



VALPARAISO

THE DEPARTMENT  
OF HYDROGRAPHY AND NAVIGATION  
OF CHILE

LE DEPARTEMENT  
D'HYDROGRAPHIE ET DE NAVIGATION  
DU CHILI



## THE DEPARTMENT OF HYDROGRAPHY AND NAVIGATION OF CHILE

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*Compiled by the Secretary General from a report received from the  
Director of the Department.*

THE DEPARTMENT OF HYDROGRAPHY AND NAVIGATION was created by Presidential Decree on 1st. May 1874, and Commander DON FRANCISCO VIDAL GORMAZ was appointed its first Director. Originally this Department occupied a small room attached to the Ministry of Marine at SANTIAGO, and it is here that, with the limited data available at that time, Commander GORMAZ organised the Department and formulated the regulations defining its duties; thanks to the support of the Ministry of Marine, instructions were drawn up for the various hydrographic missions which were to be sent to work on the coast.

A questionnaire, in which were set out the various points which had to be considered when drawing up descriptions of bays, ports, anchorages, *etc.*, was circulated with a view to accumulating the necessary material for the eventual publication of the *Derrotero General de la Costa de Chile* (*General Pilot for the Chilean Coast*). The publication was begun of a periodical entitled *Noticias Hidrográficas* (now called *Avisos a los Navegantes*), which was to be produced as material became available; this periodical was published with the object of getting into correspondence with Offices of the same nature in all maritime countries, and was intended to make known to seamen hydrographic news with reference to the Chilean coasts, and of those foreign coasts which were most frequented by Chilean vessels or by those which trade with Chile. The material for this publication was supplied in the most efficient form by the various Offices of the Navy and was taken also from the information contained in the periodical entitled *Annonces Hydrographiques*, published by the DÉPOT DES CARTES ET PLANS DE LA MARINE, in PARIS, the

only publication of this type which the Ministry received at that time and which was available for the new Department. The first number of the *Noticias Hidrograficas* was published on 15th. May, 1874, and was sent to all similar Offices in Europe and America, accompanied by a request for exchange copies, which requests were favourably received.

In the same year that the Department was created the preparation of the first volume of the *Anuario Hidrografico* was commenced, as laid down in the Regulations. The first number was issued in January 1875, and was widely circulated in Europe and America, with a view to making known the Office and its co-operators, *viz.* the Officers of the Chilean Navy, and their work in peace-time, and finally with the object of obtaining valuable publications in exchange, the acquisition of which was indispensable.

With the issue of the above-mentioned publications the Department commenced a campaign with the object of obtaining exchange copies of other publications, and this exchange has grown from year to year and has provided the elements for the formation of a *Technical Library*, which still grows rapidly, being added to also by gifts, purchases and subscriptions. By means of this system of exchange the Department has obtained Hydrographic Annuals, Sailing Directions, charts, plans, *etc.*, from Offices engaged in similar work throughout the world, as well as from various Scientific Institutes and Societies, both home and foreign. It is thus that the Library, though not as complete as might be desired, now constitutes a true depot of information for officers undertaking studies, and in general for all those people who study the sciences and wish to obtain information therefrom—the basis for work which is a credit to and of profit for the country.

At the commencement of its operations the Department had to rely on a small collection of British Admiralty charts, mostly of old editions, but today, and ever since it was aware of its creation, the BRITISH ADMIRALTY sends to the Department one copy of every new or corrected chart, thus keeping it up-to-date as to the hydrography of the whole world; the same is done by the UNITED STATES, FRANCE, ITALY, GERMANY, SPAIN, HOLLAND, JAPAN, SIAM, BRAZIL, *etc.*; thus the Department is in a position to satisfy any request relative to hydrography.

Although the Department is essentially hydrographic, as is laid down in the Decree which created it, there being no Geographical Department during its early years, it had to undertake various work under the orders first of one and then of another Ministry; work which dealt with territorial divisions, the creation of provinces, delimitation of boundaries, and similar public works.

At the beginning of 1879 the Department had to abandon its ordinary work temporarily on account of the war with PERU and BOLIVIA, in order that it might take up various works of a geographical nature, the publication of charts of the northern part of the country and of enemy territories, as well as information which might be useful to the Army and Navy in their war operations. The number of charts, maps and pamphlets published for this purpose was considerable, but the number of secret documents and plans was still greater.

The present Offices occupy a building specially appropriated for the purpose, which stands on one of the most picturesque hills of VALPARAISO. A photograph of the building appears at the beginning of this article.

The *Avisos a los Navegantes* are published weekly, but special issues are made whenever a notice appears to be urgent ; the information given in these *Avisos a los Navegantes* deals with the coasts of NORTH and SOUTH AMERICA, the Islands of the PACIFIC and ATLANTIC OCEANS, and more particularly with the coasts of CHILE.

The *Anuario Hidrografico* has now reached its 33rd. volume and it contains :—

(1) Memoranda of the voyages and explorations carried out by the Chilean Navy and by Chilean or foreign merchant vessels off the coasts of CHILE and in adjacent seas.

(2) Studies on tides and collations of observations made for determining magnetic forces off the Chilean coast.

(3) Certain statistics, which include wrecks and accidents to vessels occurring in CHILE and to Chilean vessels abroad.

(4) A bibliography, classified according to contents, of all publications received by the library during the year, whether by exchange, by gift or by purchase.

(5) A list of deep-sea soundings made in Chilean and adjacent waters by surveying vessels, and others.

(6) A report on the bars of the rivers of CHILE.

(7) Miscellaneous information in the form of original or translated articles dealing with subjects of interest to hydrography and navigation.

With a view to facilitating navigation off the extensive coast of CHILE, which reaches from 18° South Latitude (SAMA RIVER) to 57° South Latitude (DIEGO RAMIREZ ISLANDS), the Department has collected all the hydrographic work carried out by the Chilean Navy into the five volumes of the *Derrotero de la Costa de Chile*, which are as follows :—

VOLUME I. — *Derrotero del Archipiélago de la Tierra del Fuego*, 1911.

VOLUME II. — *Derrotero del Estrecho de Magallanes y aguas adyacentes de la bahia Inutil y Seno, del Almirantazgo, de los Senos Otway y Skyring y del Golfo Xaltegua*, 1908.

VOLUME III. — *Derrotero de la Costa de Chile. — Canales de la Patagonia, desde el Estrecho de Magallanes al Golfo de Peñas*, 1919.

VOLUME IV. — *Derrotero de los Archipiélagos de la Patagonia desde el Golfo de Peñas al de los Coronados (Chonos y Chiloé)*, 1913.

VOLUME V. — *Derrotero de la Costa de Chile, desde la isla Guafo a Punta Sama*, 1918.

In addition to the *Avisos a los Navegantes*, the *Anuario Hidrográfico* and the *Derrotero*, already mentioned, the following publications have been issued :—

- (a) *Table of Distances between the principal ports of the world.*
- (b) *Treatise on Hydrography*, by FONTAINE.
- (c) *Practical Manual of Hydrography*, by MCINTOSH.
- (d) *General Instructions with reference to Sounding and Tides.*
- (e) *General Instructions for the Hydrographic Service*, by P. C. COOPS.
- (f) *Hydrographic Tables*, by P. C. COOPS.
- (g) *Magnetic Compasses*, by A. GARCIA C.
- (h) *Gyro Compasses*, by A. GARCIA C.
- (i) *Navigational Instructions*, by A. GARCIA C.

The hydrographic work of the Navy is included in the *Anuarios* and *Derrotero*, and on the 126 charts published by this Department and now in use.

With a view to facilitating navigation and in order that seamen on the high seas may check their position, the Department sends out daily Time Signals (except on Sundays) from the W/T Station at PLAYA ANCHA, which has a range of 300 miles ; this Time Signal begins at 12 hrs., 55 mins., and ends at 13 hrs. Greenwich mean time. There is likewise a sound time signal given daily, except on Sundays and holidays, by means of a gun which is fired from FORT BUERAS at VALPARAISO at noon Santiago mean time. Simultaneously a black ball is dropped from the mast situated at the Naval School from whence it is visible all over the Bay of Valparaiso.

Certain members of the technical personnel have been sent at various times to the U. S. OF AMERICA and to GREAT BRITAIN with the object of perfecting their knowledge on the subject of engraving on copper ; others have worked in the laboratories of the General Staff of the Army with a view to perfecting their knowledge of Photolithography.

Special attention is given to the Merchant Marine by this Department, and for this purpose a special Bureau called " INFORMACIONES A LA MARINA MERCANTE " was created, which has its Offices in the same building as the Hydrographic Office and is in charge of a Senior Lieutenant of the Navy. Here charts and pilots are sold, barometers and sextants

are adjusted, compass cards and bearing plates are tested, chronometers are rated, compasses are corrected, compass deviation tables are constructed when required, and finally every sort of nautical information is given to those who ask for it.

The Acting Director of the Department is Commander A. GARCIA C., whose substantive appointment is Assistant Director of the Department ; and there is also an Inspector of Navigation and an Accountant attached to the Director's Office ; a Civil Secretary who acts as Archivist ; and a Lieutenant-Commander acts as Instructor in the Navigation School.

The Hydrographic Division has three Sections :

*First Section.* — Hydrographic and Nautical Information.

*Second Section.* — Cartography and Engraving.

*Third Section.* — Charts and Nautical Instruments.

The *first Section* prepares and revises the *Anuarios*, the *Avisos*, *Derrotero* and supplements, deals with tidal observations, and draws up magnetic charts and special publications ; the library is under its care, as also is the preparation of wind and current charts for the seas off the Chilean coasts. At the beginning of each year, all naval vessels and establishments are supplied by this Section with a bound copy of the *Avisos a los Navegantes* for the previous year, and also of all publications issued by the Office.

The *second Section* deals with the construction of charts and all attendant calculations ; has in its care all original charts and plans, copper plates, *etc.* from which the charts are printed, and carries out the engraving and correction of such plates.

The *third Section* is in charge of all hydrographic and meteorological instruments, and sees to their repair and testing as necessary ; it has charge also of all descriptions of stores necessary for hydrographic work and surveying ships ; it corrects all charts, plans, Sailing Directions and other publications which are in stock ; it is also in charge of the issue of these publications and hydrographic and meteorological instruments.

The Division of Navigation has two sections :

*First Section.* — Compasses and Nautical Instruments.

*Second Section.* — Chronometer section.

The Division controls the Bureau of Information for the Mercantile Marine.

*First Section.* — This Section has charge of all the compasses and nautical instruments in store ; amongst which are included magnetic and gyro compasses, bearing plates, sextants, reflecting circles, *etc.* It is responsible for keeping them in repair and for their testing as necessary.

*Second Section.* — This Section has under its care the chronometers

and deck watches for the Navy, and superintends the Astronomical Observatory and all observations for terrestrial magnetism. It tests and rates the chronometers under different temperatures, the tests lasting about six months.

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Since the receipt of the report on which the above article was based, the Bureau has been informed that Captain EMILIO GUNTHER U. was appointed Director of the Department of Hydrography and Navigation on 25th. February 1925.

