

Durability of Composites in a Marine Environment [

Rajapakse, Yapa D.S., editor Davies, Peter, editor Springer Netherlands :

Imprint: Springer, 2014

Libros electrónicos descargables

Monografía

Composites are widely used in marine applications. There is considerable experience of glass reinforced resins in boats and ships but these are usually not highly loaded. However, for new areas such as offshore and ocean energy there is a need for highly loaded structures to survive harsh conditions for 20 years or more. High performance composites are therefore being proposed. This book provides an overview of the state of the art in predicting the long term durability of composite marine structures. The following points are covered: {u2022} Modelling water diffusion {u2022} Damage induced by water {u2022} Accelerated testing {u2022} Including durability in design {u2022} In-service experience. This is essential reading for all those involved with composites in the marine industry, from initial design and calculation through to manufacture and service exploitation. It also provides information unavailable elsewhere on the mechanisms involved in degradation and how to take account of them. Ensuring long term durability is not only necessary for safety reasons, but will also determine the economic viability of future marine structures

Título: Durability of Composites in a Marine Environment Recurso electrónico] edited by Peter Davies, Yapa D.S. Rajapakse

Editorial: Dordrecht Springer Netherlands Imprint: Springer 2014

Mención de serie: Solid Mechanics and Its Applications 0925-0042 208

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ISBN: 9789400774179

Autores: Rajapakse, Yapa D.S., editor Davies, Peter, editor

Punto acceso adicional serie-Título: Engineering Springer-11647. Solid Mechanics and Its Applications 0925-0042 208

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