

# REPORT ON BOILERS

No. 41784

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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 boiler J 24 S.S. Vigor (Number of Visits 40) Gross 6650 Tons Net 3539

Master Spezia Built at Spezia By whom built Carneri Navali Bella Spigia When built 1923

Engines made at Glasgow By whom made Inchic & Baxter Ings 1008 When made 1922

Boilers made at Glasgow By whom made Stephen Sons Boilers J 27 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 Stal Co of Scotland

(Letter for record S) Total Heating Surface of Boilers 5679 sq ft Is forced draft fitted Yes No. and Description of Boilers Three single ended multitubular Working Pressure 230 lbs Tested by hydraulic pressure to 460 lbs Date of test 20-5-21  
1-6-21  
8-8-21

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 safety valves to each boiler Two spring loaded Area of each valve 5.93 sq in Pressure to which they are adjusted 235 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 15 in dia. of boilers 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. 50 lbs Diameter of rivet holes in long. seams 13/16" Pitch of rivets 9 1/2"

Lap 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 Stal Outside diameter 39 1/2" Length of plain part                      Thickness of plates crown 19/32" bottom                     

Description of longitudinal joint weld 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 nuts 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 7/8" x 46" 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 1/4" 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 of Survey                      During progress of work in shops 19.20 Nov 4. Dec 8. 17. 21. 27 (1921) Jan 12. 15. 25. 28. Feb 7. 11. 17. 21. Mar 3. 8. 14. 22. 30. Apr 1. 6. 7. 13. 18. 20. 22. 25. 29 May 5. 11. 13. 20. 25. 31 Jan 1. 3. 7. 22 July 7 Aug 18. Is the approved plan                      FOR ALEXANDER STEPHEN & SONS, LIMITED.

while building                      During erection on board vessel                      Total No. of visits 40 M. W. D. M. D. Secretary

GENERAL REMARKS (State quality of workmanship, opinions as to class, &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                      £ Charged on Machine When applied for,                      19.                     

Travelling Expenses (if any)                      When received,                      19.                     

J. S. Sellar Engineer Surveyor to Lloyd's Register of Shipping. Alex. J. J. J. Genoa

Committee's Minute                      GLASGOW 14 MAR 1922

Assigned                      Deferred                      FRI. MAY. 4 1923

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