



Subject Area no. 17: Engine room operations & bunkering

Principle: The company operates engine room and plant facilities effectively to prevent injury to people and damage to the environment.

Level	Expectations	Targets	Suggested objective evidence
Basic	The company has procedures in place for the safe operation of machinery plant.	The procedures cover: - - engine room organisation and responsibilities, UMS operation, manning levels for each E/R operational condition, procedures for taking over watch/duty - communications with bridge	Verification of procedures and checklists Verification of logbooks & abstracts, equipment running hours, etc.



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Level	Expectations	Targets	Suggested objective evidence
Basic (cont'd)	The company has procedures covering bunkers, fuel or gas, as appropriate	The procedures cover: - - Ensuring sufficient fuel, including required reserves, is carried on board, - Maintaining the quality of fuel, and prevention of contamination, - Ensuring bunkering and fuel transfers are carried out safely, provision of SDS and precautions related to H2S and Benzene - Persons responsible for bunkering and fuel transfer operations, - Fuel change over procedures	Bunker calculations and tank(s) allocation. Maximum filling levels of bunker tanks. manning requirements. communication with supplier Requirements for entries into engine room logbooks and oil record books.



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Intermediate	<p>The chief engineer verifies that engine room procedures and standards are being maintained.</p> <p>The company has comprehensive procedures to cover bunkering. Standardised forms are used for planning and recording bunker operations.</p>	<p>Chief engineers carry out an engine room operations verification, once per contract, following a format set by the company.</p> <p>Procedures cover required checks and activities during the following stages:</p> <ul style="list-style-type: none"> - – Pre-arrival; – Prior to bunkering; – During bunkering; – On Completion. <p>Procedures also cover fuel sampling, testing and storage.</p>	<p>Verification of: -</p> <ul style="list-style-type: none"> testing of high level and overflow alarms testing and calibration of gas testing equipment testing of bunker pipelines bunkering plan bunkering checklist deployment of SOPEP equipment, plugging of scuppers, save-alls, etc. checking of tanks manifold watch topping off hose connection/disconnection, etc.



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Advanced	<p>Visiting superintendents verify engine room standards during visits.</p> <p>The company has processes for ensuring fuel stability and compatibility.</p> <p>Operations level staff are encouraged to participate in planning of bunkering operations, as part of their training.</p>	<p>Superintendents carry out an annual verification of engine room standards based on a formal checklist, addressing engine room operations and practices.</p> <p>The company supplies compatibility test kits to its vessels</p> <p>Operations level staff actively participate in planning, line setting, topping off and calculations of bunkering operations.</p>	<p>Verification of forms and their use.</p> <p>Use of test kits.</p> <p>Verification of training records and appraisals.</p>



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Excellence	<p>The company uses approved laboratory fuel oil analysis for testing bunkers supplied to vessels.</p> <p>Bunkering operations and verification of procedures is regularly carried out by shore personnel during inspections and audits.</p> <p>Oil pollution drills are carried out regularly.</p>	<p>Independent laboratory analysis of fuel oil is used to ensure quality.</p> <p>Superintendents carry out an annual verification of bunkering standards based on a formal checklist, addressing operations and practices.</p> <p>Oil pollution drills are carried out at least quarterly.</p>	<p>Independent analysis of fuels.</p> <p>Audit reports Inspection forms.</p> <p>Records of drills and training</p>