

Safety Studies



Overview

Relevant technical safety studies are the foundation for quantified risk assessments, ensuring Safety Cases demonstrate regulatory compliance based on thorough and accurate analysis. In addition to initial Safety Case development, safety studies can also be used during:

- Concept design to identify appropriate solution in line with safety regulations
- Ongoing operational safety management to ensure risks to personnel, plant and environment adhere to internal safety standards
- Risk based decision making at any stage throughout the lifecycle of the asset
- To support the material change to a Safety Case

RMRI have prepared numerous safety studies for a variety of assets including accommodation jack-up rigs, flotels, and offshore production installations.

Fire and Explosion Hazard Assessment (FEHA)

FEHAs provide a client with a full understanding of the fire and explosion events associated with their asset so they can determine whether the systems in place for fire and explosion detection, control and mitigation are adequate.

FEHA studies provide information on the immediate physical consequences and extent of events, as well as the potential for escalation.

At RMRI, we utilise the PHAST software, the most comprehensive hazard analysis tool, to examine the progress of a potential accident and model the consequences of fire and explosion on surrounding infrastructure and personnel.

Marine and Mechanical Hazard Assessment (MMHA)

MMHAs address major hazards other than fire and explosion; for example, structural failure, ship collision and helicopter accident. For each of the major hazards identified, the potential causes, initiating events and consequences of incidents are evaluated and necessary measures for prevention, detection, control or mitigation are determined.

Egress, Temporary Refuge, Evacuation, Escape and Rescue Assessment (ETREERA)

An ETREERA considers major accident hazards that could lead to impairment of emergency facilities through direct flame impingement, thermal radiation, explosion overpressure, smoke, or toxic gas. This assessment is undertaken to:

- Identify systems, equipment and procedures that will be provided to allow personnel to escape the immediate area of an incident, take temporary refuge and, if necessary, evacuate the installation and reach a place of safety
- Identify events with the potential to impair those systems to ensure that provisions are adequate and offer a suitable level of protection on the installation

Emergency Systems Survivability Assessment (ESSA)

An ESSA investigates the vulnerability of key emergency systems to demonstrate that they are able to carry out their safety function under the conditions in which they are required. ESSA achieves this by:

- Identifying the major accident hazards (MAHs) during which each emergency system is required to perform a safety function
- For each emergency system, describing the system's survivability requirement for emergency system and assessing the survivability for each relevant MAH
- Identifying emergency systems that may be vulnerable to an MAH and estimating the probability of the emergency system failing to perform its safety function due to the effects of the MAH

Our Experience

Since 1992, we have produced a wide range of supporting safety studies for a variety of vessels and facilities to ensure our clients achieve their regulatory and operational requirements.

Further information

If you would like to discuss our risk management services further including how we can help you with safety studies or other technical safety requirements, please call Simon Bygrave on 01224 560 892 or email at sbygrave@rmri.co.uk.

Alternatively, for further information about our consulting, software and training solutions, please visit www.rmri.co.uk.

