

REPORT ON MACHINERY.

No. 5587

Received at London Office

TUE MAY 25 1920

Date of writing Report 18-5-20 When handed in at Local Office 18-5-20 Port of Bilbao

No. in Survey held at Bilbao Date, First Survey 21 June 1919 Last Survey 14 May 1920 (Number of Visits 43)

Reg. Book. on the SINGLE SCREW STEAMER "GUERNICA" Tons Gross 3660.43 Net 2437.02

Master AVELINO QUEVEDO Built at Bilbao By whom built SOC. ANO. ASTILLEROS DEL NERVIÓN When built 1920

Engines made at Bilbao By whom made SOC. ANO. ASTILLEROS DEL NERVIÓN when made 1920

Boilers made at Bilbao By whom made do do when made 1920

Registered Horse Power Owners CIA. AUXILIAR MARITIMA Port belonging to SAN SEBASTIAN

Horse Power as per Section 28 352 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

of Cylinders 24" x 40" x 65" Length of Stroke 45 Revs. per minute 65 Dia. of Screw shaft as per rule 13 1/4 13 5/8 Material of screw shaft as fitted 13 1/2 (S.M. iron 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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 6'

Dia. of Tunnel shaft as per rule 11 7/8 12 0/8 Dia. of Crank shaft journals as per rule 12 1/2 12 6/8 Dia. of Crank pin 13 3/4 Size of Crank webs 23 1/2 x 8 Dia. of thrust shaft under

of Feed pumps 2 Diameter of ditto 4 1/8 Stroke 24 Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 4 1/8 Stroke 24 Can one be overhauled while the other is at work yes

of Donkey Engines Two duplex Sizes of Pumps 13" x 10" & 5" x 3 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two (2) of 3 1/2" and one to donkey pump In Holds, &c. Two (2) in each of No 1, 2, 3 and 4 holds

of Bilge Injections one size 6" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 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 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

How are they protected none

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

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

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel ALTOS HORNOS DE VIZCAYA & SAN FRANCISCO

Total Heating Surface of Boilers 6000 sq ft Is Forced Draft fitted no No. and Description of Boilers 3 single ended

Working Pressure 180 lbs sq in Tested by hydraulic pressure to 360 lbs sq in Date of test 26-3-20 No. of Certificate 55

Can each boiler be worked separately yes Area of fire grate in each boiler 58 sq ft No. and Description of Safety Valves to

each boiler 2 direct spring Area of each valve 2 3/4" Pressure to which they are adjusted 180 lbs sq in Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 4.116 ft Length 3.353 ft Material of shell plates steel

Thickness 3/8" Range of tensile strength 28/32 Are the shell plates welded or flanged none Descrip. of riveting: cir. seams 2 Rows

of rivets 3 R.D.R.S Diameter of rivet holes in long. seams 30% Pitch of rivets 187% Lap of plates or width of butt straps 406%

Percentage of strength of longitudinal joint rivets 87.6% plate 85% Working pressure of shell by rules 181 lbs sq in Size of manhole in shell 305 x 406%

Material of compensating ring 130 x 28 No. and Description of Furnaces in each boiler 3 corrugated Material steel Outside diameter 1.106%

Length of main part top 22.57 Thickness of plates crown 14% Description of longitudinal joint welded No. of strengthening rings 1

Working pressure of furnace by the rules 196 lbs sq in Combustion chamber plates: Material steel Thickness: Sides 16% Back 16% Top 16% Bottom 17.5%

Pitch of stays to ditto: Sides 200 x 220 Back 204 x 200 Top 200 x 175 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 192 lbs sq in

Material of stays steel Area at smallest part 1.73 Area supported by each stay 7.0 sq ft Working pressure by rules 220 End plates in steam space:

Material steel Thickness 2.9 Pitch of stays 435 x 450 How are stays secured NUTS & WASH Working pressure by rules 202 lbs sq in Material of stays steel

Area at smallest part 6.1 Area supported by each stay 3.15 Working pressure by rules 200 Material of Front plates at bottom steel

Thickness 3.4 Material of Lower back plate steel Thickness 23.5 Greatest pitch of stays 204 x 200 Working pressure of plate by rules 248 lbs sq in

Diameter of tubes 76% Pitch of tubes 104 x 104% Material of tube plates steel Thickness: Front 20% Back 20 Mean pitch of stays 208 x 208%

Pitch across wide water spaces 350 Working pressures by rules 214 lbs sq in Girders to Chamber tops: Material steel Depth and

Thickness of girder at centre 180 x 2 of 18 Length as per rule 736 Distance apart 175 Number and pitch of stays in each 2 @ 200

Working pressure by rules 195 lbs sq in Steam dome: description of joint to shell % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Is Easing Gear fitted

Pressure to which each is adjusted

DATE OF TEST

Diameter of Safety Valve

54

2019

Lloyd's Register

Foundation

W 497-0010

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

Rpt. 13.

SPARE GEAR. State the articles supplied:— Two top end bolts. Two bottom end bolts. Two main bearing bolts. one set of coupling bolts, one set of feed pump valves one set of lidge pump valves one escape valve spring and a quantity of assorted bolts and nuts and iron of various sizes

The foregoing is a correct description,

Cintacort

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 JUNE 21 JULY 19, 22 NOV 6, 10, 13, 27 DICE 2, 4, 11, 13, 19 1920 JANV. 5, 14, 21, 23, 24, 28 FEBRU. 12, 18, 23, 28 MARCH 2, 3, 12 }
{ During erection on board vessel --- 1920 MARCH 20, 24, 26, 29 APRIL 9, 14, 19, 20, 23, 26, 28, 29 MAY 3, 4, 5, 11, 14 }
Total No. of visits 43

Is the approved plan of main boiler forwarded herewith *left at the future refer*

Dates of Examination of principal parts—Cylinders *23/1/20* last tier " " " donkey " " " " Slides *2/12/19* Covers *19/7/19* Pistons *19/12/19* Rods *13/12/19*
Connecting rods *23/2/20* Crank shaft *23/1/20* Thrust shaft *18/2/20* Tunnel shafts *19/12/19* Screw shaft *18/2/20* Propeller *23/2/20*
Stern tube *21/1/20* Steam pipes tested *19/4/20* Engine and boiler seatings *24/3/20* Engines holding down bolts *26/4/20*
Completion of pumping arrangements *29/4/20* Boilers fixed *31/3/20* Engines tried under steam *5/5/20*
Completion of fitting sea connections *28/2/20* Stern tube *28/2/20* Screw shaft and propeller *2/3/20*
Main boiler safety valves adjusted *4/5/20* Thickness of adjusting washers PORT STAR 11% 12% 11% 13% 13%
Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S NO 23 2-3-20 A.D.B.* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S NO 23 2-3-20 A.D.B.*
Material of Tunnel shafts *Steel* Identification Marks on Do. *3 SHAFTS NO 35 27-1-20 W.G.M. LLOYD'S NO 23 2-3-20 A.D.B.* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S NO 23 2-3-20 A.D.B.*
Material of Steam Pipes *Copper* Test pressure *360 lbs per sq"*

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 *Engine & machinery* duplicate of a previous case *yes* If so, state name of vessel *3 main Boilers fitted on this vessel are of the type H Plans of same have been approved on*

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

The engines and boilers have been built under special survey. The material and workmanship are sound and good and the three main Boilers have been tested by hydraulic pressure with satisfactory results, we enclose herewith the three Boiler certificates for signature.

The engines and boilers were fitted on board secured and tested under steam trials with satisfactory results.

all the safety valves of the three main boilers have now been adjusted under pressure to 180 lbs per sq"

all the auxiliary machinery have been tested under steam with satisfactory results.

The three main boilers are of the type H plans of same have been approved on the. This vessel is eligible in my opinion to have the notation of

L.M.C. 5, 20

is submitted that this vessel is eligible for THE RECORD. L.M.C. 5-20 26/5/20. [Signature]

The amount of Entry Fee ... £ 100.00 : When applied for,
Special ... £ 1450.00 : 15-5-1920
ELECTRIC LIGHT Donkey Boiler Fee ... £ 250.00 :
Travelling Expenses (if any) £ 60.00 : 15-5-1920

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. MAY. 28 1920*

FRI. JUL. 14 1922

Assigned *+ L.M.C. 5. 20*



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Surveyed to 3660 tons
and that Register of recommendat been carried Recommen be made in

Certificate is issued up the Committee use their the Committee nor the S issued by the Society or its nt, default, or negligence of This Certificate ha

Certificate (if required) to be sent to the office

The Surveyors are requested not to write on or below the space for Committee's Minute.

CERTIFICATE WRITTEN