

## REPORT ON MACHINERY.

No. 5399

Received at London Office

THU. 12 JUN. 1919

Date of writing Report 14<sup>th</sup> 6 1919 When handed in at Local Office 14<sup>th</sup> 6 1919 Port of Bilbao

No. in Survey held at Pasajes Date, First Survey 22<sup>nd</sup> 5 - 1919 Last Survey 23<sup>rd</sup> 5 - 1919

Reg. Book. ✓ on the Three masted wood scho. Ex PASAJES SAN JUAN NOW "SANTA ANA" (Number of Visits 186.64)

Master not now jet Built at Pasajes By whom built Astillews de Pasajes Tons 165.66 Gross 186.64

Engines made at Glasgow By whom made Bergius Launch & Engine Co. when made ✓

Boilers made at ✓ By whom made ✓ when made ✓

Registered Horse Power in LETTER H 9-5-18 Owners Com. Maritima Santa Ana Port belonging to San Sebastian

Nom. Horse Power as per Section 28 14.3110 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

Engines, &c.—Description of Engines 2 KELVIN INTERNAL COMBUSTION MOTORS No. of Cylinders 4 No. of Cranks 4

Dia. of Cylinders 5 1/2" Length of Stroke 7" Revs. per minute 700 Dia. of Screw shaft 2 1/8" 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

in the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ 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 ✓ If two

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 9"

Dia. of Tunnel shaft 2 3/8" Dia. of Crank shaft journals 2 1/2" Dia. of Crank pin 2 7/16" Size of Crank webs 1 1/8 x 3 1/4" Dia. of thrust shaft under

collars 2 1/4" Dia. of screws 26 1/2" Pitch of Screws 19' 5" No. of Blades 2 State whether moveable no Total surface ✓

No. of Feed pumps ✓ Diameter of ditto ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

No. of Bilge pumps ✓ Diameter of ditto ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

No. of Donkey Engines ✓ Sizes of Pumps ✓ No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one hand pump 2" dia worked from deck Holds, &c. 2-3" dia hand pumps worked from

deck

No. of Bilge Injections one sizes 2" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size ✓

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 cocks

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 out side planking of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓

What pipes are carried through the bunkers ✓ How are they protected ✓

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 ✓

Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record ✓) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

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

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

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

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

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

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

iameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



IS A DONKEY BOILER FITTED? ☒

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

1 complete set of piston rings and 6 spark plugs  
one inlet and one exhaust valve  
a suitable length of copper fuel pipes  
a quantity of assorted bolts and nuts

The foregoing is a correct description,

Por "Astilleros de Pasajes

EL SECRETARIO-TESORERO

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } These are the motors fitted previously on N°15 Venel and afterwards removed and fitted now on this vessel. see letter to secretary dated 13<sup>th</sup> 6-19  
{ During erection on board vessel - - - } 22<sup>nd</sup> and 23<sup>rd</sup> of May 1919  
Total No. of visits

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 22<sup>nd</sup> 5-19 Slides ☒ Covers 22-5-19 Pistons 22<sup>nd</sup> 5-19 Rods 22<sup>nd</sup> 5-19

Connecting rods 22<sup>nd</sup> 5-19 Crank shaft 22-5-19 Thrust shaft 22-5-19 Tunnel shafts ☒ Screw shaft 21<sup>st</sup> 2-19 Propeller 21<sup>st</sup> 2-19

Stern tube 21<sup>st</sup> 2-19 Steam pipes tested ☒ Engine and boiler seatings 22<sup>nd</sup> 5-19 Engines holding down bolts 22<sup>nd</sup> 5-19

Completion of pumping arrangements 22<sup>nd</sup> 5-19 Boilers fixed ☒ Engines tried under <sup>power</sup> steam 22<sup>nd</sup> 5-19

Completion of fitting sea connections 21<sup>st</sup> 2-19 Stern tube 21<sup>st</sup> 2-19 Screw shaft and propeller 21<sup>st</sup> 2-19

Main boiler safety valves adjusted ☒ Thickness of adjusting washers ☒

Material of Crank shaft Steel Identification Mark on Do. ☒ Material of Thrust shaft Steel Identification Mark on Do. ☒

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts Steel Identification Marks on Do. ☒

Material of Steam Pipes ☒ Test pressure ☒

Is an installation fitted for burning oil fuel ☒ 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 yes If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The auxiliary motors of this Venel)

have been opened out and examined through out and found satisfactory. The tanks fitted on the venel for carrying the fuel are 2 standard tanks as per approved plans dated 24<sup>th</sup> 10-18 same have been tested to a head of 15 feet of water and found satisfactory. Oil trays have been fitted under each oil tank. Each motor carry a high tension magnets of the closed in type and the electric ignition has been examined and the leads tested and found satisfactory. These motors are not reversible and this takes place by means of an strong construction and accessible reversing gear. when the motor is declutched a governor is fitted to each motor connected to the carburettor throttle valve preventing this way the racing of the engine.

These motors were examined previously when the builders fitted same on board the N°15 Venel & afterwards removed from same.

Enclose herewith a letter respecting these motors.

It is submitted that this vessel is eligible for THE RECORD, LMC 5. 19.

Oil Engines 4SC. 5A. 4Cy 5<sup>1/2</sup> - 7.  
Bergius Launch & Eng. Co. Glasgow.

The amount of Entry Fee ... \$ : : When applied for,  
Special ... \$ 2.00 : 10<sup>th</sup> 6 1919.  
Donkey Boiler Fee ... \$ : : When received,  
Travelling Expenses (if any) \$ : : June 1919.

Committee's Minute

Assigned

FRI 27 JUN. 1919

Ln 6 5. 19  
oil engines

WARRANTY CERTIFICATE  
No. 100

LR

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