

REPORT ON MACHINERY.

No. 5416

MON. AUG. 18. 1913

Received at London Office

Date of writing Report August 12th 1913 When handed in at Local Office Aug 14th 1913 Port of Genoa
No. in Survey held at Sestri Ponente & Pace Date, First Survey July 3rd 1912 Last Survey August 11th 1913
Reg. Book. on the Screw Steamer "Splendor" (Number of Visits 39)
Master C. Vaccarezza-12-13 Built at Pace By whom built H. Piro fu Aless & Co Tons Gross 6507.40 Net 4028.52
Engines made at Sestri Ponente By whom made H. Piro fu Aless & Co when made 1913
Boilers made at FE By whom made FE when made 1913
Registered Horse Power 393 Owners Societa' Stato Americana Port belonging to Genoa
Nom. Horse Power as per Section 28 393 ³⁹⁵ Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
Dia. of Cylinders 20 1/8, 29 1/2, 43 1/2, 61 1/4 Length of Stroke 45 1/2 Revs. per minute 75 Dia. of Screw shaft as per rule 13.70 Material of steel
20 1/8, 29 1/2, 43 1/2, 61 1/4 as fitted 13.74 screw shaft
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
in the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two
liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 64"
Dia. of Tunnel shaft as per rule 11.20 Dia. of Crank shaft journals as per rule 12.40 Dia. of Crank pin 13.38 Size of Crank webs 20 1/2 x 8 1/2 Dia. of thrust shaft under
collars 12.99 Dia. of screw 14 1/4 Pitch of Screw 14-0 1/2 No. of Blades 4 State whether moveable Yes Total surface 86.15 Brass
No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 22 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 22 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 3 Sizes of Pumps 8" x 8 1/2" x 12" No. and size of Suctions connected to both Bilge and Donkey pumps
{ In Engine Room 2 in Centre aft. 3 1/2". One port side for 3 1/2" In Holds, &c. For 2" deep tank top 2-2". One peak top 2-2". Chan-
one starboard side for 3 1/2" and one 2 1/2" to gutter way. } — Locker 2-2"
No. of Bilge Injections 1 size 4 1/8 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 5"
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 None
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
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 Yes
Dates of examination of completion of fitting of Sea Connections 19/4/13 of Stern Tube 19/4/13 Screw shaft and Propeller 19/4/13
Is the Screw Shaft Tunnel watertight Yes, End of the Is it fitted with a watertight door no worked from None

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Furnaces H. Piggott & Co. Plates John Spencer & Co
Total Heating Surface of Boilers 5682 1/2 Is Forced Draft fitted Yes No. and Description of Boilers 3 Horizontal Multitubular
Working Pressure 238 lbs Tested by hydraulic pressure to 460 lbs Date of test 23/1/13 No. of Certificate 102
Can each boiler be worked separately Yes Area of fire grate in each boiler 44.95 No. and Description of Safety Valves to
each boiler 2 Spring Area of each valve 14.180 Pressure to which they are adjusted 230 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15.48 Length 130" Material of shell plates steel
Thickness 1 1/2" Range of tensile strength 28-32 lbs Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
long. seams 4 rivets per pitch Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 14 1/2 Lap of plates or width of butt straps 2 1/8"
Per centages of strength of longitudinal joint rivets 91.5 Working pressure of shell by rules 238 lbs Size of manhole in shell 15 1/2 x 11 1/2"
Size of compensating ring 9 1/2" x 1" No. and Description of Furnaces in each boiler 3 Suspension Material steel Outside diameter 39.54"
Length of plain part top 10.25" Thickness of plates crown 1 1/16" Description of longitudinal joint welded No. of strengthening rings —
Working pressure of furnace by the rules 296 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1"
Pitch of stays to ditto: Sides 6.69 x 6.69 Back 6.69 x 6.69 Top 6.69 x 6.69 If stays are fitted with nuts or riveted heads welded heads Working pressure by rules 235
Material of stays steel Diameter at smallest part 1 1/8" Area supported by each stay 3 1/2 Working pressure by rules 230 End plates in steam space: 235
Material steel Thickness 1 1/16" Pitch of stays 15 1/2 x 14 1/4 How are stays secured 220 lbs Working pressure by rules 238 lbs Material of stays steel
Diameter at smallest part 2 1/2" Area supported by each stay 2 1/5 Working pressure by rules 238 Material of Front plates at bottom steel
Thickness 1 1/8" Material of Lower back plate steel Thickness 1 1/16" Greatest pitch of stays 12.95 Working pressure of plate by rules 290
Diameter of tubes 2 1/2" Pitch of tubes 3 1/8" Material of tube plates steel Thickness: Front 1 1/16" Back 1 1/16" Mean pitch of stays 4.24"
Pitch across wide water spaces 12.79 Working pressures by rules 228 Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 4.84 x 1.54 Length as per rule 23.62 Distance apart 4.64 Number and pitch of stays in each 2-16.69"
Working pressure by rules 336.5 Superheater or Steam chest; how connected to boiler None 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 —

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description					See separate Report									
Made at	By whom made					When made					Where fixed				
Working pressure		tested by hydraulic pressure to			Date of test		No. of Certificate		Fire grate area		Description of Safety				
Valves		No. of Safety Valves			Area of each		Pressure to which they are adjusted			Date of adjustment					
If fitted with easing gear		If steam from main boilers can enter the donkey boiler			Dia. of donkey boiler			Length							
Material of shell plates		Thickness			Range of tensile strength			Descrip. of riveting long. seams							
Dia. of rivet holes		Whether punched or drilled			Pitch of rivets			Lap of plating			Per centage of strength of joint				
Working pressure of shell by rules		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		Thickness of furnace crown plates			Radius of do.			Stayed by							
Diameter of uptake		Thickness of uptake plates			Thickness of water tubes			Dates of survey							

SPARE GEAR. State the articles supplied:— 2 Top end, and 2 bottom and bolts & nuts. 2 Main bearing bolts & nuts. one set of coupling bolts, a set of feed & helpe pump valves, a complete set of piston rings, a quantity of assorted bolts & nuts, and iron of various sizes. One $\frac{1}{4}$ length crankshaft, 1 Propeller shaft, 2 Propeller blades, studs & nuts for same. Pump link, air pump rod, air pump rod, valve spindle &c.

The foregoing is a correct description,

per N. ODERO & C.

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1912 July 3-4 Aug 23 Sept 5-13 Oct 1-14 26-28 Nov 4-18 24 Dec 5-10 19-1913 Jan 4-17 20-27 30
During erection on board vessel --- 1913 May 3-19 30 June 6-14 18-30 July 15-19 Aug 1-2 8-11
Total No. of visits 39

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 28/10/12 - 23/11/12 Slides 27/11/12 Covers 24/11/12 Pistons 24/11/12 Rods 6/11/12
Connecting rods 24/11/12 Crank shaft 31/11/12 Thrust shaft 31/11/12 Tunnel shafts 31/11/12 Screw shaft 31/11/12 Propeller 24/11/12
Stern tube 24/11/12 Steam pipes tested 18/6/13 Engine and boiler seatings 29/3/13 Engines holding down bolts 6/6/13.
Completion of pumping arrangements 2-8/13 Boilers fixed 2-8/13 Engines tried under steam 2-8/13
Main boiler safety valves adjusted 8-8/13 Thickness of adjusting washers A $\frac{1}{16}$ - $\frac{1}{8}$ F A $\frac{1}{16}$ - $\frac{1}{8}$ F A $\frac{1}{16}$ - $\frac{1}{8}$ F
Material of Crank shaft steel Identification Mark on Do. M.P. 31/12 Material of Thrust shaft steel Identification Mark on Do. 32
Material of Tunnel shafts steel Identification Marks on Do. 32 Material of Screw shafts steel Identification Marks on Do. 32
Material of Steam Pipes steel Test pressure 460 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. This vessel's machinery has been examined during construction, and the materials and workmanship are good & in accordance with the rules requirements & the approved plans & correspondence. The principal castings have been tested by hydraulic pressure, the boilers have been tested by water pressure as per rule, and the engines & boilers submitted to a steam trial with satisfactory results. The vessel is therefore eligible in my opinion to be classed + L.M.C. 8.13. as regards the machinery, in the R. Book. The plans of boilers, pumping arrangements, shafting & steel test certificates are enclosed.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8.13

F.D.

18.8.13.

Francis Peterson
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ 78.00
Special .. £ 1024.00
Donkey Boiler Fee .. £ 54.00
Travelling Expenses (if any) £ 35.00

Committee's Minute

Assigned

TUE. SEP. 2 - 1913

TUE. JAN. 13. 1914

+ L.M.C. 8.13

MACHINERY CERTIFICATE
WRITTEN



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Foundation