

## REPORT ON BOILERS

No. 41784

Received at London Office

FRI. MAY 4 1923

Date of writing Report 24. 8. 1921 When handed in at Local Office 24. 8. 1921 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 14th Nov 1920 Last Survey 18th Aug 1921

Reg. Book. 76396 on the main boilers J 24. S.S. Vigor (Number of Visits 40.) Gross 6650 Tons Net 3539

Master Built at Spezia By whom built Cantieri Navali Bella Spiga When built 1923.

Engines made at Glasgow By whom made Inlet & Baster Ings 1008 When made 1922

Boilers made at Glasgow By whom made Stephen & Sons Boilers 127 When made 1921

Registered Horse Power Owners L.A. Columbia "S.A." Port belonging to Genoa

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Steel Co of Scotland

(Letter for record S) Total Heating Surface of Boilers 5679 sq ft Is forced draft fitted Yes No. and Description of 20-5-21

Boilers Three single ended multitubular Working Pressure 230 lbs Tested by hydraulic pressure to 460 lbs Date of test 1-6-21

No. of Certificate 15830 Can each boiler be worked separately Yes Area of fire grate in each boiler 45 sq ft No. and Description of 235 1/2 sq ft

safety valves to each boiler Two spring loaded Area of each valve 5.93 sq ft Pressure to which they are adjusted 235 1/2 lbs

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 13'-0" Length 11'-0"

Material of shell plates S Thickness 1 1/16" Range of tensile strength 29/32 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams L.D.R. long. seams T.R. 5/16" Diameter of rivet holes in long. seams 13/16" Pitch of rivets 9 1/2"

Top of plates or width of butt straps 20 1/8" Per centages of strength of longitudinal joint rivets 88.4 Working pressure of shell by rules 236

Size of manhole in shell 16" x 12" Size of compensating ring 34" x 29" x 1 1/4" No. and Description of Furnaces in each boiler 3 Corrugated Material Steel Outside diameter 39 1/2" Length of plain part top 19 1/2" Thickness of plates crown 19 1/32"

Description of longitudinal joint welded No. of strengthening rings none Working pressure of furnace by the rules 233 Combustion chamber plates: Material S Thickness: Sides 3/4" Back 1 1/16" Top 3/4" Bottom 3/4" Pitch of stays to ditto: Sides 10 1/2" x 8" Back 8 1/2" x 8 1/2"

Top 9 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads No Working pressure by rules 230 Material of stays S Area at smallest part 2'03" Area supported by each stay 84.2 Working pressure by rules 236 End plates in steam space: Material S Thickness 1 1/32"

Pitch of stays 17 1/8" x 16" How are stays secured D. nuts Working pressure by rules 231 Material of stays S Area at smallest part 6.65"

Area supported by each stay 281 Working pressure by rules 240 Material of Front plates at bottom S Thickness 7/8" Material of Lower back plate S Thickness 1 1/4" Greatest pitch of stays 14" x 8 1/2" Working pressure of plate by rules 233 Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4" x 3 1/16" Material of tube plates S Thickness: Front 7/8" Back 7/8" Mean pitch of stays 8 3/8" Pitch across wide water spaces 13 1/2" Working pressures by rules 260 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 3/4" x 1 3/4" Length as per rule 31 1/16" Distance apart 8 7/8" Number and pitch of Stays in each 2 @ 9 1/2"

Working pressure by rules 240 Steam dome: description of joint to shell % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

UPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

The foregoing is a correct description,

Manufacturer.

Dates During progress of (1920 Nov 4 Dec 8 17-21 27 (1921) Jan 12 15 25 28 Feb 7 11 17 21 Mar 3 8 14 22 30. Is the approved plan of work in shops - Apr 1 6 7 13 18 20 22 25 29 May 3 5 11 13 20 25 31 Jan 1 3 7 22 July 7 Aug 18.

while building During erection on board vessel - - -

Is the approved plan of work in shops -

Total No. of visits

40

Secretary

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &amp;c.)

At the shop test of the third boiler (Cert No 15885) the welds in both the wing furnaces were found leaking. The weld in the left hand furnace was made good by the electric arc & the right hand furnace was renewed: on completion the boiler was tested by water pressure to 460 lbs and found tight and satisfactory in all respects. These boilers have been built under special survey and in accordance with Rules, the materials and workmanship are sound and good. The boilers have been properly fitted in board & have proved satisfactory under steam.

Survey Fee

Travelling Expenses (if any)

When applied for,

19

When received,

19

Committee's Minute

Assigned Deferred

GLASGOW

14 MAR 1922

FRI. MAY. 4 1923

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation