

# REPORT ON MACHINERY

No. 6279

Survey held at **Bilbao** Date, First Survey **Oct. 12. 1918** Last Survey **August 11 1923**  
 on the **S.S. ALFONSO XIII** (Number of Visits **190**)

Built at **Bilbao** By whom built **Soc. Española de Const. Naval** When built **1921**  
 By whom made **Soc. Española de Const. Naval** when made **1921**  
 By whom made **Cia Transatlantica** when made **1921**  
 Owners **Cia Transatlantica** Port belonging to **Barcelona**  
 Horse Power at Full Power **9,800** Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **Yes.**

## LINE ENGINES, &c.—Description of Engines

No. of Rotor Shaft Journals, H.P. **L.P.** Diameter of Pinion Shaft  
 of Journals Distance between Centres of Bearings Diameter of Pitch Circle  
 of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel  
 Face Diameter of Thrust Shaft under cover Diameter of Tunnel Shaft as per rule  
 crew Shafts Diameter of same as fitted Diameter of Propeller Pitch of Propeller  
 blades State whether Moveable Total Surface Diameter of Rotor Drum, H.P. **L.P.** Astern  
 s at Bottom of Groove, H.P. **L.P.** Revs. per Minute at Full Power, Turbine Propeller

## DETAILS OF BLADING.

H.P.			L.P.			ASTERN.		
HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.

size of Feed pumps **2 Pans of Wrens Feed Pumps & 2 General Service Donkey pumps Duplex type (10 x 7 x 10) 254 x 178 x 259**  
 size of Bilge pumps **2 Independent Duplex pumps (7 x 8 x 8) 178 x 203 x 203**  
 size of Bilge suction in Engine Room **6 - 3 1/2" suction & 3 - 2 3/4" suction & 1 - 3 1/2" Tunnel suction**

**22 - 2 3/4" & 1 - 3 1/2" No. 4 hold 3 - 3 1/2" & 1 - 2 1/2" No. 5 2 - 3 1/2"**  
 In Holds, &c. **No. 1 hold 1 - 3 1/2" No. 2 Hold 2 - 2 3/4" & 1 - 3 1/2"**  
 Bilge Injections **2** sizes **13"** Connected to **main**, or to circulating pump **Circ. pump** is a separate Donkey Suction fitted in Engine Room & size **4 1/2" x 5 1/2" x 8"**

the bilge suction pipes fitted with roses **yes** Are the roses in Engine room always accessible **yes**  
 connections with the sea direct on the skin of the ship **yes** Are they Valves or Cocks **Both**  
 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 **below**  
 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**  
 pipes are carried through the bunkers **no** How are they protected **yes**

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **yes**  
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges **yes**  
 crew Shaft Tunnel watertight **yes** Is it fitted with a watertight door **yes** worked from **Deck**

ERS, &c.—(Letter for record **(7)**) Manufacturers of Steel **Altos Hornos Sertao**  
 Heating Surface of Boilers **20840** Is Forced Draft fitted **yes** No. and Description of Boilers **Seven S.E. marine 733**  
 g Pressure **180 lbs** Tested by hydraulic pressure to **360 lbs** Date of test  No. of Certificate

boiler be worked separately **yes** Area of fire grate in each boiler **68.75** No. and Description of Safety Valves to   
 or **2 Spring loaded** Area of each valve **11.045** Pressure to which they are adjusted **180 lbs** Are they fitted with easing gear **yes**  
 distance between boilers or uptakes and bunkers or woodwork **2'-0"** Mean dia. of boilers **16'-3"** Length **11'-7 1/2"** Material of shell plates **Steel**  
 Range of tensile strength **29 1/2 - 33** Are the shell plates welded or flanged **yes** Description of riveting: **see specs** **21**  
 ms **Double Nut type** Diameter of rivet holes in long. seams **1 1/16"** Pitch of rivets **9 3/4"** Lap of plates or width of butt straps **21**  
 5 Rivets per pitch

ages of strength of longitudinal joint **84.7** Working pressure of shell by rules **191** Size of manhole in shell **16" x 12"**  
 plates **85.26**

compensating ring **40" x 36"** No. and Description of Furnaces in each Boiler **3 Suspension** Material **Steel** Outside diameter **4'-4 1/8"**  
 of plain part  Thickness of plates **4 1/16"** Description of longitudinal joint **weld**

pressure of furnace by the rules **199** Combustion chamber plates: Material **test** Thickness: Sides **5/8"** Back **5/8"** Top **5/8"** Bottom **1"**  
 stays to ditto: Sides **7 1/8" x 8 1/2"** Back **8 1/2" x 8 1/2"** Top **8 1/2" x 7 1/8"** If stays are fitted with nuts or riveted heads **yes** Working pressure by rules **187**  
 of stays **yes** Diameter at smallest part **2.03** Area supported by each stay **7.22** Working pressure by rules **210** End plates in steam space   
**Steel** Thickness **1 1/8"** Pitch of stays **18" x 15 1/4"** How are stays secured **by nuts** Working pressure by rules **216** Material of stays **Steel**  
 at smallest part **5.56** Area supported by each stay **2.74** Working pressure by rules **211** Material of Front plates at bottom **Steel**  
**31/32"** Material of Lower back plate **Steel** Thickness **7/8"** Greatest pitch of stays **13 1/2" x 8 1/2"** Working pressure of plate by rules **208**  
 of tubes **2 1/2"** Pitch of tubes **3 3/4" x 3 3/4"** Material of tube plates **Steel** Thickness: Front **3/32"** Back **13/16"** Mean pitch of stays **10 1/2"**  
 cross wide water spaces **13 1/2"** Working pressures by rules **210** Girders to Chamber tops: Material **Steel** Depth and   
 of girder at centre **10" x 1 3/8"** Length as per rule **32.762** Distance apart **8 1/2"** Number and pitch of stays in each **3 - 7 1/8" Pitch**  
 pressure by rules **211** Steam dome: description of joint to shell  % of strength of joint  Diameter   
 mess of shell plates  Material  Description of longitudinal joint  Diameter of rivet holes  Pitch of rivets   
 ing pressure of shell by rules  Crown plates: Thickness  How stayed



