



Subject Area no. 16: Critical equipment

Principle: The company maintains an inspection programme to determine the condition of critical equipment & systems to verify and document they are fit for service.

Level	Expectations	Targets	Suggested objective evidence
Basic	<p>Critical equipment & systems are listed in the SMS and PMS.</p> <p>Procedures are in place to manage the maintenance of critical equipment.</p> <p>When critical equipment becomes defective the company is promptly notified.</p>	<p>Critical equipment is identified by a documented risk assessment or other hazard identification method. The list of critical equipment should be periodically reviewed and, when needed, amended.</p> <p>A responsible person in the company is informed when critical equipment is taken out of service for maintenance; this activity is covered by a risk assessment.</p>	<p>Critical equipment procedures</p> <p>Critical equipment in PMS</p> <p>Risk assessment/hazid/FMEA.</p> <p>Defect reports of critical equipment.</p>



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Basic (cont.)	<p>When critical equipment cannot be maintained according to the schedule, the company takes appropriate action,</p> <p>There are procedures for the regular testing of stand-by equipment or systems that are not in continuous use.</p>	<p>When, under exceptional circumstances, it is not possible to complete planned maintenance on critical equipment as scheduled, senior management approval is obtained, which is only given following the review of a risk assessment.</p> <p>Stand-by equipment reliability is ensured through maintenance, alarm testing & alternate running. There are procedures to ensure redundancy during critical operations.</p>	<p>Approvals for deferring scheduled maintenance of critical equipment and systems.</p>



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Intermediate	<p>Work instructions are available in the planned maintenance system for critical equipment and systems.</p> <p>A procedure is in place to test and record performance for all critical equipment and systems.</p>	<p>Work instructions may include:</p> <ul style="list-style-type: none">• Spare parts and tools required to conduct the maintenance.• How the maintenance is carried out.• Risk assessment for the job to be undertaken.• Defined approval requirements. <p>Comparisons are made between performance data and manufacturer's test data periodically to help determine equipment health.</p>	<p>work instructions</p>
Advanced	<p>Designated personnel are responsible for the maintenance and repair of critical equipment and systems.</p>	<p>The personnel responsible for performing maintenance and repairs on critical equipment and systems have the appropriate skills and competencies to perform the task.</p> <p>This may include third party contractors.</p>	<p>Critical equipment competencies. Approved technicians for critical equipment repair.</p>



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Excellence	The reliability and performance of critical equipment or systems and associated alarms is monitored and analysed.	<p>The company continually improves its maintenance system by forecasting necessary maintenance of critical systems, in order to prevent incidents or equipment downtime. Methods may include:</p> <ul style="list-style-type: none">• Condition-based monitoring.• Trends and historical data.• Fleet experience.• Manufacturer's recommendations.• Predictive maintenance tools.	critical equipment reliability analysis.