

**SKILLS FRAMEWORK FOR SEA TRANSPORT
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Ship Operations					
TSC	Cargo Handling and Stowage					
TSC Description	Handling and stowage of cargo and ensuring its care during the voyage					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		STP-SOP-2001-1.1	STP-SOP-3001-1.1	STP-SOP-4001-1.1	STP-SOP-5001-1.1	STP-SOP-6001-1.1
		Monitor the loading, stowage, securing and unloading of cargo and their care during voyage	Monitor cargo operations and report defects and damage to cargo spaces	Plan and ensure safe loading, stowage, securing and care during the voyage and unloading of cargo	Formulate strategies to improve overall cargo handling and stowage operations	Lead overall cargo handling and stowage activities to ensure operational excellence
Knowledge		<ul style="list-style-type: none"> • Cargo handling, stowage and securing • Dangerous, hazardous and harmful cargo • Effect of dangerous, hazardous and harmful cargo on safety of life and of ships • Precautions to observe in connection with particular types of cargo • Procedures for safe handling, stowage and securing of cargo and stores • International Maritime Dangerous Goods (IMDG) codes • Identification of IMDG labelling 	<ul style="list-style-type: none"> • Cargo handling, stowage and securing • Parts of ship to be inspected for damage • Methods to identify and defects in cargo spaces and hatches • Procedures on how to carry out inspections • Procedures to maintain trim and stability during cargo operations • Procedures for safe handling, stowage and securing of cargo and stores • International Maritime Dangerous Goods (IMDG) codes 	<ul style="list-style-type: none"> • International regulations, codes and standards concerning safe handling, stowage, securing and transport of cargo • Effect of trim and stability on cargo and cargo operations • Stability and trim diagrams and stress-calculating equipment • Automatic data-based (ADB) equipment • International Maritime Dangerous Goods (IMDG) codes • Operational and design limitations of bulk carriers • Code of safe practice for cargo stowage and securing • Limitations on strength of vital constructional parts of standard bulk carriers • International Maritime Solid Bulk Cargo (IMSBC) codes 	<ul style="list-style-type: none"> • Proposed changes and upcoming revisions to international regulations, codes and standards on safe handling, stowage, securing and transport of cargoes • Competitor trends and developments on cargo handling and stowage practices • Efficient cargo handling and stowage practices • Impact of emerging technologies on cargo handling and stowage practices 	<ul style="list-style-type: none"> • Industry best practices for cargo handling and stowage operations • Internal and external factors impacting cargo handling and stowage strategies ranging from port constraints to environmental conditions • Emerging technological trends impacting cargo handling and stowage practices • Process improvement frameworks

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<p>Abilities</p>		<ul style="list-style-type: none"> • Carry out cargo operations in accordance with cargo plans • Ensure safety rules or regulations, equipment operating instructions and shipboard stowage limits are adhered to • Handle dangerous, hazardous and harmful cargo in compliance with international regulations and recognised standards and codes of safe practice 	<ul style="list-style-type: none"> • Ensure cargo operations are carried out in accordance with cargo plans • Establish and maintain communications during loading and unloading • Inspect and report defects and damage to cargo spaces, hatch covers and ballast tanks • Identify elements of ship structure which are critical to safety of ships • Maintain stability and stress during cargo operations • Adhere to standards for dangerous, hazardous and harmful cargo 	<ul style="list-style-type: none"> • Plan and execute cargo operations in accordance with established procedures and legislative requirements • Establish procedures for safe cargo handling in accordance with provisions • Ensure stress and stability conditions remain within safe limits at all times during voyages • Assess reported defects and damage to cargo spaces, hatch covers and ballast tanks 	<ul style="list-style-type: none"> • Review planning and execution of daily cargo handling and stowage operations • Formulate cargo handling strategies with an emphasis on cost effectiveness • Formulate dangerous cargo handling strategies to ensure safe cargo handling • Review existing cargo handling strategies and recommend safety improvements • Collaborate with key stakeholders to enhance efficiency of cargo handling and stowage planning practices 	<ul style="list-style-type: none"> • Oversee overall planning and execution of daily cargo handling and stowage operations • Oversee implementation of cost effective and dangerous cargo handling and stowage strategies • Instil safe cargo handling culture and practices across the organisation • Maintain communications with senior management to collaborate on cargo handling and stowage planning improvements
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