

# REPORT ON MACHINERY

No. 824

24 FEB. 1920

of writing Report 18-2-1920 When handed in at Local Office

Received at London Office

Port of **CADIZ**

in Survey held at **CADIZ**

Date, First Survey **26-8-19** Last Survey **28-7-1920**

Book **90 on the STEEL S.S. "MENHIR"**

(Number of Visits **TEN**)

Master **JUAN M. RUIS DE AZUA** Built at **CADIZ**

By whom built **ECHIVARRIETA Y LARRANAGA**

Gross **549**

Net **233**

When built **1919**

Engines made at **BARCELONA**

By whom made **ALEXANDER BROS.**

when made **1919**

Motors made at **GREENOCK**

By whom made **J.G. KINCAID & CO. LTD.**

when made **1919**

Registered Horse Power **75**

Owners **ECHIVARRIETA Y LARRANAGA**

Port belonging to **CADIZ**

Net Horse Power as per Section 28 **74**

Is Refrigerating Machinery fitted for cargo purposes **No**

Is Electric Light fitted **No**

**GINES, & Co.**—Description of Engines **TRIPLE EXPANSION**

No. of Cylinders **3**

No. of Cranks **3**

No. of Cylinders **12", 20", 32"** Length of Stroke **24"** Revs. per minute **90**

Dia. of Screw shaft as per rule **7 7/8"** Material of screw shaft **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 **Yes**

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**

Are the shafts fitted, is the shaft lapped or protected between the liners **Yes**

Length of stern bush **2'-8"**

Dia. of Tunnel shaft as per rule **6-19"**

Dia. of Crank shaft journals as per rule **6-49"**

Dia. of Crank pin **6-49"**

Size of Crank webs **4 3/8"** Dia. of thrust shaft under bars **7 1/2"**

Dia. of screw **108"** Pitch of Screw **13-0"**

No. of Blades **4** State whether moceable **No** Total surface **31 sq. ft.**

No. of Feed pumps **1**

Diameter of ditto **2 7/16"** Stroke **12 1/8"** Can one be overhauled while the other is at work **Yes**

No. of Bilge pumps **1**

Diameter of ditto **2 7/16"** Stroke **12 1/8"** Can one be overhauled while the other is at work **Yes**

No. of Donkey Engines **2**

Sizes of Pumps **6" x 6" x 6" BALL - 6" x 4 1/2" x 6"** No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room **2 of 2 1/4" and 1 of 2"**

In Holds, &c. **2 of 2" and 3 of 3"**

No. of Bilge Injections **1** size **3"** Connected to condenser, or to circulating pump **Yes**

Is a separate Donkey Suction fitted in Engine room & size **2 1/4"**

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**

Are all pipes carried through the bunkers **none**

How are they protected **Yes**

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 **26-8-19** of Stern Tube **26-8-19** Screw shaft and Propeller **26-8-19**

Is the Screw Shaft Tunnel watertight **Yes**

Is it fitted with a watertight door **Yes** worked from **Yes**

**PLATES, &c.**—(Letter for record) Manufacturers of Steel

Working 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 boiler

Area of each valve Pressure to which they are adjusted **150 lb. sq. in.** Are they fitted with easing gear **Yes**

Least distance between boilers or uptakes and bunkers or woodwork **7 1/2"** 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

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

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

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

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

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

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

Material of stays Diameter 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

Diameter 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

Work 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

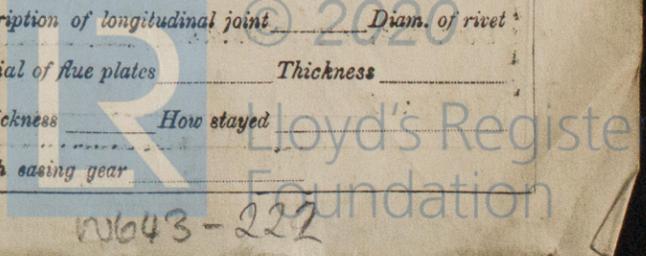
Working pressure by rules Superheater or Steam chest; how connected to boiler. Can the superheater be shut-off and the boiler worked

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

Are they 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



W643-222

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 top and 2 bottom end bolts + nuts, 2 main bolts + nuts, 1 set of coupling bolts + nuts, 1 set each, air, feed and bilge pump valves, 1 main and donkey check valve, 1 safety valve spring, 6 firing ring bolts + nuts, 12 condenser tubes, 6 boiler tubes, 6 gauge glasses + 1/2 set of fire bars, assorted bolts, nuts + iron.

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 TEN

Is the approved plan of main boiler forwarded herewith?

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

Connecting rods  Crank shaft  Thrust shaft 26-8-19 Tunnel shafts  Screw shaft 26-8-19 Propeller 26-8-19

Stern tube 26-8-19 Steam pipes tested 24-12-19 Engine and boiler seatings 8-11-19 Engines holding down bolts 25-11-19

Completion of pumping arrangements 20-1-20 Boilers fixed 31-12-19 Engines tried under steam 28-1-20

Main boiler safety valves adjusted 28-1-20 Thickness of adjusting washers Port 9/16" Starb. 7/16"

Material of Crank shaft  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 Copper Test pressure 360 lbs 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?

Is this machinery duplicate of a previous case? YES If so, state name of vessel S.S. "OPHIR"

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

The machinery of this vessel with the exception of the Boiler has not been constructed under special survey and has now been efficiently fitted in the vessel and tried under steam with satisfactory results and is eligible in my opinion to be classed and to have record of L.M.C. 1-20, subject to boiler pressure not exceeding 150 lbs per sq. inch until Tail Shaft has been renewed.

Certificate (if required) to be sent to Surveyor Cadiz

The amount of Entry Fee ... £	Special ... £	Donkey Boiler Fee ... £	Travelling Expenses (if any) £	When applied for, 18-2-1920	When received, 18/2/20
£ 600.00	£ 463.00				

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

Committee's Minute  
Assigned L.M.C. 1:20

FRI. 27 FEB. 1920

