

RISPECT

Risk-Based Expert System for Through-Life Ship Structural Inspection and Maintenance and New-Build Ship Structural Design

- End user: Ship Owners and Operators, Repairers, Inspection Bodies, Classification Bodies



The main objective of the project is to provide to the shipping companies (owners, managers) a useful tool to aid the structural integrity management of ships. This is with a view to optimising the overall management of shipping operations and trades.

The project is addressed to two particular types of ship: Bulk carriers and Tankers. The first challenge is the creation of a standardised methodology for performing inspection on-board a ship. Appropriate recording tools and codification will be adopted in order to store, without the risk of misunderstanding, inspection data pertaining to structural issues (cracks, deformation, indents, coating conditions, corrosion, thickness reduction).

Such data from individual ships including historical inspection data from a number of ships will be stored in a Central Statistical Database (CSD) in a form ensuring

confidentiality. The database would be fed with information coming from all the different actors involved during the life-cycle of a ship (shipyards, shipping companies, classification societies, inspection and service societies, etc.) and addressed principally for managerial use. This project will provide a better methodology that will (on an ongoing basis) combine detailed analysis of long term experience from large numbers of ships and the reliability/risk-based methods applied to individual ships to provide useful and justifiable risk-based inspection plans and design guidance. This will lead to better inspections, more important defects being found and repaired, better design, fewer pollution incidents and increased safety.

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