

Durability Requirements for Reinforced Concrete Construction in Aggressive Marine Environments

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(Received 18 May 1989; revised version received 29 November;
accepted 25 January 1990)

ABSTRACT

Reinforced concrete is being increasingly used in the construction of important and high cost marine structures in aggressive environments such as found in the Arabian Gulf states. In such highly aggressive and corrosive environments, it is essential to select the correct concrete materials to match the exposure severity and to adopt proper construction practices to obtain a high quality dense and impermeable concrete. The paper outlines the nature of exposure and the deterioration mechanisms in seawater and provides a set of specific recommendations to obtain durable concrete in aggressive marine environments.

Key words: reinforced concrete, construction, durability, aggressive environment, marine environment