

Port Engineering by PER BRUUN, *Gulf Publishing Co., Houston, Texas, 2nd ed., 1976, 586 pp. Price U. S. \$ 41.95.*

Prof. Per Bruun in his book has synthesized, from a vast variety of sources, the latest information on engineering topics related to port and harbour development. He has also developed many new ideas and concepts himself after many years of active research. Prof. Bruun starts with a discussion on modern trends in port engineering followed by several chapters dealing with important subjects such as port navigation, breakwaters, jetties, wharves, quays, fenders, dolphins, mooring devices etc. Then he presents a discussion on the various port transportation systems. Being an expert of international repute in coastal engineering and noted specialist in the field of coastal processes and coastal structures, Prof. Bruun has added three chapters on littoral drift and estuarine sedimentation problems, coastal geomorphology and tidal inlets. Sediment transport and hydraulic problems related to harbour development have thus received relatively more attention in Prof. Bruun's Book. The last two chapters deal with dredging technology and fishing as well as small craft harbours. Geotechnical and hydrodynamic problems related to pile foundations, anchored bulk heads, ship berthing, sand tracers, container ships and their terminals, wave forces on vertical

wall breakwaters and fishery harbour planning have been treated by well known scientists in seven appendices.

The book can be used as a reference by practising engineers involved with design and planning of either large or small port installations. The book would be of great value to developing countries like India where the need for improved fishing ports, small craft harbours as well as bigger ports to handle different types of vessels of increasing size and number is fast increasing. The most commendable part of the book is its examples. All discussions are supported by many illustrative diagrams and photographs. All designs and layouts are amply exemplified by case-studies of existing or proposed facilities. This book, therefore, will be of great value to practising engineers, teachers as well as students who would like to be specialized in port engineering. It is a valuable edition to any library and I shall recommend it to all marine scientists who are involved in the problem of coastal zone management.

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