

Design and construction of sea crossing bridges

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ABSTRACT: Efficient infrastructure plays a key and vital role in the economic development of a country or region and in several parts of the world this has meant constructing crossings across wide rivers, bays and estuaries, which have been a hindrance to the movement of people and goods and related economic development. Where crossings have been in the form of a bridge instead of a tunnel, the choice on type of bridge has been based on comparison of environmental, durability, maintenance, safety, construction period and cost considerations.

The method of construction has a significant influence on bridge durability which has led to the use of large off-site pre-fabricated elements being used for construction. Design for environmental sustainability and extreme events have been another major consideration influencing the span and configuration of the bridge.

The key-note lecture will describe the author's personal experience in the design and construction of large sea-crossing bridges to achieve projects that safeguard the environment along with quality and durable construction, ease of inspection and maintenance and safety against extreme events.