



Subsea Engineering Competency Profile



COMMISSIONING ELECTIVE

PCC-003

This competency demonstrates a subsea engineer has sufficient knowledge to effectively and successfully perform, supervise and approve the planning and execution of commissioning and start-up of subsea systems.

Commissioning includes the activities directly related to the verification of functionality that cannot be undertaken prior to production.

ELEMENT OF COMPETENCE	WHAT THIS COMPETENCE MEANS IN PRACTICE	INDICATORS OF ATTAINMENT
<p>Expert Knowledge of the following with respect to commissioning and start-up activities:</p> <ul style="list-style-type: none"> ● Piping & Instrument Diagrams (P&IDs), Cause & Effects (C&E) Tables and System Diagrams ● Permit to work and Isolations ● HAZOP, HAZID and Risk Assessment ● Operability and Constructability Review ● Role of production supervisors / operators/technicians ● Handover documentation ● Systems Completion Management System ● Safeguards on temporary equipment ● Management of Change ● International and Company Standards applicable to commissioning 	<p>Capable of interpreting system limits, specification breaks and functionality from P&IDs/C&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"> ● Working in accordance with work permits, implement isolations and lead risk reviews. ● Lead commissioning HAZOP, HAZID and risk assessments. ● Lead commissioning operability and constructability reviews. ● Define and specify acceptance and handover conditions. ● Approve commissioning strategy and vendor scope of work. ● Approve commissioning plans and procedures. ● Prepare production systems and/or subsea Control System for handover to the Commissioning and Start-up Team 	<p>Refer to only as many Indicators of Attainment as you need to demonstrate the Element of Competence</p> <ul style="list-style-type: none"> Has reviewed and commented on project isolations philosophies. Has lead task specific Special Risk Assessments to review isolations outside of Company Standards Has participated in HAZOP, HAZID and Risk Assessments as commissioning lead Has specified project specific acceptance conditions to be attained prior to handover to operations Defined project specific handover documentation and certification Has specified safeguarding equipment to prevent exceeding specified design parameters for permanent equipment, such as pressure, high and low temperature Can describe in detail the impact and constraints of subsea facilities commissioning on topsides process facilities and vice versa Has witnessed and/or approved 3rd party vendors on site undertaking commissioning tasks.



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ELEMENT OF COMPETENCE	WHAT THIS COMPETENCE MEANS IN PRACTICE	INDICATORS OF ATTAINMENT
	<ul style="list-style-type: none"> ● Review to ensure appropriate isolations are provided for commissioning and instigate modifications where required. ● Develop/modify/approve Company commissioning Specifications/Standards. ● Approve MOCs having an impact on commissioning ● Determine and specify acceptance and handover condition. ● Identify if temporary equipment has the specified safeguards. ● Ensure site records and certification meet the requirements of the Handover Dossier and/or Completions Management System ● Determine and specify acceptance and handover condition. 	<p>Refer to only as many Indicators of Attainment as you need to demonstrate the Element of Competence</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 procedure</p> <p>Has specified project specific acceptance conditions to be attained during commissioning and Start-up</p>