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COURSE BROCHURE

Maritime Reliability & Safety Management Techniques Training Course

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Maritime Reliability & Safety Management Techniques is a 1-week training course for ship superintendents, marine engineers and fleet technical managers who must keep propulsion, auxiliary and safety-critical machinery available at sea, with a vessel reliability and safety plan as the work product. Owners, charterers and class surveyors now expect proof that machinery failures and shipboard hazards are controlled before they reach a casualty report. The course is led by Jupiter Prime Training.

Why Maritime Reliability & Safety Management Techniques Matters Now

Three groups shape the subject today. Charterers vet vessels on detention history and machinery incidents, so a single blackout or steering gear failure can cost future fixtures. Crews rotate more often and carry less hands-on experience of older engines. Fleet offices receive more remote condition data than superintendents can review. A fleet that links its planned maintenance system to failure history keeps hire and protects crews; one that treats maintenance as a calendar exercise repeats the same defects. The course draws on ISO 55001 for asset management and EN 13306 for maintenance terminology, applied to vessels.

Who Gains Most from Maritime Reliability & Safety Management Techniques

- Superintendents who approve shipboard maintenance, dry-dock scopes and spares for a group of vessels
- Chief and second engineers responsible for main engine, generator and pump availability
- Fleet technical leads who own the planned maintenance system and its job library
- Shore safety staff who track hazard reports, near misses and corrective actions
- Marine assurance staff who prepare vessels for vetting and class surveys

A fleet technical department gains most when superintendents and senior sea staff attend together and agree one approach to defect reporting.

Maritime Reliability & Safety Management Techniques Capabilities

Participants practise linking machinery defects, hazard reports and maintenance jobs on one vessel so that fleet decisions rest on evidence from engine room logs.

- Rank shipboard machinery by criticality to propulsion, steering and power — superintendent spares and dry-dock budgets
- Assess planned maintenance system job intervals against running hours and defect history — chief engineers
- Apply failure mode and effects analysis to a critical system — fleet technical reviews
- Build a shipboard hazard identification and risk register — masters and safety officers
- Calculate machinery availability and repeat-defect rates — owners and charterers
- Design a vessel reliability and safety plan — fleet management meetings

Key Maritime Reliability & Safety Management Techniques Terms

- Planned Maintenance System PMS — the shipboard schedule of maintenance jobs set by running hours or calendar, with records of work done.
- Critical Equipment — machinery whose sudden failure could create a hazardous situation, such as steering gear or emergency generators.
- Failure Mode and Effects Analysis FMEA — a method that lists how each component can fail and the effect on the vessel.
- Hazard Identification HAZID — a structured session that names hazards of a task or system before work begins.
- Permit to Work — a written control that authorises hazardous jobs such as hot work or enclosed space entry.
- Near Miss — an event that could have caused harm or damage but did not, reported to prevent recurrence.

Maritime Reliability & Safety Management Techniques Day by Day

Day 1: Vessel Reliability and Safety Context

- Machinery Failure and Casualty Patterns at Sea — Where Fleets Lose Hire
- ISO 55001 Asset Principles for Ships — Linking Machinery to Owner Goals
- EN 13306 Maintenance Terms on Board — One Language for Sea and Shore
- Vetting and Class Survey Expectations — Evidence Superintendents Must Hold
- Engine Room Walkdown Routines — Daily Condition Checks by Watchkeepers

Day 2: Planned Maintenance and Critical Equipment

- Critical Equipment List for Propulsion, Steering and Power — Testing Frequency
- Planned Maintenance System Job Library — Running Hours Versus Calendar Intervals
- Condition Monitoring of Engines and Pumps — Vibration, Lube Oil and Thermography
- Spares Holding on Board — Critical Spares Against Port Availability
- Dry-Dock Work Specification — Scoping Hull and Machinery Jobs

Day 3: Failure Analysis on Board

- Defect Reporting and Failure Coding — Quality of Fleet Data
- FMEA for Fuel and Cooling Systems — Ranking Failure Effects
- Root Cause Analysis of Blackouts — Preventing Repeat Power Loss
- Machinery Availability and Repeat-Defect Rates — Fleet Comparison
- Lessons Learned Circulars — Sharing Findings Across Sister Ships

Day 4: Shipboard Hazards and Safety Controls

- HAZID Sessions for Engine Room Tasks — Hazards Before Work Starts
- Risk Matrix for Shipboard Operations — Accepting or Reducing Risk
- Permit to Work and Isolation on Board — Hot Work and Enclosed Spaces
- Near Miss Reporting and Trend Review — Leading Safety Signals
- Emergency Generator and Fire Pump Tests — Readiness of Safety Systems

Day 5: Practising the Vessel Reliability and Safety Plan

- Critical Equipment and PMS Findings Applied — Case Vessel Gaps
- FMEA Results Into Maintenance Jobs — Revised Intervals
- Hazard Register Into Safety Controls — Owners and Timelines
- Reliability and Safety Indicators — Monthly Fleet Dashboard
- Vessel Reliability and Safety Plan — Actions, Owners and Review Points

Applying Maritime Reliability & Safety Management Techniques After the Course

- Review the critical equipment list of one vessel and match each item to tested PMS jobs.
- Lead a HAZID session with sea staff on one recurring engine room task and update the hazard register.

Maritime Reliability & Safety Management Techniques Questions FAQ

What is Maritime Reliability & Safety Management Techniques and why does it matter now?

It is the set of methods that keep shipboard machinery available and hazards controlled. It matters now because charterers, owners and class surveyors judge vessels on machinery incidents and the evidence behind maintenance.

Which roles gain most from Maritime Reliability & Safety Management Techniques?

Superintendents, chief engineers and fleet technical managers gain most. Shore safety and marine assurance staff also benefit from the hazard and defect reporting methods.

How does Maritime Reliability & Safety Management Techniques differ from a marine emergency response course?

It prevents failures rather than responding to them. An emergency response course drills crews for fire, flooding and abandonment, while this course works on machinery reliability, maintenance intervals and hazard controls before an incident.

What do you bring back from Maritime Reliability & Safety Management Techniques?

You bring back a plan for one vessel. It links critical equipment, PMS intervals, failure analysis findings and hazard controls to named owners and review dates.

Maritime Reliability & Safety Management Techniques: The Way Forward

The vessel reliability and safety plan turns engine room evidence into fleet decisions. Its first decision is which critical machinery needs revised maintenance intervals. Superintendents, chief engineers and shore safety staff use it in monthly fleet reviews. After a full voyage cycle, it is worth comparing repeat defects across sister ships to see which controls should become fleet standard.