Use of Concrete Armor Units for Shore Protection in Hawaii and the Pacific

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Abstract

Concrete armor units have been used for shore protection in Hawaii and the Pacific for several decades. Concrete armor units offer the advantages of increased stability and smaller size when compared with armor stone. Concrete armor units are also well-suited for island environments where sufficient armor stone may not be available. Construction of an engineered armor unit structure, however, requires careful placement to achieve proper interlocking and stability. The individual characteristics, design parameters, and suitability of the common types of concrete armor units will be presented, along with comparisons with armor stone. The recent use of concrete armor units, along with challenges and solutions, will be discussed through a series of case studies.