

**SKILLS FRAMEWORK FOR MARINE AND OFFSHORE  
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT**

<b>TSC Category</b>	Production Management					
<b>TSC</b>	Value Engineering					
<b>TSC Description</b>	Apply value principles to increase productivity and efficiency in production lines by reducing operational costs and waste					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
		<b>MAR-OPR-2002-1.1</b>	<b>MAR-OPR-3002-1.1</b>	<b>MAR-OPR-4002-1.1</b>		
		Apply methods that minimise wastage and operational costs in daily activities as per instructions	Detect shortcomings in manufacturing processes by carrying out value analyses and propose improvements	Develop procedures that minimise waste and operational costs for the manufacturing department by reviewing value analysis reports		
<b>Knowledge</b>		<ul style="list-style-type: none"> <li>Types of manufacturing processes pertaining to mechanical and electrical components, units, blocks and other marine components and structures</li> <li>Basic principles of mechanical and electrical engineering</li> <li>Basic principles of service engineering</li> <li>Methods of reducing operational waste</li> <li>Types of ships and rigs, terminologies and features</li> </ul>	<ul style="list-style-type: none"> <li>Principles of manufacturing workflow management</li> <li>Principles of structural and arrangement, equipment and electrical drawings</li> <li>Types of manufacturing processes</li> <li>Types of resource requirements</li> <li>Methods of waste reduction</li> <li>Relevant workplace safety and health (WSH) practices, guidelines and regulations</li> <li>Relevant quality assurance and quality control (QA/QC) policies and procedures</li> </ul>	<ul style="list-style-type: none"> <li>Advanced principles of mechanical and electrical engineering</li> <li>Advanced principles of mechanical and electrical drawings</li> <li>Methods of resource allocation</li> <li>Types of lean methodologies for reducing operational waste</li> <li>Principles of organisational behaviour</li> </ul>		

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<p><b>Abilities</b></p>		<ul style="list-style-type: none"> <li>• Reduce material and utilities wastage in daily activities</li> <li>• Apply improvements in manufacturing processes</li> <li>• Provide feedback regarding gaps in present processes</li> </ul>	<ul style="list-style-type: none"> <li>• Implement value analyses on manufacturing processes</li> <li>• Identify and analyse operational inefficiencies</li> <li>• Formulate modifications to manufacturing processes in adherence to relevant WSH and QA/QC requirements</li> <li>• Prepare technical reports with suggested modifications</li> </ul>	<ul style="list-style-type: none"> <li>• Stay abreast of industry best practices</li> <li>• Formulate policies for application</li> <li>• Consider resource requirements and feasibility while drafting new policies</li> <li>• Promote value engineering across the organisation</li> </ul>		
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