

REPORT ON MACHINERY.

MUN 17 APL 1899

Port of Genoa

Received at London Office 18

No. in Survey held at Sestri Ponente Date, first Survey 10.5.98 Last Survey 12 April 1899
 Reg. Book. on the Steel Sparth Screw Steamer "Venus" (Number of Visits 32) Tons { Gross 4051 Net 2641
 Master S. Crocconia Built at Sestri Ponente By whom built N. Odero fu A When built 1899
 Engines made at Sestri Ponente By whom made N. Odero fu A when made 1899
 Boilers made at Sestri Ponente By whom made N. Odero fu A when made 1899
 Registered Horse Power 480 282 Owners Soc. Com. Ital. di Nav. Port belonging to Genoa
 Nom. Horse Power as per Section 28 _____ Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Vertical Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 22 20, 36 1/2, 60 1/2 Length of Stroke 39 3/8 Revs. per minute 70 Dia. of Screw shaft 11 1/2 as per rule 11 1/2 as fitted 12 Lgth. of stern bush 48
 Dia. of Tunnel shaft 10 13/16 as per rule 10 13/16 as fitted 10 13/16 Dia. of Crank shaft journals 11 2/8 as per rule 11 2/8 as fitted 11 2/8 Dia. of Crank pin 11 13/16 Size of Crank webs 8 Dia. of thrust shaft under collars 11 3/8 Dia. of screw 11 5/8 Pitch of screw 14 5/8 No. of blades 4 State whether moveable No Total surface 96.80 sq feet
 No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 19 1/16 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 19 1/16 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Ballast: 5 1/16 x 8 1/4 x 9 1/16 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 Donkey: 7 1/16 x 5 1/2 x 6 3/16 Holds, &c. 2 in each hold, one port, one starboard
 Side Diameter 3 1/2
 No. of bilge injections 1 sizes 6 1/16 Connected to condenser, or to circulating pump Rec. Pump a separate donkey suction fitted in Engine room of size Yes-4
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks All cocks except Boiler Blow off
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the discharge pipes above or below the deep water line Above
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate Yes
 What pipes are carried through the bunkers None How are they protected _____
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges They are
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock On Stock Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door Yes worked from Main Deck

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 4856 sq ft Is forced draft fitted No
 No. and Description of Boilers 2 Return tubular Working Pressure 180 lb Tested by hydraulic pressure to 360 lb
 Date of test 5 and 11 Oct 1898 Can each boiler be worked separately Yes Area of fire grate in each boiler 77.4 sq ft and Description of safety valves to each boiler 2 Spring loaded in pairs of each valve 7.30 sq ft Pressure to which they are adjusted 182 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8 Mean dia. of boilers 13.10 3/4 Length 10.11 1/2 Material of shell plates Steel
 Thickness 1 1/4 Range of tensile strength 28-32 Are they welded or flanged Flang Descrip. of riveting: cir. seams Double and triple butt seams butts triple
 Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 10 outs row Lap of plates or width of butt straps 16 1/2
 Per centages of strength of longitudinal joint rivets 88.3 Working pressure of shell by rules 178.7 lb Size of manhole in shell None
 plate 86.3
 Size of compensating ring None No. and Description of Furnaces in each boiler 4 Plain Material Steel Outside diameter 2.11.13/16
 Length of plain part top 7.1.3/16 Thickness of plates crown 3/4 Description of longitudinal joint Double butt straps No. of strengthening rings None
 bottom 8.2 bottom 3/4
 Working pressure of furnace by the rules 180 lb Combustion chamber plates: Material Steel Thickness: Sides 12/20 Back 12/20 Top 12/20 Bottom 12/20
 Pitch of stays to ditto: Sides 6 1/2 x 7 1/4 Back 7 1/4 Top 6 1/2 x 7 1/4 If stays are fitted with nuts or riveted heads top rose nuts other riveted heads Working pressure by rules 179.7 lb
 Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 4.9 sq ft Working pressure by rules 184 lb End plates in steam space:
 Material Steel Thickness 18/20 Pitch of stays 15 3/8 x 15 3/8 How are stays secured Double nuts Working pressure by rules 184 lb Material of stays Steel
 Diameter at smallest part 2 1/2 Area supported by each stay 24.18 sq ft Working pressure by rules 182 lb Material of Front plates at bottom Steel
 Thickness 16/20 Material of Lower back plate Steel Thickness 16/20 Greatest pitch of stays 7 1/4 Working pressure of plate by rules 179.7 lb
 Diameter of tubes 3 1/2 Pitch of tubes 4.5/16 Material of tube plates Steel Thickness: Front 18/20 Back 16/20 Mean pitch of stays 7 1/4
 Pitch across wide water spaces 14.3/16 Working pressures by rules 272 lb Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 5.13/16 x 19/20 Length as per rule 2.5/8 Distance apart 7.3/4 Number and pitch of Stays in each 3-6 3/4
 Working pressure, by rules 182 lb Superheater or Steam chest, how connected to boiler? _____ Can the superheater be shut off and the boiler worked
 separately _____ Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet
 holes _____ Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____
 If stiffened with rings _____ Distance between rings _____ Working pressure by rules _____ End plates: Thickness _____ How stayed _____
 Working pressure of end plates _____ Area of safety valves to superheater _____ Are they fitted with easing gear _____

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DONKEY BOILER—		No.	Description		When made	Where fixed
Made at	By whom made					
Working pressure	tested by hydraulic pressure to	No. of Certificate	Fire grate area	Description of safety valves		
No. of safety valves	Area of each	Pressure to which they are adjusted	If fitted with easing gear	If steam from main boilers can enter the donkey boiler		
strength	Descrip. of riveting long seams	Dia. of donkey boiler	Length	Material of shell plates	Thickness	Range of tensile
Lap of plating	Per centage of strength of joint	Rivets Plates	Thickness of shell crown plates	Radius of do.	No. of Stays to do.	
Dia. of stays.	Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Diameter of uptake	Thickness of uptake plates	Thickness of water tubes			

SPARE GEAR for *Motor Boilers* One propeller & connecting rods bolts and nuts, 2 Main bearings, 9 Crankpins bolts, 2 feed, 2 Bidge, 2 air pumps valves, 2 Crank pin bearings, 1 set rubber valves for Circulatory pump, 1 1/2" boiler tubes, 2 1/2" glands, 1/2 set of fire bars, Spring for safety valves of boiler, cylinders and face pumps.

The foregoing is a correct description,
 Manufacturer. *J.P. O'Sullivan*

Dates	During progress of work in shops -	1898 Mar 10. 28 June 6. 14. 16. 29. July 2. 7. 18. 23. Aug 4. 9. 17. 28 Sept 6
of Survey	During erection on board vessel -	9. 19. 27. Milton Surveyor - 26 Oct 10. 15. 24. Nov 9. 18. Dec 21
while building	Total No. of visits	1899 Jan 5. 11. Feb 21. March 11. 17. 21. April 1. Landed - 12

Is the approved plan of main boiler forwarded herewith *Not*
 Retained for sister vessels
 donkey

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery and Boilers have been constructed under special survey the Material and the Workmanship are very good, and in my opinion eligible to have record of *L.M.C. 4.99* marked in the Key Book.

The Boilers have been submitted to an hydraulic pressure of 360 lb on the 5th and 11th of Oct 1898 with good results.

The safety valves have been adjusted under steam to float at 182 lb pressure.

Mr. Morrison visited me during the survey.

These Machinery and Boilers are perfectly equal to those of the *S/S "Jupiter"* or No 198 launched from Joe. Yard.

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 4.99.*

A.C.H.
S.S. 17.4.99.
 18.4.99

The amount of Entry Fee..	£ 2 : 0 :	When applied for,
Special	£ 24 : 0 :	15.4.18.99
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any) £	4 : 0 :	15.4.18.99

J. C. Whiffles
 For Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Marine Marine Engineer

Committee's Minute
 Assigned
 TUES. 18 APL 1899 MACHINERY DEPT. FRI. 12 MAY 1899 FRI. 2 JUN 1899
 + L.M.C. 4.99



This Office

Certificate (if required) to be sent to the Surveyors and placed in or below the space for Committee's Minute.