

Rpt. 4.

REPORT ON MACHINERY.

No. 6016

Received at London Office

JUN. 12 1922

Date of writing Report 6/6/22 1922 When handed in at Local Office 8th June 1922 Port of BILBAO.

No. in Survey held at BILBAO.

Date, First Survey Dec. 12th 1921 Last Survey JUNE 1st 1922

Reg. Book.

(Number of Visits 23)

on the

S/S "CABO ROCHE"

Tons } Gross
Net

Master Built at BILBAO By whom built SOC. ESPANOLA DE CONSTR. NAVAL. When built 1922.

Engines made at STOCKTON By whom made MESSRS BLAIR & CO. when made 1920

Boilers made at STOCKTON By whom made MESSRS. BLAIR & CO. when made 1920

Registered Horse Power Owners YBARRA & CO. Port belonging to SEVILLA.

Nom. Horse Power as per Section 28 253. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES.

ENGINES, &c.—Description of Engines TRI-COMPOUND. No. of Cylinders 3. No. of Cranks 3.

Dia. of Cylinders 22"-36"-59" Length of Stroke 39" Revs. per minute Dia. of Screw shaft as per rule 12.42 Material of STEEL
as fitted 13.5 screw shaft

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 YES 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 4'-8"

Dia. of Tunnel shaft as per rule 10.85" Dia. of Crank shaft journals as per rule 11.4" Dia. of Crank pin 12.25" Size of Crank webs 23 1/2 x 7 1/4 Dia. of thrust shaft under
as fitted 11.25" as fitted 11.75"

collars 12 1/4" Dia. of screw 15'-6" Pitch of Screw 15'-9" No. of Blades 4 State whether moveable No Total surface 68 sq

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 28" Can one be overhauled while the other is at work YES

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work YES

No. of Donkey Engines 2 Sizes of Pumps 10' x 10' 5' x 8' No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 5-3" Suct. 1. 2 1/4" TUNNEL. 4-2 1/4" TO COFFERDAMS In Holds, &c. No. 1. HOLD 2-3" No. 2. HOLD 2-3"

No. 3 HOLD 2-2 1/2" & 1-3 1/2"

No. of Bilge Injections 1. sizes 6" Connected to condenser, or to circulating pump COND. Is a separate Donkey Suction fitted in Engine room & size YES. 4"

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

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 YES

Is the Screw Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from TOP PLATFORM

BOILERS, &c.—(Letter for record) Manufacturers of Steel (SEE ATTACHED REPORTS. NOS 10910 & 40798.)

Total Heating Surface of Boilers Is Forced Draft fitted No. No. and Description of Boilers 2 SINGLE ENDED.

Working Pressure 180 lbs. Tested by hydraulic pressure to 260 Date of test 7-12-20 No. of Certificate 6184

Can each boiler be worked separately YES Area of fire grate in each boiler 60.2 sq No. and Description of Safety Valves to

each boiler 2 DIRECT SPRING Area of each valve 7.07 sq Pressure to which they are adjusted 180 Are they fitted with easing gear YES.

Smallest distance between boilers or uptakes and bunkers on woodwork 1'-6" EXT. dia. of boilers 15'-2" Length 10'-6" Material of shell plates STEEL

Thickness 1 1/32" Range of tensile strength 28-32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams 2R. LAP

long. seams 2. B. 3. R. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/16" Lap of plates or width of butt straps 18 5/8 x 1 5/32

Per centages of strength of longitudinal joint rivets 86.4 Working pressure of shell by rules 182. Size of manhole in shell 16" x 12"

Size of compensating ring 7 1/2" x 1 1/32" No. and Description of Furnaces in each boiler 3 MORISONS Material STEEL Outside diameter 47 1/32"

Length of plain part top Thickness of plates crown 3 1/16" Description of longitudinal joint WELD No. of strengthening rings

Working pressure of furnace by the rules 192 Combustion chamber plates: Material STEEL Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 3/4"

Pitch of stays to ditto: Sides 9" x 9 1/2" Back 9 1/4" x 9 1/4" Top 10" x 8 1/4" If stays are fitted with nuts or riveted heads NUTS Working pressure by rules 185

Material of stays STEEL Area at smallest part 1.99 Area supported by each stay 87.8 Working pressure by rules 204 End plates in steam space:

Material STEEL Thickness 1 1/4" Pitch of stays 18 1/2" x 20 How are stays secured NUTS & WASHERS Working pressure by rules 200 Material of stays STEEL

Area at smallest part 7.24 Area supported by each stay 37.5 Working pressure by rules 201 Material of Front plates at bottom STEEL

Thickness 1 1/16" Material of Lower back plate STEEL Thickness 1" Greatest pitch of stays 14 1/2" x 9 1/4" Working pressure of plate by rules 212

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 7/8" Material of tube plates STEEL Thickness: Front 1 1/16" Back 1 1/16" Mean pitch of stays 11 7/32"

Pitch across wide water spaces 14 1/2" Working pressures by rules 191 Girders to Chamber tops: Material STEEL Depth and

thickness of girder at centre 7 3/4" x 1 5/8" Length as per rule 28 1/4" Distance apart 10 Number and pitch of stays in each 2. P. 8 3/4"

Working pressure by rules 189 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

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

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IS A DONKEY BOILER FITTED? YES.

If so, is a report now forwarded? YES.

SPARE GEAR. State the articles supplied:— 2 Conn. rod top end & bottom end bolts & nuts. 2 main bearing bolts & nuts. 1 Set of Coupling bolts. 1 Set of feed & bilge pump valves. 1 Escape valve & spring of each size. 1 Safety valve & spring. Holding down bolts & nuts. 1 Propeller shaft. 1 Propeller. Several assorted sizes of bolts & nuts. 1 Full set of spare gear for oil fuel burning system.

The foregoing is a correct description,

REGISTRO DE COMERCIO MARITIMO

D. A. Fullerton

for the installation of
the machinery

Dates { During progress of work in shops - - } See attached report 10910.
of Survey { During erection on 1921 Dec. 12, 16, 30. 1922 Jan. 13. MARCH 20, 22, 23, 24, 25, 29. APRIL 4, 11, 20, 27. MAY 5, 8, 9, 16, 18, 26, 30. JUNE 1, 6.
while { board vessel - - - }
building { Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith No.

" " " donkey " " " 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 20/4/22. Engine and boiler seatings 4/4/22 Engines holding down bolts 11/4/22
Completion of pumping arrangements 16/5/22. Boilers fixed 11/4/22 Engines tried under steam 26/5/22
Completion of fitting sea connections 29/3/22 Stern tube 25/3/22 Screw shaft and propeller 25/3/22
Main boiler safety valves adjusted 9/5/22. Thickness of adjusting washers P. 11 7/8 S. 9 7/8 P. 10 7/8 S. 10 7/8
Material of Crank shaft by Steel Identification Mark on Do. 7285 Material of Thrust shaft by Steel Identification Mark on Do. 5484 N.
Material of Tunnel shafts by Steel Identification Marks on Do. 5484 N Material of Screw shafts by Steel Identification Marks on Do. 7285.
Material of Steam Pipes LAP WELDED WROUGHT IRON. Test pressure 540 lbs.

Is an installation fitted for burning oil fuel YES

Is the flash point of the oil to be used over 150°F. YES

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, &c. Workmanship good.

The engines & boilers of this vessel have been examined by us whilst being installed on board at Bilbao. On Completion the machinery was tried under steam and found satisfactory. The oil fuel system was tried under working conditions, & found in order & fitted & tested in accordance with Section 49 of the Rules.

This vessel is now eligible in our opinion to have notation, of
L.M.C. 6-22. Electric lighting and fitted for the burning of oil fuel,
flash point above 150°F. recorded in the register book.

It is submitted that
this vessel is eligible for
THE RECORD.

L.M.C. - 6.22. C.L.

Fitted for Oil Fuel, 6.22, F.P. above 150°F.

PESETAS.

(Date of build 1922.)

13/6/22.

The amount of Entry Fee ... £ 175 00

When applied for,

Special ... £ 1500 00

ELECTRIC LIGHT Donkey Boiler Fee ... £ 250 00

When received,

Travelling Expenses (if any) £

late fee, Bureau request

Committee's Minute

Assigned

+ L.M.C. 6.22

MACHINERY TESTED
WRITTEN.

Fitted for oil fuel 6.22

F.P. above 150°F

C. H. Fowling & W. G. McKee
Engineer Surveyors to Lloyd's Register of Shipping.



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