

REPORT ON MACHINERY.

No. 22661

JUL 1 1910

Date of writing Report 30.6.10 When handed in at Local Office 30.6.10 Port of Hull Received at London Office

No. in Survey held at Reg. Book. 324 on the S.S. ARISTO row. Luis Vives Date, First Survey June 9th Last Survey 30th June 1910 (Number of Visits 11)

Master Built at Hull By whom built Carlos & Co (Ld) Engines made at Hull By whom made Carlos & Co Boilers made at West Hartlepool By whom made Central Marine Eng Works when made 1890. Tons { Gross 1394 Net 1513 When built 1890. Registered Horse Power 389 Owners P. de Sres La Roda Hermann de Valencia when made 1905. Nom. Horse Power as per Section 28 389 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3 Dia. of Cylinders 30-46-75 Length of Stroke 45 Revs. per minute 1323 Dia. of Screw shaft as per rule 13.23 as fitted 13.25 Material of screw shaft Is the screw shaft fitted with a continuous liner the whole length of the stern tube No. Is the after end of the liner made water tight in the propeller boss No. If the liner is in more than one length are the joints burned No. Is the after end of the liner made water tight between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No. If two liners are fitted, is the shaft lapped or protected between the liners No. Length of stern bush 52 Dia. of Tunnel shaft as per rule 12.28 as fitted 13 Dia. of Crank shaft journals as per rule 13.23 as fitted 13.5 Dia. of Crank pin 13.2 Size of Crank webs 8 1/2 x 9 Dia. of thrust shaft under collars 13 Dia. of screw 16-0 Pitch of Screw 19-6 No. of Blades 4 State whether moveable No Total surface No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 29 Can one be overhauled while the other is at work Yes No. of Bilge pumps 2 Diameter of ditto 5 Stroke 29 Can one be overhauled while the other is at work Yes No. of Donkey Engines 3 Sizes of Pumps 6x17-9x6x15-6 1/2x14 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps Engine Room 1-3' 6" bilge 3 Bilge room (2-2 1/2' and 1-3' cent) Holds, &c. 5. (Main hold 2-2 1/2' and 1-3' cent) 2-7' fore hold, 1-3' after hold) of Bilge Injections 1 sizes 7 3/4 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 3 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 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 No 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 at pipes are carried through the bunkers None How are they protected all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller e Screw Shaft Tunnel watertight Is it fitted with a watertight door Yes worked from Top platform

CLERS, &c.—(Letter for record 5) Manufacturers of Steel James Cannell & Co Heating Surface of Boilers 6012 1/2 Is Forced Draft fitted No No. and Description of Boilers 3-SE Multitubular Working Pressure 160 Tested by hydraulic pressure to Date of test No. of Certificate each boiler be worked separately Yes Area of fire grate in each boiler 61 1/2 No. and Description of Safety Valves to boiler 2 Spring loaded Area of each valve 7.06 Pressure to which they are adjusted 16.5 lbs Are they fitted with easing gear Yes Distance between boilers or uptakes and bunkers or woodwork 1 1/2 Mean dia. of boilers 15-0 Length 10-3 Material of shell plates Steel Range of tensile strength 29-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams SA Rip. Diameters 2 1/2 S.S. rivets Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 8 7/8 Lap of plates or width of butt straps 18 1/2 Stages of strength of longitudinal joint rivets 98.7 Working pressure of shell by rules 189 Size of manhole in shell 16 5/8 x 12 compensating ring 40 x 30 x 1 3/8 No. and Description of Furnaces in each boiler 3 Corrugated Material Steel Outside diameter 21 1/2 of plain part top Thickness of plates crown 3 1/2 Description of longitudinal joint welded No. of strengthening rings 3 pressure of furnace by the rules 219 Combustion chamber plates: Material Steel Thickness: Sides 5 Back 5 Top 5 Bottom 5 stays to ditto: Sides 8 3/4 x 8 3/4 Back 8 x 9 Top 8 3/4 x 8 3/4 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 186 of stays Steel Diameter at smallest part 1 3/4 = 2 1/4 Area supported by each stay 72 Working pressure by rules 84 End plates in steam space: Steel Thickness 1 5/8 Pitch of stays 18 x 20 1/2 How are stays secured Stanchions Working pressure by rules 219 Material of stays Steel at smallest part 7-22 Area supported by each stay 369 Working pressure by rules 203 Material of Front plates at bottom Steel 15-76 Material of Lower back plate Steel Thickness 1 5/8 Greatest pitch of stays 13 1/2 x 9 Working pressure of plate by rules 231 of tubes 3 Pitch of tubes 4 5/8 Material of tube plates Steel Thickness: Front 1 5/8 Back 7 Mean pitch of stays 8 1/2 cross wide water spaces 13 1/2 Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and of girder at centre 8 1/2 x 1 1/2 Length as per rule 21 1/2 Distance apart 8 1/2 Number and pitch of stays in each 30 8 1/2 pressure by rules 173 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked 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 How stayed with rings Distance between rings Working pressure by rules End plates: Thickness How stayed pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

HUL 426-0121

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 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 _____ 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:— *Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, twelve coupling bolts and nuts, air feed and bilge pump valves, screw shaft, propeller, and a quantity of assorted bolts nuts etc.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - }
Total No. of visits _____

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders _____ Slides _____ Covers _____ Pistons _____ Rods _____

Connecting rods _____ Crank shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____

Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material of Crank shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & fittings of this vessel are now in good order & safe working condition and are respect fully submitted as eligible in our opinion to be classed with vessel of L.M.C. 6-10 in the Register Book.*

The amount of Entry Fee .. £ 3 : : When applied for, 30/6/1910

Special .. £ See other Report

Donkey Boiler Fee .. £ : : When received, 2/7/1910

Travelling Expenses (if any) £ : : .. 1910

Committee's Minute

FRI. 1 JUL 1910

TUES. 5 JUL 1910

Assigned

see minute on this Rpt

2266 attached

Lloyd's Register Foundation