REGIMEN OF COASTS

Hydrographic elements of approaches to Ports.

by A. DE ROUVILLE — Paris 1942.

Inspecteur général des Ponts et Chaussées (Inspector general of the French Department of Civil Engineering and Highways) A. de Rouville has just published an important book which is the outcome of his great experience and fills up a gap in the sense that it constitutes a systematic presentation of the hydrographic phenomena of the regimen of the coasts of France, her colonies and some other countries. It contains in a condensed form the results of his experience, manifold works and minute investigations.

The book is divided into five parts.

The first part points out the various operations or investigations which it may be advisable to undertake in order to study the regimen of a coast and its variations, the different kinds of loose bottom materials and the factors which bear on these matérials : waves, currents, winds. The author points out the deformation which is undergone by waves round capes and constructive works as well as the effect of breakers due to shoals and artificial works together with the action of these works on the regimen of the adjacent coast; he studies variations in the conditions of coasts according as they are abrupt or low. The important chapters VIII and IX deal with the study of singular points in the littoral and the application of experience of coast regimen to the tracing of harbours. Mr. de Rouville investigates cases of formation of lagoons ; offshore bars and currents which occur in passes (graus), he also considers various forms of river mouths and the formation of bars (1).

A special study of the arrangement of harbours deals with the orientation and form to be given to the entrance according to the direction of the winds, currents and deposit movements; the orientation to be adopted for quays and jetties is also considered.

After having thus grouped the general conditions relating to the regimen of coasts and the approaches to ports, the author, in the second part, makes a survey of the French coast ports and points out the application which has been made of the foregoing principles. The varied character of the coasts makes this survey very complete and instructive. Particular stress is laid on the work carried out in the harbours of Boulogne and particularly of Havre and Saint-Nazaire. Notable features, changes in depths, currents, work done and projected relating to the estuaries of the Seine, Loire and Gironde Rivers as well as the Arcachon Basin, are set frth in a both concise and very clear manner.

The ports of the Mediterranean coast are also described and considered from Port-Vendres, noted for its very important traffic by large steamers with Algeria, to Mentone. This tideless sea with very small alluvial deposits but generally greater depths offers different problems in connection with which it is very useful to consider already adopted solutions. In this respect, we find a very interesting study regarding the transport of sands west of the Rhône river mouth, the delta itself, the successive enlargements of the port of Marseilles together with the difficulties of approach due to the mistral.

The ports of Corsica are next considered, then those of Tunis, Algeria, Morocco (with the exception of the port of Casablanca).

The author further considers instructive problems connected with some of the ports of French Colonies, at the mouth of the Senegal river, at Abidjan on the Guinea coast at Pointe-Noire in French Equatorial Africa, at Madagascar, Tamatave and Majunga, at Haïphong in French Indo-China. He further describes, in pursuance of principles set forth, work carried out before 1935 in some large foreign ports such as Port-Saïd, in the ports on the coasts of Italy, Spain, England, Belgium (Zeebrugge), Netherlands (Ymuiden), Germany, Denmark, on the coasts of the Baltic and Black seas (Danube Mouth).

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(1) See: *Hydrographic Review*, Vol. XVI, n° 1, pages 113-116.

The last five chapters of this part deal, from the view point of application of rules and drifting of alluvial deposits, with the coasts of Japan, India (Madras), U.S.A., the Argentine Republic and Chile

The last part of the work is an analytical classification in 78 paragraphs of the teachings derived from the preceding parts. It is calculated to considerably facilitate the study of questions concerning works in ports by referring to the various monographs of the ports which have been considered and constitutes an addition to the possibilities of utilization of this valuable publication.

Numerous maps and plans of nearly all the parts described make it easy to follow the setting forth of features and works as well as the application of the rules which should govern the carring out of work at sea, such rules being constantly referred to.

The book will not only be valuable to those responsible for projected maritime work, it will also be of great service to hydrographic surveyors making new surveys requiring to be compared with the results of previous ones; it will also be useful to all the seamen who will be called upon to express an opinion on new projected works.

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