

REPORT ON MACHINERY.

Port of *Leghorn*

MON. JAN 14 1901

Received at London Office 18

No. in Survey held at *Leghorn*Date, first Survey *January 1900* Last Survey *January 1901*

Book.

(Number of Visits 80)

on the *S. S. Juno*Tons { Gross 4120.66
Net 2712.56

When built 1899-900-901

Master *Cremonini Lapione* Built at *Leghorn* By whom built *Polando Bros*Machinery made at *Leghorn* By whom made *ditto* when made *ditto*Boilers made at *ditto* By whom made *ditto* when made *ditto*Registered Horse Power *296.30* OwnersPort belonging to *Genoa*Horse Power as per Section 28 *296.30* 260Is Electric Light fitted *no*

FINES, &c.—Description of Engines *triple expansion* No. of Cylinders *3* No. of Cranks *3*

Diameter of Cylinders *22, 23, 37, 4, 5, 8, 1* Length of Stroke *39, 37* Revolutions per minute *90* Diameter of Screw shaft *as per rule 11 1/16*

Diameter of Tunnel shaft *as per rule 10 1/10* Diameter of Crank shaft journals *11 3/8* Diameter of Crank pin *11 1/8* Size of Crank webs *7 1/2 x 14 3/16*

Diameter of screw *16 9/16* Pitch of screw *15 1/2* No. of blades *4* State whether moveable *no* Total surface *78.60*

No. of Feed pumps *2* Diameter of ditto *3 5/16* Stroke *22 1/2* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* Diameter of ditto *3 5/16* Stroke *22 1/2* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *2* *Worthington* Sizes of Pumps *6 x 9 - 8 5/8 x 9* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *two 3 1/2* In Holds, &c. *No 1 two 3" No 2 two 3" No 3 two 3"*

No 4 one 3" tunnel well one 3"

No. of bilge injections *1* sizes *5"* Connected to condenser, *or to circulating pump* *yes* Is a separate donkey suction fitted in Engine room & size *yes 3"*

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 *valves*

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*

Are all pipes carried through the bunkers *yes* How are they protected *yes*

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 *yes*

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *before* Is the screw shaft tunnel watertight *yes*

Is it fitted with a watertight door *yes* worked from *upper main deck*

PLERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *5071 1/10* Is forced draft fitted *no*

and Description of Boilers *2 single ended cylindrical multitubular* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*

Date of test *17 May 00* Can each boiler be worked separately *yes* Area of fire grate in each boiler *77 1/2* No. and Description of safety valves to *4*

h boiler *two spring* Area of each valve *9 1/2* Pressure to which they are adjusted *180 lbs* Are they fitted

h easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *1' to bunker* Mean diameter of boilers *15 1/8*

Length *40'* Material of shell plates *steel* Thickness *1 1/4* Description of riveting: circum. seams *double & triple long* seams *quadruple*

Diameter of rivet holes in long. seams *1 3/8* Pitch of rivets *4, 7 1/2 - 9, 4 1/2 - 18, 90* Lap of plates or width of butt straps *inside 20"*

Percentages of strength of longitudinal joint *92.75* Working pressure of shell by rules *180 lbs* Size of manhole in shell *front 11 1/2 x 15"*

Size of compensating ring *4 3/4 x 29 1/2* No. and Description of Furnaces in each boiler *4 corrugate box* Material *steel* Outside diameter *3 1/4"*

Length of plain part *8 1/2"* Thickness of plates *1 1/2* Description of longitudinal joint *welded* No. of strengthening rings *—*

Working pressure of furnace by the rules *188.8* Combustion chamber plates: Material *steel* Thickness: Sides *1 1/2"* Back *1 1/2"* Top *1 1/2"* Bottom *1 1/2"*

Pitch of stays to ditto: Sides *7 x 7"* Back *6 1/2 x 6 1/2"* Top *7 x 7"* If stays are fitted with nuts or riveted heads *with nuts* Working pressure by rules *189 lbs*

Material of stays *steel* Diameter at smallest part *1 1/4* Area supported by each stay *44 3/4 - 49* Working pressure by rules *200 lbs* End plates in steam space:

Material *steel* Thickness *7/8* Pitch of stays *14 3/16 - 15"* How are stays secured *double nuts & washers* Working pressure by rules *191 lbs* Material of stays *steel*

Diameter at smallest part *2 3/16* Area supported by each stay *275"* Working pressure by rules *184 lbs* Material of Front plates at bottom *steel*

Thickness *13/16* Material of Lower back plate *steel* Thickness *2 3/16* Greatest pitch of stays *16 1/2"* Working pressure of plate by rules *182 lbs*

Diameter of tubes *3 1/4* Pitch of tubes *4 1/2"* Material of tube plates *steel* Thickness: Front *3 5/16* Back *3 5/16* Mean pitch of stays *8 1/2"*

Across wide water spaces *13 3/4* Working pressures by rules *268 lbs* Girders to Chamber tops: Material *cast-steel* Depth and

Weight of girder at centre *6 3/4 x 1 1/2* Length as per rule *23 1/2* Distance apart *7 3/16* Number and pitch of Stays in each *two 7 3/16*

Working pressure by rules *181 lbs* Superheater or Steam chest; how connected to boiler *yes* Can the superheater be shut off and the boiler worked

Stays *yes* Diameter *yes* Length *yes* Thickness of shell plates *yes* Material *yes* Description of longitudinal joint *yes* Diam. of rivet

Pitch of rivets *yes* Working pressure of shell by rules *yes* Diameter of flue *yes* Material of flue plates *yes* Thickness *yes*

Strengthened with rings *yes* Distance between rings *yes* Working pressure by rules *yes* End plates: Thickness *yes* How stayed *yes*

Working pressure of end plates *yes* Area of safety valves to superheater *yes* Are they fitted with easing gear *yes*

DONKEY BOILER— Description *Horizontal multibular*

Made at *Leghorn* By whom made *Orlando Bros* When made *16 Nov* Where fixed *on main deck*
 Working pressure *100 lbs* tested by hydraulic pressure to *200 lbs* No. of Certificate *31.1.01* Fire grate area *29' 0"* Description of safety valves *two spring*
 No. of safety valves *two* Area of each *5.28* Pressure to which they are adjusted *100 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes through the reduction valve* Diameter of donkey boiler *9' 2 1/2"* Length *9' 2 1/2"* Material of shell plates *steel* Thickness *5/8"*
 Description of riveting long. seams *double (double butt shops)* Diameter of rivet holes *7/8"* Whether punched or drilled *a* Pitch of rivets *3 3/8"*
 Lap of plating *3 5/8"* Per centage of strength of joint *85* Rivets *85* Thickness of shell crown plates *3/4"* Radius of do. *flat* No. of Stays to do. *14*
 Dia. of stays *1 1/16"* Diameter of furnace Top *31"* Bottom *24"* Length of furnace *6' 9"* Thickness of furnace plates *1/2"* Description of joint *welded - one strengthening ring* Thickness of furnace crown plates *3/4"* Stayed by *14* Working pressure of shell by rules *112 lbs*
 Working pressure of furnace by rules *177 lbs* Diameter of uptake *✓* Thickness of uptake plates *✓* Thickness of water tubes *✓*

SPARE GEAR. State the articles supplied:— *2 connecting rod top-end & 2 connecting rod bottom end bolts*
2 main bearing, 1 set of coupling bolts - 1 set of feed & bilge pump valves - 1 set of piston springs - assorted bolts & nuts & iron, 2 safety valve springs - 10 condenser tubes & 16 boiler tubes
2 air pump valves, 1 set connecting rod traps - 1 set cross-head traps & other sundries -
 The foregoing is a correct description,
J. H. Orlando Manufacturer.

Dates During progress of work in shops - *1899*
 of Survey while building During erection on board vessel - *1900*
 Total No. of visits

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

ENGINES—Length of stern-bush *4'* Diameter of crank shaft journals *as per rule 11 1/8"* Diameter of thrust shaft under collars *11 3/20"*
 BOILERS—Range of tensile strength *27-32* Are they welded or flanged *no* DONKEY BOILERS—No. *1* Range of tensile strength *27-32*
 Is the approved plan of main boiler forwarded herewith *yes* Is the approved plan of donkey boiler forwarded herewith *yes*

This vessel's machinery has been built under survey in accordance with the approved plan & the requirements of the rules.
The boilers & main steam pipes have been tested by hydraulic pressure to 350 lbs per square inch.
The engine & boilers were seen fitted on board after which the engines were seen running under steam & the safety valves were then adjusted to working pressure to 180 lbs per square inch with satisfactory results.
The vessel is therefore eligible in my opinion to be classed & to have the notation of + LMC 31/1/01 recorded in the Reg Book.

It is submitted that this vessel is eligible for THE RECORD + LMC. 1.01

The amount of Entry Fee... £ *2 : 0* : When applied for,
 Special ... £ *34 : 16* :
 Donkey Boiler Fee ... £ *2 : 2* : When received,
 Travelling Expenses (if any) £ : : *none*

Committee's Minute

Assigned

TUES. 5 FEB 1901

+ LMC. 1.01

31.1.01
30.1.01
Giovanni Parrini
Marine Engineer
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Amiraglio Garibaldi
Livorno

