



# Subsea Engineering Competency Profile



## PRE-COMMISSIONING ELECTIVE

**PCC-002**

This competency demonstrates that the subsea engineer has sufficient knowledge to effectively and successfully specify, perform, supervise and approve the planning, and execution of subsea production and control system pre-commissioning.

Pre-commissioning includes all activities undertaken during installation and tie-in to prepare systems for production.

ELEMENT OF COMPETENCE	WHAT THIS COMPETENCE MEANS IN PRACTICE	INDICATORS OF ATTAINMENT
<p>Expert Knowledge of the following with respect to pre-commissioning activities:</p> <ul style="list-style-type: none"> <li>● Piping &amp; Instrument Diagrams (P&amp;IDs), Cause &amp; Effects (C&amp;E) Tables and System Diagrams</li> <li>● Permit to work and Isolations</li> <li>● HAZOP, HAZID and Risk Assessment</li> <li>● Operability and Constructability Review</li> <li>● Role of production supervisors / operators/technicians</li> <li>● Handover documentation</li> <li>● Systems Completion Management System</li> <li>● Safeguards on temporary equipment</li> <li>● Management of Change</li> <li>● International and Company Standards applicable to pre-commissioning</li> </ul>	<p>Capable of interpreting system limits, specification breaks and functionality from P&amp;IDs/C&amp;Es including the effect of changes to flow paths, under/over pressure, alarm and trip functionality.</p> <p>Capable of:</p> <ul style="list-style-type: none"> <li>● Working in accordance with work permits, implement isolations and lead risk reviews.</li> <li>● Leading pre-commissioning HAZOP, HAZID and risk assessments.</li> <li>● Leading pre-commissioning operability and constructability reviews.</li> <li>● Defining and specify acceptance and handover conditions.</li> <li>● Approving pre-commissioning strategy and vendor scope of work.</li> <li>● Approving pre-commissioning plans and procedures.</li> <li>● Preparing production systems and/or subsea Control System for handover to the Commissioning and Start-up Team</li> </ul>	<p>Refer to only as many Indicators of Attainment as you need to demonstrate the Element of Competence</p> <p>Has specified project specific acceptance conditions to be attained prior to handover from pre-commissioning to Commissioning and Start-up</p> <p>Has reviewed and commented on project isolations philosophies.</p> <p>Has lead task specific Special Risk Assessments to review isolations outside of Company Standards</p> <p>Has participated in HAZOP, HAZID and Risk Assessments as pre-commissioning lead</p> <p>Has specified project specific acceptance conditions to be attained prior to handover from pre-commissioning to Commissioning and Start-up</p> <p>Defined project specific handover documentation and certification</p> <p>Has specified safeguarding equipment to prevent exceeding specified design parameters for permanent equipment, such as pressure, high and low temperature</p>



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<b>ELEMENT OF COMPETENCE</b>	<b>WHAT THIS COMPETENCE MEANS IN PRACTICE</b>	<b>INDICATORS OF ATTAINMENT</b>
	<ul style="list-style-type: none"> <li>● Reviewing to ensure appropriate isolations are provided for pre-commissioning and instigate modifications where required.</li> <li>● Develop/modify/approve Company Pre-commissioning Specifications/Standards.</li> <li>● Approve MOCs having an impact on pre-commissioning</li> <li>● Determine and specify acceptance and handover condition.</li> <li>● identify if temporary equipment has the specified safeguards.</li> <li>● Ensure site records and certification meets the requirements of the Handover Dossier and/or Completions Management System</li> </ul>	<p>Refer to only as many Indicators of Attainment as you need to demonstrate the Element of Competence</p> <p>Can describe in detail the impact and constraints of subsea facilities commissioning on topsides process facilities and vice versa</p> <p>Has witnessed and/or approved 3rd party vendors on site undertaking pre-commissioning tasks.</p> <p>Has transferred site records and certificates to the Handover Dossier or Completions Management System</p> <p>Has prepared and presented change requests according to Company procedures.</p>