



| Subject Area no. 16 Critical equipment | | | |
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| 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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| Level | Expectations | Targets | Suggested objective evidence |
| <p>Basic (contd)</p> | <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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| Level | Level | Level | Level |
| 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> | work instructions |
| Advanced | Designated personnel are responsible for the maintenance and repair of critical equipment and systems. | <p>The personnel responsible for performing maintenance and repairs on critical equipment and systems have the appropriate skills and competencies to perform the task. This may include third party contractors.</p> | <p>Critical equipment competencies.</p> <p>Approved technicians for critical equipment repair.</p> |



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| Level | Expectations | Targets | Suggested objective evidence |
| 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. |

