

Rpt. 4.

REPORT ON MACHINERY

No. 70374

MON OCT 22 1917

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 (Number of Visits 142)

Built at Newcastle By whom built Palmers & Co Ltd Tons Gross Not When built 1916

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

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

Registered Horse Power Owners Soc de Nav a Vap. Santa 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

MACHINES, &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 3/4 Material of 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

Shafts 16 1/4 Dia. of screw 19 1/2 Pitch of Screw 19 5/8 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 3 1/2" But room 3 1/2" In Holds, &c. 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 4 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 Yes

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

Dates 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

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel J. & W. Brown & Co. & Palmers & Co. Ltd

Total Heating Surface of Boilers 29604 Is Forced Draft fitted Yes No. and Description of Boilers 12 Single Ended

Working Pressure 220 lb per sq in Tested by hydraulic pressure to 440 lb Date of test 8/4/15, 25/10/15 No. of Certificates 8739, 8758, 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

Boilers 2, 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" diam. of boilers 15 3/8 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

Seams 5 rivets Diameter of rivet holes in long. seams 1 7/8 Pitch of rivets 10 1/2 Top of plates or width of butt straps 24"

Percentages 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 32 3/32 Thickness of plates crown 32 3/32 Description of longitudinal joint Welded No. of strengthening rings 1

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 21.0 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 Nuts Working pressure by rules 222 Material of stays Steel

Area at smallest part 9.8 Area supported by each stay 4.05 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"

Pitch 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, 7/8"

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

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

© 2021

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top & two bottom end bolth & nuts, two main bearing bolth & nuts, one set of coupling bolth & nuts, one set of feed & ledge pump valves, assorted bolth & nuts and a few bars of iron, One propeller shaft, 2 propeller bosses and 4 blades, 1 pair connecting rod bottom end bushes, 1 pair crosshead bushes, 1 set of springs for relief valves & Harris 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. K. M. J. B.

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. 8. 13. 15. 16. 20. 21. 22. 28. 29. 30 Nov. 2. 6. 12. 18. 19. 26.
During erection on board vessel -- Jan. 5. 13. 14. 26. 29 Feb. 5. 12. 19. 26 Mar. 3. 16. 18. Apr. 1. 8. 15 May 4. 31 Aug 24.
Total No. of visits 142

Is the approved plan of main boiler forwarded herewith? Yes

" " " donkey " " "

None

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 23/3/15

Stern tubes 6/2/15 Steam pipes tested 16/8, 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 15/32 & 7/16 2 1/2 lb. pressure

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 660 lb. Copper 440 lb. per sq. in.

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? Yes

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" & 1/32" L.P.B. 1/32" & 1/32" S.P.B. { P.B. 3/8" & 1/32" L.B. 1/32" & 1/32" S.B. 1/8" & 1/16" After forward tubes

After do do P.B. 1/32" & 1/16" L.B. 1/16" & 1/16" S.B. 1/16" & 1/16" P.B. 1/16" & 1/32" L.B. 1/32" & 1/16" S.B. 1/32" & 1/2" After boiler

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. (in red) 10-17 in the register book

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

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10. 17. F.D.

The amount of Entry Fee ... £ 3 : 0 : When applied for, 13 OCT 1917

Special ... £ 90 : 13 : When received, 23.10.1917

Donkey Boiler Fee ... £ 5 : 0 : 25.10.17

Travelling Expenses (if any) £ 5 : 0 : 25.10.17

Committee's Minute FRI. OCT. 26 1917

Assigned + L.M.C. 10. 17

George Murdoch & Thomas Field

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

MACHINERY CERTIFICATE WRITTEN 24/10/17

© 2021 Lloyd's Register Foundation