

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 23 NOV 1931

Date of writing Report 9<sup>th</sup> November 1931 When handed in at Local Office 10.11. 1931 Port of TRIESTE 23 NOV 1931

No. in Survey held at VENICE Date, First Survey 31<sup>st</sup> Dec. 1930 Last Survey 5<sup>th</sup> Nov 1931  
Reg. Book. 39729 on the STEEL TWIN SCREW "CABO DELGADO" (Number of Visits 37)

Built at VENICE By whom built CANTIERI NAVALI ED OFFICINE MECCANICHE DI VENEZIA Yard No. 74 Tons { Gross 372.5 Net 121.0  
Engines made at VENICE By whom made CANT. NAV. ED OFF. MECC. DI VENEZIA Engine No. P 1577 S 1578 When built 1931  
Boilers made at VENICE By whom made CANT. NAV. ED OFF. MECC. DI VENEZIA Boiler No. P 50 S 57 when made 1931

Registered Horse Power Owners GOVERNMENT OF PORTUGUESE COLONY Port belonging to PORTO AMELIA  
Nom. Horse Power as per Rule 159 183 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

Trade for which Vessel is intended TOWING SERVICES.

Engines, &c.—Description of Engines COMPOUND Revs. per minute 155

Dia. of Cylinders 420<sup>7</sup> + 540<sup>7</sup> Length of Stroke 480<sup>7</sup> No. of Cylinders Two (EACH ENGINE) No. of Cranks Two (EACH ENGINE)

Crank shaft, dia. of journals as per Rule 178<sup>7</sup> as fitted 180<sup>7</sup> Crank pin dia. 180<sup>7</sup> Crank webs Mid. length breadth 220<sup>7</sup> Mid. length thickness 120<sup>7</sup> Thickness parallel to axis ✓ Thickness around eye-hole ✓

Intermediate Shafts, diameter as per Rule 169.5<sup>7</sup> as fitted NONE Thrust shaft, diameter at collars as per Rule 178<sup>7</sup> as fitted 180<sup>7</sup>

Tube Shafts, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule 190.5<sup>7</sup> as fitted 195.0<sup>7</sup> Is the { tube } shaft fitted with a continuous liner { No }

Bronze Liners, thickness in away of bushes as per Rule 13.3<sup>7</sup> as fitted 13.5<sup>7</sup> Thickness between bushes as per Rule ✓ as fitted ✓ Is the after end of the liner made watertight in the propeller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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 No Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No

Length of Bearing in Stern Bush next to and supporting propeller 810<sup>7</sup>

Propeller, dia. 2100<sup>7</sup> Pitch 2900<sup>7</sup> No. of Blades 4 Material BRONZE whether Movable No Total Developed Surface 2.224 METRES sq. feet

Feed Pumps worked from the Main Engines, No. Two Diameter 80<sup>7</sup> Stroke 260<sup>7</sup> Can one be overhauled while the other is at work YES  
Bilge Pumps worked from the Main Engines, No. Two Diameter 80<sup>7</sup> Stroke 260<sup>7</sup> Can one be overhauled while the other is at work YES

Feed Pumps { No. and size ONE 90<sup>7</sup> X 130<sup>7</sup> ONE 100<sup>7</sup> X 200<sup>7</sup> Pumps connected to the { No. and size ONE 100<sup>7</sup> X 200<sup>7</sup> How driven STEAM Main Bilge Line How driven STEAM

Ballast Pumps, No. and size ONE 100<sup>7</sup> X 200<sup>7</sup> Lubricating Oil Pumps, including Spare Pump, No. and size ✓  
Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room ONE 60<sup>7</sup>; TWO 55<sup>7</sup>;  
In Holds, &c. FOR HOLD - ONE 55<sup>7</sup>.

Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE 160<sup>7</sup> Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ONE 60<sup>7</sup> Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes YES

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES  
Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with 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 Overboard Discharges 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

Do all Pipes pass through the bunkers NONE How are they protected ✓  
Do all pipes pass through the deep tanks ONE BILGE SUCTION PIPE THROUGH FOR 2<sup>nd</sup> F.W. tank Have they been tested as per Rule YES

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES  
Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another YES Is the Shaft Tunnel watertight NONE Is it fitted with a watertight door ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record (S) ) Total Heating Surface of Boilers 374 m<sup>2</sup> 4020 #

Forced Draft fitted NO No. and Description of Boilers Two SINGLE ENDED MARINE TYPE Working Pressure 11.5 Kg Cm<sup>2</sup>

IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES 2SB. 1627

IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded? ✓

PLANS. Are approved plans forwarded herewith for Shafting YES Main Boilers YES Auxiliary Boilers ✓ Donkey Boilers ✓  
Superheaters ✓ General Pumping Arrangements YES Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:—

One connecting rod top end bearing complete with bolts & nuts  
Two connecting rod bottom end bolts & nuts; Two main bearing bolts; One quadrant block bearing complete;

One set coupling bolts; One set feed, bilge and air pump valves; One set piston springs;  
A quantity of assorted bolts & nuts; Iron of various sizes; Four piston junk ring studs for each piston;

One set of cylinder relief valve springs; 3% condenser tubes; 6% condenser tube froulers;  
10% boiler smoke tubes; Ten boiler tube stoppers; Four screw stays; Two safety valve springs.

The foregoing is a correct description.

CANTIERI NAVALI E OFFICINE MECCANICHE DI VENEZIA

Manufacturer.



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Lloyd's Register Foundation

1930 Dec 31, 1931 Mar 17, 25, Apr 2, 29, May 1, 4, 11, 20, June 1, 11, 18, 25, July 4, 9, 24, 27, 28, 31, Aug 6, 11, 12, 23

Dates of Survey while building

During progress of work in shops - - Sep 23

During erection on board vessel - - - 1931 Aug 11, 12, 25, Sep 4, 14, 17, 23, Oct 2, 12, 19, 22, 23, Nov 5

Total No. of visits 37

Dates of Examination of principal parts—Cylinders 28.7.31 Slides 6.8.31 Covers 20.5.31

Pistons 3.7.31 Piston Rods 6.8.31 Connecting rods 31.7.31

Crank shaft 31.7.31 Thrust shaft 25.8.31 Intermediate shafts ✓

Tube shaft ✓ Screw shaft 12.8.31 Propeller 25.8.31

Stern tube 11.8.31 Engine and boiler seatings 25.8.31 Engines holding down bolts 17.9.31

Completion of fitting sea connections 4.9.31

Completion of pumping arrangements 23.10.31 Boilers fixed 2.10.31 Engines tried under steam 23.10.31

Main boiler safety valves adjusted 23.10.31 Thickness of adjusting washers FOR BUR - P 14% S 7% AFTER BUR - P 9% S 12%

Crank shaft material STEEL Identification Marks No 8799 A.C. 2.7.31 Thrust shaft material STEEL Identification Marks P 8797 A.C. 25.8.31

Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material STEEL Identification Mark No 205 A.C. 12.8.31 Steam Pipes, material STEEL Test pressure 35 kg/cm<sup>2</sup> Date of Test 2.10.31

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 the Rules for carrying and burning oil fuel been complied with ✓

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.)

The Engines and Boilers have been built under Special Survey and satisfactorily fitted in the vessel. The materials and workmanship are good. On completion the machinery was tried under a full head of steam with satisfactory results.

The machinery throughout is now in a good and efficient condition, and eligible in my opinion for classification and the notation **L.M.C. 11.31**.

Certificate to be sent to

The amount of Entry Fee ... *280* ... When applied for, 17/11/1931

Special ... *4930* ...

Donkey Boiler Fee ... £ ...

Travelling Expenses (if any) *3330* ... When received, 8.1.1932

*Alfred Be...*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 4 DEC 1931

Assigned + L.M.C. 11.31



CERTIFICATE WRITTEN