nominal Horse Power Owners Eagle Oil Shipping Co Ltd Port belonging to London

MULTITUBULAR BOILERS ~~M/T~~, AUXILIARY, ~~OR~~ DONKEY.

Manufacturers of Steel Colville & Co of Scotland (Letter for Record S)

Total Heating Surface of Boilers 3866 sq ft / 1938 Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 2 Single Ended Dry Back Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 24.6.38 No. of Certificate 2153 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 60 sq ft No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler { per Rule 14.14 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 2'-6" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 17'-3" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 12'-4" Length 11'-0" Shell plates: Material S Tensile strength 29.33

Thickness 1" Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR inter. DR }

long. seams TR+DBS Diameter of rivet holes in { circ. seams 1 1/32" long. seams 1 1/16" } Pitch of rivets 3"000"

Percentage of strength of circ. end seams { plate 64.5 rivets 46.8 } Percentage of strength of circ. intermediate seam { plate 85.25 rivets 88.6 }

Percentage of strength of longitudinal joint { plate 85.25 rivets 88.6 combined 88.2 } Working pressure of shell by Rules 182

Thickness of butt straps { outer 3/4" inner 7/8" } No. and Description of Furnaces in each Boiler 2 Motionless

Material S Tensile strength 26-30 Smallest outside diameter 3'-4"

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

Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 180

End plates in steam space: Material S Tensile strength 26-30 Thickness 1 3/8" Pitch of stays 22"

How are stays secured DN Washers Working pressure by Rules 219

Tube plates: Material { front S back S } Tensile strength 26-30 Thickness { front 15/16" back 15/16" }

Mean pitch of stay tubes in nests 8 6/8" Pitch across wide water spaces 1'-2 1/2" Working pressure { front 187 back 187 }

Girders to combustion chamber tops: Material Yes Tensile strength Yes Depth and thickness of girder Yes

at centre Yes Length as per Rule Yes Distance apart Yes No. and pitch of stays Yes

in each Yes Working pressure by Rules Yes Combustion chamber plates: Material Yes

Tensile strength Yes Thickness: Sides Yes Back Yes Top Yes Bottom Yes

Pitch of stays to ditto: Sides Yes Back Yes Top Yes Are stays fitted with nuts or riveted over Yes

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

Thickness 15/16" Lower back plate: Material S Tensile strength 26-30 Thickness 15/16"

Pitch of stays at wide water space 1'-2 1/2" Are stays fitted with nuts or riveted over Yes

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

Diameter { At body of stay 3 1/4" or over threads Yes } No. of threads per inch 6 Area supported by each stay 4840"

Working pressure by Rules 191 Screw stays: Material Yes Tensile strength Yes

Diameter { At turned off part Yes or over threads Yes } No. of threads per inch Yes Area supported by each stay Yes

Working pressure by Rules Are the stays drilled at the outer ends Margin stays: Diameter (At turned off part. or Over threads

No. of threads per inch Area supported by each stay Working pressure by Rules

Tubes: Material *S* External diameter *2 1/2"* Thickness *9 WG 3/8 5/16* No. of threads per inch *9*

Pitch of tubes *3 3/4" x 3 7/8"* Working pressure by Rules *209* Manhole compensation: Size of opening in shell plate *16" x 12"* Section of compensating ring *2-10 1/2, 2-6 1/2, 1 1/6"* No. of rivets and diameter of rivet holes *38 at 1 1/4"*

Outer row rivet pitch at ends *8* 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 rivets)

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

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 forgings 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

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,
 For JOHN G. KINGAID & CO. LIMITED.
[Signature] 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 ~~and superheater~~ forwarded herewith (If not state date of approval.) *Yes*

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.) *These boilers have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality & they have now been securely fitted on board. This Report accompanies that of the Machinery*

Survey Fee *Charged on Machinery* } When applied for, 19
 Travelling Expenses (if any) *2* } When received, 19

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 7.5.20*
 Assigned *See Fuel Entry Report*

LR-FAF-TB14-301

Rpt. 13.
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