

Minimum standard of competence in basic training for oil and chemical tanker cargo operations (STCW Reg V/1-1)

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
<p>Contribute to the safe cargo operation of oil and chemical tankers</p>	<p>Basic knowledge of tankers:</p> <ul style="list-style-type: none"> .1 types of oil and chemical tankers .2 general arrangement and construction <p>Basic knowledge of cargo operations:</p> <ul style="list-style-type: none"> .1 piping systems and valves .2 cargo pumps .3 loading and unloading .4 tank cleaning, purging, gas-freeing and inerting <p>Basic knowledge of the physical properties of oil and chemicals:</p> <ul style="list-style-type: none"> .1 pressure and temperature, including vapour pressure/temperature relationship .2 types of electrostatic charge generation .3 chemical symbols <p>Knowledge and understanding of tanker safety culture and safety management</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme 	<p>Communications within the area of responsibility are clear and effective</p> <p>Cargo operations are carried out in accordance with accepted principles and procedures to ensure safety of operations</p>

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<p>Take precautions to prevent hazards</p>	<p>Basic knowledge of the hazards associated with tanker operations, including:</p> <ul style="list-style-type: none"> .1 health hazards .2 environmental hazards .3 reactivity hazards .4 corrosion hazards .5 explosion and flammability hazards .6 sources of ignition, including electrostatic hazards .7 toxicity hazards .8 vapour leaks and clouds <p>Basic knowledge of hazard controls:</p> <ul style="list-style-type: none"> .1 inerting, water padding, drying agents and monitoring techniques .2 anti-static measures .3 ventilation .4 segregation .5 cargo inhibition .6 importance of cargo compatibility .7 atmospheric control .8 gas testing <p>Understanding of information on a Material Safety Data Sheet (MSDS)</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme 	<p>Correctly identifies, on an MSDS, relevant cargo-related hazards to the vessel and to personnel, and takes the appropriate actions in accordance with established procedures</p> <p>Identification and actions on becoming aware of a hazardous situation conform to established procedures in line with best practice</p>

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<p>Apply occupational health and safety precautions and measures</p>	<p>Function and proper use of gas-measuring instruments and similar equipment</p> <p>Proper use of safety equipment and protective devices, including:</p> <ul style="list-style-type: none"> .1 breathing apparatus and tank-evacuating equipment .2 protective clothing and equipment .3 resuscitators .4 rescue and escape equipment <p>Basic knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to oil and chemical tankers, including:</p> <ul style="list-style-type: none"> .1 precautions to be taken when entering enclosed spaces .2 precautions to be taken before and during repair and maintenance work .3 safety measures for hot and cold work .4 electrical safety .5 ship/shore safety checklist <p>Basic knowledge of first aid with reference to a Material Safety Data Sheet (MSDS)</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme 	<p>Procedures for entry into enclosed spaces are observed.</p> <p>Procedures and safe working practices designed to safeguard personnel and the ship are observed at all times</p> <p>Appropriate safety and protective equipment is correctly used</p> <p>First aid do's and don'ts</p>

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Carry out fire-fighting operations	<p>Tanker fire response organization and action to be taken</p> <p>Fire hazards associated with cargo handling and transportation of hazardous and noxious liquids in bulk</p> <p>Fire-fighting agents used to extinguish oil and chemical fires</p> <p>Fixed fire-fighting foam system operations</p> <p>Portable fire-fighting foam operations</p> <p>Fixed dry chemical system operations</p> <p>Spill containment in relation to fire-fighting operations</p>	<p>Practical exercises and instruction conducted under approved and truly realistic training conditions (e.g., simulated shipboard conditions) and, whenever possible and practicable, in darkness</p>	<p>Initial actions and follow-up actions on becoming aware of fire on board conform with established practices and procedures</p> <p>Action taken on identifying muster signal is appropriate to the indicated emergency and complies with established procedures</p> <p>Clothing and equipment are appropriate to the nature of the fire-fighting operations</p> <p>The timing and sequence of individual actions are appropriate to the prevailing circumstances and conditions</p> <p>Extinguishment of fire is achieved using appropriate procedures, techniques and fire-fighting agents</p>
Respond to emergencies	<p>Basic knowledge of emergency procedures, including emergency shutdown</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience</p> <p>.2 approved training ship experience</p> <p>.3 approved simulator training</p> <p>.4 approved training programme</p>	<p>The type and impact of the emergency is promptly identified and the response actions conform to the emergency procedures and contingency plans</p>

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<p>Take precautions to prevent pollution of the environment from the release of oil or chemicals</p>	<p>Basic knowledge of the effects of oil and chemical pollution on human and marine life</p> <p>Basic knowledge of shipboard procedures to prevent pollution</p> <p>Basic knowledge of measures to be taken in the event of spillage, including the need to:</p> <ul style="list-style-type: none"> .1 report relevant information to the responsible persons .2 assist in implementing shipboard spill-containment procedures 	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme 	<p>Procedures designed to safeguard the environment are observed at all times</p>