

SKILLS FRAMEWORK FOR MARINE AND OFFSHORE SKILLS MAP - SENIOR QUALITY ASSURANCE/QUALITY CONTROL ENGINEER			
Sector	Marine and Offshore		
Track	Production Engineering		
Occupation	Quality Engineer		
Job Role	Senior Quality Assurance/Quality Control Engineer		
Job Role Description	<p>The Senior Quality Assurance/Quality Control Engineer is responsible for developing Quality Assurance and Quality Control (QA/QC) monitoring and measurement plans that adhere to external regulations and standards and organisation's quality policies. He/She establishes and manages QA and compliance systems, and provides quality oversight to the Design, Production and Procurement departments on all quality-related matters.</p> <p>His duties require working outdoors on the shop floors, within dry docks and on-board ships to support quality inspections and enforcement, and must possess a level of physical fitness appropriate to the job requirements. He should be meticulous in nature to identify potential quality concerns across the organisation's operations.</p>		
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)
	Deploy quality assurance and quality control (QA/QC) policies, processes and procedures	Develop standard operating procedures (SOPs) for the QA/QC department	<ul style="list-style-type: none"> In accordance with: • Classification Society regulations; • Workplace Safety and Health (WSH) Act
		Integrate quality management into other departments' workflows and SOPs	
		Manage the implementation of policies and procedure revisions due to changes in legal requirements	
		Update the quality management system (QMS) to reflect legislative and organisational changes	
		Develop quality management resource and budget plans based on project requirement assessments	
		Identify gaps from quality reports and test cases to facilitate quality management and continuous improvements	
		Detect and report variations in the quality of operations, services or products from required standards	
		Isolate root causes of quality issues and develop corrective and preventative actions (CAPA) plans	
	Initiate external compliance audits	Assess QMS compliance and highlight critical and/or recurring issues to relevant teams and departments	
		Coordinate external audits with regulators, classification societies, service providers and customers	
		Monitor the integration of quality management principles based on internal audit reports	
		Review performance and due diligence reports on vendor quality to support procurement activities from a quality stand-point	
	Coordinate testing and commissioning	Develop inspection and testing plans (ITPs) for smaller scale projects, including development of technical test cases, test ware and test scripts	
		Define technical test requirements and create tactical plans for inspection activities	
		Oversee compilation, amendment, and review of inspection schedules	
Develop and adapt testing and commissioning procedures and parameters			
Plan, schedule and carry-out material, parts, equipment and systems testing			
Coordinate in-process technical testing and inspections during fabrication and installation			
Oversee commissioning processes			
Monitor quality deliverables from test groups			
Documentation and reporting	Report potential issues that may affect product quality to relevant stakeholders		
	Prepare final documentation dossiers and manufacturing data records (MRDs)		
	Manage documents and reports and adapt SOPs to meet specific project briefs		
	Record approved performance metrics and quality-related metrics of relevant departments		

		Document quality improvement activities and the effectiveness in improving quality		
		Review and approve technical QA/QC engineering documents and vendor quality documentation and certificates		
	Manage people and organisational function	Collaborate with team members to deliver high performance		
		Optimise utilisation of resources		
		Acquire and allocate resources to support operations		
		Provide suggestions for tweaks to business processes and operations to support change management initiatives		
		Support negotiations with relevant key internal and external stakeholders		
	Conduct basic modelling and forecasting analyses			
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
	Big Data Analytics	Level 4	Problem Solving	Advanced
	Business Negotiation	Level 4	Resource Management	Advanced
	Business Presentation Delivery	Level 4	Leadership	Intermediate
	Change Management	Level 3	Interpersonal Skills	Intermediate
	Commissioning Coordination	Level 4	Decision Making	Intermediate
	Continuous Quality Improvement	Level 4		
	Crisis Management	Level 3		
	Electrical Testing	Level 4		
	Emergency Response Management	Level 2		
	Financial Budgeting	Level 3		
	Financial Planning	Level 3		
	Manpower Forecasting	Level 3		
	Manufacturing Workflow Management	Level 4		
	Marine Engineering Calculations	Level 3		
	Material Inspection	Level 4		
	Naval Architecture Calculations	Level 4		
	Non-destructive Testing	Level 4		
	Operational Risk Management	Level 3		
	Organisational Performance Management	Level 3		
	Programme Management	Level 4		
	Quality Engineering Integration	Level 5		
	Quality Systems Management	Level 5		
	Service Excellence	Level 3		
	Staff Performance Management	Level 3		
	Stakeholder Management	Level 4		
	Structural Testing	Level 4		
Technical Inspection	Level 4			
Technical Writing	Level 4			
Value Engineering	Level 3			
WSH Culture Development	Level 2			
WSH Performance Management	Level 2			
Programme Listing	For a list of Training Programmes available for the Marine and Offshore sector, please visit: www.skillsfuture.sg/skills-framework/marineandoffshore			

The information contained in this document serves as a guide.