

Safe Return to Port

Approval and Systems Availability Analysis

A ship is its own best lifeboat

Entering into force on 1st July 2010, this new regulation, applied to Passenger Vessels and highly occupied Special Purpose Ships recognises the well know adage that “A ship is its own best lifeboat”.

The International Maritime Organisation (IMO) has introduced via SOLAS, new regulations concerning the availability of essential ship systems ‘post-casualty’ in order that a ship may be able to Safely Return to Port following a wider range of casualties and subsequently require abandonment in fewer situations.

The Safe Return to Port regulations provide performance requirements for ‘essential systems’ that must be demonstrated to remain operational following fire and flooding damages that do not exceed a certain pre-defined ‘casualty threshold’. In addition to this, the regulations also describe the systems that must be available in ‘safe areas’ of the vessel following a fire casualty in which the casualty threshold is exceeded.

For each type of casualty, the assessment of Safe Return to Port is broken down into two steps. The first step is an overall systems assessment in which the availability of all ‘essential systems’ is assessed in a structured, qualitative manner following all relevant fire or flooding scenarios. All systems that do not meet the performance requirements are identified as ‘critical systems’. These identified systems can then be re-designed and re-assessed or, assessed in detail.

The second step is a detailed assessment of any systems identified as 'critical'. If the engineering principles on which a system is designed are acceptable, then the compliance of critical systems may be demonstrated by engineering analysis.

SafetyatSea can help you to apply safe return to port correctly and efficiently

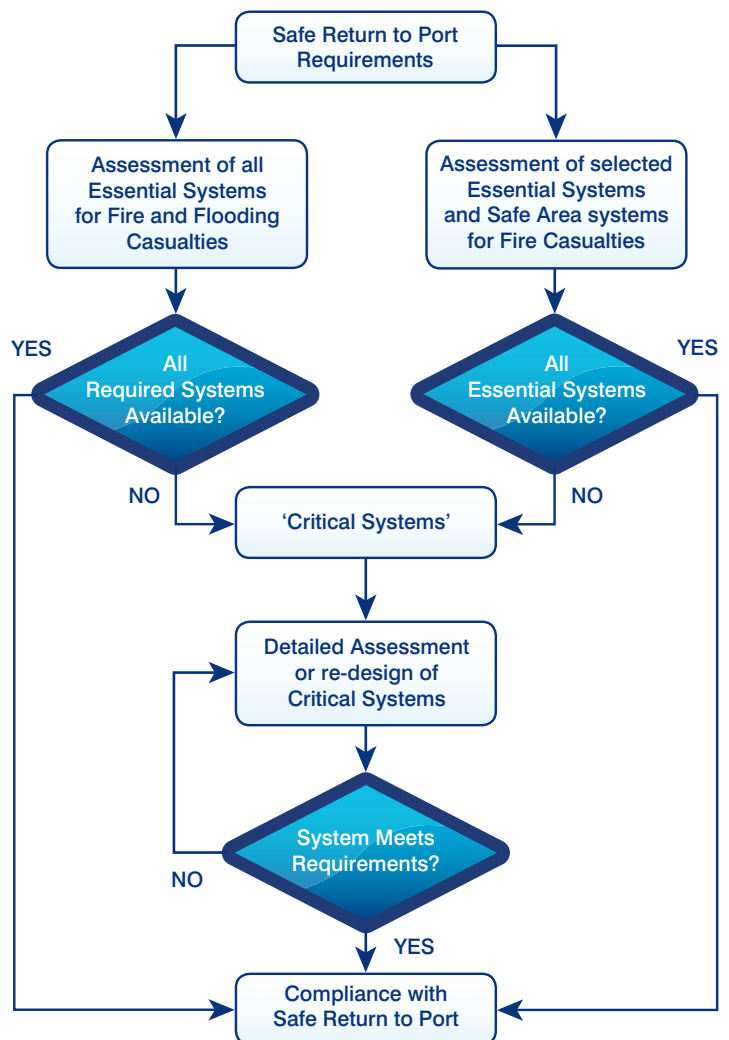
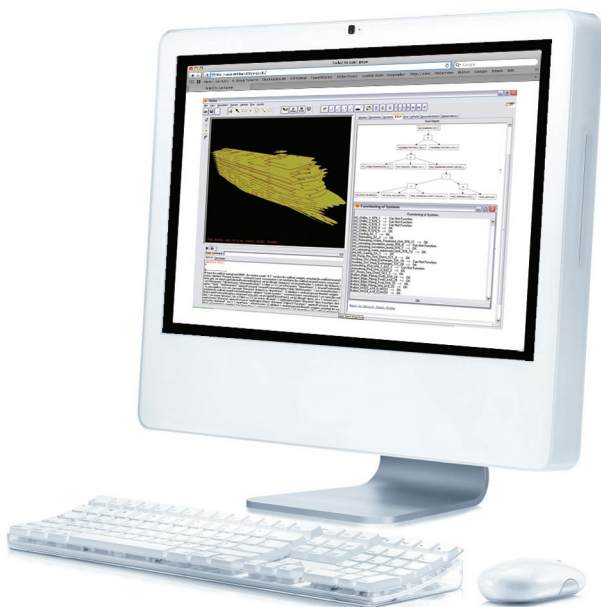
The company, in conjunction with the Ship Stability Research Centre at the University of Strathclyde have developed a unique software tool for performing the overall systems analysis. This software, known as Systems AVailability ANalysis Tool (SAVANT) enables the components and connections involved in complex and interrelated ship systems to be easily modelled. This is done within the geometric subdivision of the vessel by the use of simple logical expressions defining dependency.

SAVANT allows all of the IMO required essential systems to be modelled in one analysis, including the connections between systems. The damage scenarios required by the regulations are then input into the SAVANT model and the availability of each of the essential systems is determined for each damage case.

Further assessment of any systems identified as 'critical' is then carried out by **SafetyatSea**, either by consulting the designer on alterations to the original design, or by detailed engineering analysis to demonstrate the adequacy of the existing design.

SafetyatSea have already been involved in a number of both commercial and research projects relating to the new regulations and systems availability analysis and are ideally placed to provide any assistance required by ship owners, builders and designers alike regarding Safe Return to Port.

Safe Return to Port Method



Further Information

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