



Review

Dredged marine sand in concrete: An experimental section of a harbor pavement

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ABSTRACT

This research work describes three experimental sections of a harbor pavement made with three different concretes. The influence of dredged marine sand (DMS) from Port of Sant Carles de la Ràpita (Tarragona, Spain) as a fine aggregate on the production of concretes was analyzed, and its properties were determined. The three concretes were produced at a homologated plant (UNILAND): C1 (control concrete), C2 (concrete made with DMS as corrective fine sand) and C3 (concrete made with DMS as corrective fine sand and reinforced with plastic fibers PF). The fresh and hardened properties of concretes made with DMS approached the results of the control concrete.

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1. Introduction

Dredging works (enlarging and deepening access channels, achieving appropriate water depths along waterside facilities,

etc.) are usually required in order to carry out maintenance activities in many ports all over the world. Maintenance dredging work such as removing accumulated sediments from the bottom of dredged channels is also necessary. During these works possible environmental impacts related to the extraction process could happen. Considering the huge volumes of sediments generated by dredging, some guidelines developed at the level of national and international policy might guarantee the best performance of

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