

REPORT ON MACHINERY

No. 70374

MON OCT. 22 1917

Received at London Office

Date of writing Report 15th Oct 1917 When handed in at Local Office 15th Oct 1917 Port of Newcastle on Tyne

No. in Survey held at Jarrow & Hebburn Date, First Survey 7 Aug 1914 Last Survey 10 Oct 1917

Reg. Book. 367 on the S.S. San Gennaro

Registered Horse Power Built at Newcastle By whom built Palmers & Co Ltd When built 1916

Machinery made at Jarrow By whom made Palmers & Co Ltd when made 1917

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Registered Horse Power Owners Soc de Nav a Vap. Linea Americana Port belonging to Naples

Horse Power as per Section 28 1826 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Engines, &c.—Description of Engines Twin Screw Quadruple No. of Cylinders Eight No. of Cranks 8

No. of Cylinders 28 1/2, 40, 57 & 80 Length of Stroke 51 Revs. per minute 95 Dia. of Screw shaft as per rule 16 1/2 Material of screw shaft as fitted 16 3/4 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

Is 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 If two

shafts are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5-7"

Dia. of Tunnel shaft as per rule 14 8/16 Dia. of Crank shaft journals as per rule 15 6/16 Dia. of Crank pin 16 1/4 Size of Crank webs 22 3/4 Dia. of thrust shaft under

cranks 16 1/4 Dia. of screw 19-12 Pitch of Screw 19-5 No. of Blades 4 State whether moveable Yes Total surface 98 sq ft each

No. of Feed pumps 2 Diameter of ditto 4 Stroke 30 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 30 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 9 x 11 x 10 duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2 No 3 1/2 In Holds, &c. 2 No 3 1/2 in No 1, 2 & 3 holds

No. of Bilge Injections 2 sizes 1 1/4 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

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 below

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 pipes to forward holds How are they protected Hood boxing

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

Time of examination of completion of fitting of Sea Connections 20/9/15 of Stern Tube 22/10/15 Screw shaft and Propeller 22 10 15

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine room top platform

Suppliers, &c.—(Letter for record S) Manufacturers of Steel J. & S. Stephensons & Sons & Palmers & Co Ltd

Total Heating Surface of Boilers 29604 Is Forced Draft fitted Yes No. and Description of Boilers 1/2 Single Ended

Working Pressure 220 lb per sq in Tested by hydraulic pressure to 440 lb Date of test 8/4/15, 12/2/15 No. of Certificates 5776, 8812, 8819

Can each boiler be worked separately Yes Area of fire grate in each boiler 64.6 sq ft No. and Description of Safety Valves to

each boiler 2 No, direct spring Area of each valve 8.290 Pressure to which they are adjusted 225 lb per sq in Are they fitted with easing gear Yes

Least distance between boilers or uptakes and bunkers or woodwork 18" Inside diam. of boilers 15-3 Length 12-0 Material of shell plates Steel

Thickness 1 7/32 Range of tensile strength 32 to 35 1/2 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap

No. of seams 5 rivets Diameter of rivet holes in long. seams 1 5/8 Pitch of rivets 10 1/2 Top of plates or width of butt straps 24"

Percentage of strength of longitudinal joint rivets 96.0 Working pressure of shell by rules 260 lb Size of manhole in shell 16 x 12"

No. of compensating ring 3 No. and Description of Furnaces in each boiler 3, Brighton Material Steel Outside diameter 48 1/2"

Length of plain part top 33 3/32 Thickness of plates crown 33 3/32 Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 246 Combustion chamber plates; Material Steel Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 1/8"

No. of stays to ditto: Sides 9 x 7/8 Back 8 1/4 x 8/8 Top 9 x 7/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 229

Material of stays Steel Diameter at smallest part 2.360 Area supported by each stay 710 Working pressure by rules 295 End plates in steam space:

Material Steel Thickness 1 3/8 Pitch of stays 22 1/4 x 17 How are stays secured Double nuts Working pressure by rules 222 Material of stays Steel

Diameter at smallest part 9.8 Area supported by each stay 4050 Working pressure by rules 255 Material of Front plates at bottom Steel

Thickness 1/16 Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 14" Working pressure of plate by rules 250

Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 Material of tube plates Steel Thickness: Front 1 1/16 Back 25/32 Mean pitch of stays 9 3/8"

Distance across wide water spaces 14" Working pressures by rules 221 lb Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10 x 1 3/4 Length as per rule 34 1/2 Distance apart 9" Number and pitch of stays in each 3, 7 7/8"

Working pressure by rules 225 lb 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

plates 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

7010-8701M

Lloyd's Register Foundation

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top & two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & ledge pump valves, assorted bolts & nuts and a few bars of iron, One propeller shaft, 2 propeller boxes and 4 blades, 1 pair connecting rod bottom end bushes, 1 pair crosshead bushes, 1/2 set springs for relief valves & Kavis pumps, one air pump rod & bucket, one head valve & set of guards, 72 boiler tubes, 2 check valves, 1 safety valve springs etc.

The foregoing is a correct description,
Palmer's Shipbuilding & Iron Co., Ltd.

J. Kemp
Manager, *Palmer's Shipbuilding & Iron Co., Ltd.* Manufacturer.

Dates of Survey while building	During progress of work in shops --	1914 Aug. 7-13-21-31. Sep. 2-7-9-11-17-18-23-24-30 Oct. 2-5-13-15-16-20-21-22-28-29-30 Nov. 2-6-12-18-19-26.
	During erection on board vessel --	Jan. 9-11-14-15. 1915 Jan. 5-13-14-26-29 Feb. 3-12-19-26 Mar. 3-16-18 Apr. 1-8-15 May 4-31 Aug 24
	Total No. of visits	Jan. 2-20-24-28 Oct. 4-8-12-22-25 Nov. 2-4-9-17 Dec. 6-15 1916 Jan. 21 Feb. 25 Apr. 6 May 12-16-24

Is the approved plan of main boiler forwarded herewith? *Yes*

Dates of Examination of principal parts—Cylinders *13/1/15* Slides *19/2/15* Covers *29/1/15* Pistons *29/1/15* Rods *19/2/15*
 Connecting rods *3/3/15* Crank shaft *8/9/15* Thrust shaft *13/1/15* Tunnel shafts *19/2/15* Screw shaft *2/3/15* Propeller *3/3/15*
 Stern tubes *6/2/15* Steam pipes tested *16/5, 22/8, 14/9/17* Engine and boiler seatings *4/5/15* Engines holding down bolts *19/6/17*
 Completion of pumping arrangements *18/9/17* Boilers fixed *6/9/17* Engines tried under steam *11/9/17*
 Main boiler safety valves adjusted *6 and 9/11/17* Thickness of adjusting washers *see below*

Material of Crank shaft *Steel* Identification Mark on Do. *TF 9.15* Material of Thrust shaft *Steel* Identification Mark on Do. *TF 1.15*
 Material of Tunnel shaft *Steel* Identification Marks on Do. *TF 2.15* Material of Screw shaft *Steel* Identification Marks on Do. *TF 3.15*
 Material of Steam Pipes *Steel & Copper* Test pressure *Steel 66 lbs Copper 44 lbs*

Is an installation fitted for burning oil fuel? *No* Is the flash point of the oil to be used over 150°F?

Have the requirements of Section 49 of the Rules been complied with?

Is this machinery duplicate of a previous case? *No* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, & thickness of safety valve rings)
For Boiler room. for P.B. 3/8" x 1/32 L.P.B. 10/32" x 1/32 S.P.B. { P.B. 3/8" x 1/32 L.B. 15/32" x 1/32 S.B. 7/16" x 1/16" } After forward tubes
After do do P.B. 15/32" x 7/16" L.B. 7/16" x 7/16" S.B. 7/16" x 7/16" P.B. 7/16" x 1/32, C.B. 1/8" x 1/32" x 7/16" S.B. 15/32" x 1/2"

The machinery of this vessel has been built under special survey the materials and workmanship are of good quality, it has been securely fitted on board and satisfactorily tested under steam.

In our opinion the machinery of this vessel is now eligible for record of L.M.C (marked) 10-17 in the register book

Boilers plan, 11 forging & castings reports, one expansion report, 7 certificates for steam & other pipes and the invoices of boiler plates now forwarded.

It is submitted that this vessel is eligible to THE RECORD. + L.M.C. 10.17. F.D.

The amount of Entry Fee	£ 3 : 0	When applied for,	18 OCT 1917
Special	£ 90 : 13	When received,	23.10.1917
Donkey Boiler Fee	£ 5		
Travelling Expenses (if any)	£ 5		

George Murdoch & Thomas Field
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned *+ L.M.C. 10.17*



MACHINERY CERTIFICATE WRITTEN 24/10/17