

Rpt. 4.

## REPORT ON MACHINERY.

No. 1134

Received at London Office

MUN. FEB. 13 1922

Date of writing Report 8. 2. 1922, When handed in at Local Office 8. 2. 1922 Port of GENOA  
No. in Survey held at GENOA & RNA TRIGOSO Date, First Survey 19. 9. 21 Last Survey 6. 2. 1922  
Reg. Book. on the S.S. "RAPALLO" (Number of Vents 14)  
Master Built at RNA Trigoso By whom built Società Esercizio Bacini Tons Gross 6464 Net 3944  
Engines made at RNA Trigoso By whom made Società Esercizio Bacini When built 1922  
Boilers made at do By whom made do when made 1921  
Registered Horse Power Owners do Port belonging to GENOA  
Nom. Horse Power as per Section 28 456 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 26" 42 1/2" 69 1/16" Length of Stroke 48 7/16" Revs. per minute 80 Dia. of Screw shaft as per rule 36 1/4" Material of screw shaft Steel  
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 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 1300 (there is an inner  
break 225 1/2 forward of stern bush of length 660 1/2)  
Dia. of Tunnel shaft as per rule 330 Dia. of Crank shaft journals as per rule 346.8 Dia. of Crank pin 350 Size of Crank webs 700x232 Dia. of thrust shaft under collars 350 Dia. of screw 5200 Pitch of Screw 5200 No. of Blades 4 State whether moveable Yes Total surface 10.4 sq. m.  
No. of Feed pumps 2 Diameter of ditto 114 Stroke 610 Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2 Diameter of ditto 114 Stroke 610 Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 8 Sizes of Pumps Ball: 260x280x300 No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 4-1/2" ; 2-1/2" Cyl. Cal. 200x170 Dry Bl. 150x100x150 Hlds. &c. Tanker  
200 Fuel: 165x165x300 Transfer: 150x150x150  
No. of Bilge Injections 1 sizes 180 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes—1 1/2"  
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 nil 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 14. 10. 20 of Stern Tube 12. 10. 20 Screw shaft and Propeller 14. 10. 20  
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 6608 #) Manufacturers of Steel Impaled by Cassio Costruttori Navali (see certificate)  
Total Heating Surface of Boilers 613.4 sq. m. Is Forced Draft fitted Yes No. and Description of Boilers 2—S.E. Marine  
Working Pressure 12.6 kg. cmq. Tested by hydraulic pressure to 25.3 kg. cmq. Date of Test 28. 5. 21 No. of Certificate None  
Can each boiler be worked separately Yes Area of fire grate in each boiler 6.12 sq. m. No. and Description of Safety Valves to  
each boiler 3 spring loaded Area of each valve 1/238 sq. m. Pressure to which they are adjusted 13 kg. cmq. Are they fitted with easing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork distant Mean dia. of boilers 5030 Length 3600 Material of shell plates S  
Thickness 32.5 Range of tensile strength 44.5/50 kg. cmq. Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.  
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 40 Pitch of rivets 424 Lap of plates or width of butt straps 604  
Per centages of strength of longitudinal joint rivets 90.3 plate 90.5 Working pressure of shell by rules 12.8 Size of manhole in shell 430x330  
Size of compensating ring 900x800x25 No. and Description of Furnaces in each boiler 3—Corrugated Material S Outside diameter 1318  
Length of plain part top Thickness of plates crown 17 Description of longitudinal joint weld No. of strengthening rings  
bottom Working pressure of furnace by the rules 13.2 Combustion chamber plates: Material S Thickness: Sides 17.5 Back 17.5 Top 17.5 Bottom 23  
Pitch of stays to ditto: Sides 200x165 Back 204x205 Top 190x222 If stays are fitted with nuts or riveted heads R. Heads Working pressure by rules 12  
Material of stays S Diameter at smallest part 1134 Area supported by each stay 41820 mm Working pressure by rules 16.4 End plates in steam space:  
Material S Thickness 25 Pitch of stays 445x445 How are stays secured D.N.C.R.W. Working pressure by rules 12.5 Material of stays S  
Diameter at smallest part 4418 Area supported by each stay 198025 mm Working pressure by rules 17 Material of Front plates at bottom S  
Thickness 22 Material of Lower back plate S Thickness 21 +17.5 double Greatest pitch of stays 360x204 Working pressure of plate by rules 21  
Diameter of tubes 76 Pitch of tubes 105x105 Material of tube plates S Thickness: Front 25 Back 22 Mean pitch of stays 210x210  
Pitch across wide water spaces 350 Working pressures by rules 13.2 Girders to Chamber tops: Material S Depth and  
thickness of girder at centre 215x25 (double) length as per rule 780 Distance apart 222 Number and pitch of stays in each 3-190  
Working pressure by rules 18.5 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked  
separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet  
holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness  
If stiffened 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

If not, state whether, and when, one will be sent.

Is a Report also sent on the Hull of the Ship?

Im. 212. T.



# VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description				
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 casing 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	Rivets Plates
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 bolts & nuts; 2 bottom end bolts & nuts; 1 set coupling bolts for both crank & tail shaft; 2 main bearing bolts & nuts; 1 set feed & bilge pump valves; 1 set H.P. & M.P. piston rings; 1 set L.P. piston rings & springs; 2 safety valve springs; 1 set bilge pump valves; 1 set pump ring bolts for each piston; set escape valve springs; 2 air pump valves; 6 cylinder & 6 valve chest cover studs; anastis bolts & nuts; union of various sizes, boiler and condenser tubes.

The foregoing is a correct description,

Fug. Ferdinand Rottig Manufacturer.

Dates of Survey while building	During progress of work in shops - -	19 Sept 12, 14 Oct 3, 23 Nov. 4, 12, 13, 16, 20, 29 Dec 1921. 12 Jan. 6 Feb. 1922.
	During erection on board vessel - - -	
	Total No. of visits	

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	12.12.21	Slides	7.12.21	Covers	7.12.21	Pistons	12.12.21	Rods	13.12.21
Connecting rods	13.12.21	Crank shaft	16.12.21	Thrust shaft	16.12.21	Tunnel shafts	✓	Screw shaft	17.10.21
Stern tube	12.10.21	Steam pipes tested by R.N.I.	Engine and boiler seatings	19.9.21	Engines holding down bolts	19.9.21			
Completion of pumping arrangements	20.12.21	Boilers fixed	19.9.21	Engines tried under steam	29.12.21				
Main boiler safety valves adjusted	20.12.21	Thickness of adjusting washers	Pat 25 30 28						
Material of Crank shaft	Steel	Identification Mark on Do.	LLOYD'S NO 216 PTB 16121	Material of Thrust shaft	Steel	Identification Mark on Do.	LLOYD'S NO 216 PTB 16121		
Material of Tunnel shafts	✓	Identification Marks on Do.		Material of Screw shafts	Steel	Identification Marks on Do.	LLOYD'S NO 216 PTB 12.11		
Material of Steam Pipes	Steel	Test pressure	35 kg cmq.						

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

OIL FUEL BURNING FITTED FOR OIL ABOVE 150° F FLASH POINT.

SECTION 49 OF RULES COMPLIED WITH. MACHINERY & BOILERS DUPLICATE OF SS. "RECCO" ✓

The materials used in the construction of the machinery and boilers of this vessel were tested by the R.N.I. (see Certificate herewith). The boilers and machinery were completed and being fitted aboard before the question of classing with this Society was taken up. The work up till this point had been done under R.N.I. Survey. For particulars see correspondence. All boilers and their mountings have been opened out, examined and seatings checked. They are as shown on approved plans and are of good workmanship and in good order. The main engines were opened out and examined and found in good order. The workmanship throughout is good. All shafting examined, found in good order and marked as above. The pumping arrangement checked and found in order. The safety valves tested and adjusted under steam. The main engines & aux. engines tested under working conditions with satisfactory results. All Rule Requirements and amendments carried out.

The amount of Entry Fee	£ 5-0-0	When applied for	8.2.22
Special	£ 93-8-0	When received	27/3/22
Donkey Boiler Fee	£ 4-4-0		
Travelling Expenses (if any)	£ 3-0-0		

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

Committee's Minute

Assigned

L.N.B. 2.22 F.D. C.L.

Tested for oil fuel 2.22  
F.P. above 150° F.



Lloyd's Register Foundation