

SKILLS FRAMEWORK FOR MARINE AND OFFSHORE SKILLS MAP - ASSISTANT PRODUCTION ENGINEER			
Sector	Marine and Offshore		
Track	Production Engineering		
Occupation	Marine Production Engineer		
Job Role	Assistant Production Engineer		
Job Role Description	<p>The Production Section Manager/Head of Department leads the production department at the organisation and is in charge of ensuring efficient and productive operations in all projects. He/She acts as the liaison between other departments and ensures effective communication and seamless production workflow execution.</p> <p>He applies both technical and managerial skills to fulfil the responsibilities of managing both operations and employees within the department to meet the organisational business goals, leads a team of engineers and technicians, and is responsible for their training and development. He is comfortable with interacting with others frequently on the job, to direct and motivate a team to achieve operational goals.</p> <p>In the shipyard context, the Production Section Manager/Head of Department also takes full responsibility for organising and coordinating successful launches of ships and rigs into open water.</p>		
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)
	Manufacture marine components	Assist in drafting production workflows for projects	In accordance with: • Classification Society regulations; • Workplace Safety and Health (WSH) Act
		Advise manufacturing teams on-site to facilitate workflow implementation	
		Evaluate feasibility of machining techniques over alternatives by studying design requirements, time constraints and expertise required	
		Oversee use of new technologies in production	
		Assist in material selection, technical specifications preparation and material inspection for received spares and stores	
		Assist in equipment coding to ease segregation of products and equipment in production workflows	
		Raise shortcomings in material quality or machinery performance	
		Review work specifications to identify waste and cost reduction opportunities	
	Assemble ships, rigs and marine equipment	Establish assembly job requirements and sequence of operations	
		Coordinate transfer of sub-assemblies and/or work pieces across work stations	
		Plan appropriate methods and schedules for installation of specific machinery, equipment and/or systems	
		Carry out vibration and thermal analysis on test beds to evaluate performance in operating conditions	
		Select suitable non-destructive testing (NDT) methods for post-assembly testing	
		Review current assembly activities and present ideas for work improvement	
	Plan surface preparation and protection	Develop surface preparation and protection plans	
		Conduct feasibility studies of recommended surface preparation and protection application techniques	
		Plan locations, climate control and other factors for surface preparation and protection	
		Enforce workplace safety and health (WSH) compliance during blasting work	
	Execute launching operations	Ensure alignment of guides, rollers, airbags and other launching devices	
Oversee disconnection of ships and rigs from shore-based auxiliaries prior to launch			
Oversee loading of ballast tanks to specified capacity for stability upon launching			
Enforce adherence to WSH and quality assurance and quality control (QA/QC) policies			
Coordinate reinstatement of slipways after launch			
Prepare berths for new production operation after launch			

	Coordinate commissioning	Assist in conducting pre-commissioning inspections Coordinate survey inspections by owners, classification societies and other stakeholders Coordinate rectification of defects and other issues found		
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
	Additive Manufacturing	Level 3	Problem Solving	Basic
	Big Data Analytics	Level 3	Teamwork	Basic
	Commissioning Coordination	Level 3	Communication	Intermediate
	Component Assembly	Level 4	Creative Thinking	Basic
	Computer Numeric Control Operations	Level 3	Digital Literacy	Intermediate
	Electrical Testing	Level 3		
	Emergency Response Management	Level 2		
	Forming	Level 3		
	Incident and Accident Investigation	Level 2		
	Installation Planning and Execution	Level 3		
	Instrumentation and Control System Design	Level 3		
	Interface Management	Level 3		
	Joining and Welding	Level 3		
	Laser and Optics Application	Level 3		
	Launch Planning and Management	Level 4		
	Marine Engineering Calculations	Level 2		
	Marine Equipment and System Maintenance	Level 4		
	Marine Equipment Material Selection	Level 3		
	Materials Inspection	Level 3		
	Naval Architecture Calculations	Level 3		
	Non-destructive Testing	Level 4		
	Procurement Coordination and Policy Development	Level 3		
	Programme Management	Level 3		
	Quality System Management	Level 2		
	Robotics and Automation Application	Level 3		
	Scaffolding	Level 4		
	Service Excellence	Level 3		
	Structural Testing	Level 3		
	Surface Preparation and Protection	Level 3		
	System Architecture Design	Level 3		
System Configuration Management	Level 3			
Systems Integration	Level 3			
Technical Inspection	Level 3			
Technical Writing	Level 3			
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.