

Rpt. 4.

REPORT ON MACHINERY.

No. 1134

Received at London Office

MUN. FEB. 13 1922

Date of writing Report 8. 2. 22, When handed in at Local Office 8. 2. 22 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 Riva Trigoso By whom built Società Esercizio Bacini When built 1922
Engines made at Riva Trigoso By whom made Società Esercizio Bacini when made 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 1220 Revs. per minute 80 Dia. of Screw shaft as per rule 36 1/4" Material of screw shaft Steel
as fitted 385

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 Yes

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 1300 (there is an inner bush 225" forward of stern bush of length 60")

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"; 2-1/2"; 2-1/2"; 2-1/2"; 2-1/2"; 2-1/2"; 2-1/2"

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 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

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 Yes

BOILERS, &c.—(Letter for record S. 6608 #) Manufacturers of Steel Impaled by Casario 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. mm² 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

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 mm² 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 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 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

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 boiler crank & tail shaft; 2 main bearing bolts & nuts; 1 set feed & bridge pump valves; 1 set H.P. & M.P. piston rings; 1 set L.P. piston rings & springs; 2 safety valve springs; 1 set waste pump valves; 1 set gauge ring bolts for each piston; 1 set escape valve springs; 2 air pump valves; 6 cylinder & 6 valve chest cover studs; 1 set of various sizes, boiler and condenser tubes.*

The foregoing is a correct description,
Jug. Fernando Pottig Manufacturer.

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

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* Propeller *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 16.12.21* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S NO. 216 PTB 12.11*
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *Steel* Identification Marks on Do. _____
 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* = *£104.00*
 Donkey Boiler Fee £ *4-4-0* When received *27/3/22*
 Travelling Expenses (if any) *£300*
 This machinery is, in my opinion, suitable for classification with record L.M.C. 2, 22.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
P. H. Man

Committee's Minute *TUE. FEB. 26 1922*
 Assigned *L.M.C. 2, 22 F.D. C.L.*
Tested for oil fuel 2.22 S.P. above 150° F.
 Lloyd's Register Foundation

Certificate (if registered) to be sent to Committee's Minute.

