TSC Category	Discipline Engineering Specialisation					
TSC	Mechanical Field Maintenance Management					
TSC Description	Perform routine and non-routine mechanical field maintenance work to ensure optimal availability and reliability of mechanical rotating and static equipment in process plants					
TSC Proficiency Description	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
	ECM-DEG-1007-1.1	ECM-DEG-2007-1.1	ECM-DEG-3007-1.1	ECM-DEG-4007-1.1		
	Recall fundamentals of mechanical rotating and static equipment and systems to assist in mechanical maintenance tasks in a safe and reliable manner	Identify and apply mechanical maintenance procedures and work instructions to perform mechanical maintenance tasks at field in a safe and reliable manner	Interpret mechanical maintenance and inspection regimes, work instructions and procedures to coordinate mechanical maintenance tasks at field	Develop mechanical field maintenance and inspection regimes, workflows and procedures to reduce likelihood of failure and to ensure maintenance tasks are performed correctly and consistently		
Knowledge	• International codes and standards for mechanical and piping • Principles of static and rotating mechanical equipment and systems • Types of mechanical equipment and systems • Mechanical assembly techniques • Principles of correct use of hand tools and power tools • Mechanical fitting techniques • Types of bolting and jointing systems • Types of bearings and lubrication • Principles of seals and sealing systems • Types of materials • Principles of pneumatics and hydraulics	• International codes and standards for mechanical and piping • Methods of maintaining static and rotating equipment • Methods in reading vendor documentation • Principles and methods of condition-based monitoring • Fabrication principles and practices • Methods of valve maintenance • Types of mechanical measurement and testing equipment • Principle of tolerances, limits and fits • Metallurgy principles • Troubleshooting and fault-finding techniques	• Alignment and balancing principles and practices • Condition-based monitoring and vibration analysis methods • External insulation and protection systems • Types and techniques of maintenance and inspection of mechanical safety protection systems • Methods in maintaining hydraulic systems • Principles of predictive and preventative maintenance	• Methods of developing and maintaining maintenance work instructions • Techniques of developing, supervising and recording routine maintenance, in line with asset integrity requirements • Methods of mechanical diagnostic principles • Principles of asset integrity management systems		

Abilities	• Apply international codes and standards for mechanical and piping when assisting in mechanical maintenance work • Carry out mechanical maintenance activities • Assist in general maintenance and troubleshooting of static and rotating mechanical equipment and systems • Select and use a range of hand tools • Carry out lubrication activities of rotating equipment • Maintain a clean and safe work area	• Perform maintenance of static and rotating mechanical equipment and systems • Perform the disassembly and reassembly of mechanical equipment and components • Use a range of measuring equipment to perform the restoring of dimensions, clearances and tolerances of components • Determine and repair deficiencies • Perform equipment inspections and checks • Perform bolting and joint integrity maintenance and repairs • Perform condition-based monitoring field checks on rotating equipment	• Carry out alignment, using reverse dial indicators, or laser alignment methods, for cold and hot alignment • Coordinate the disassembly and reassembly of static and rotating equipment and components • Coordinate the mechanical maintenance and inspection of static and rotating equipment • Coordinate the maintenance and repair of mechanical pumps, gearboxes and engines • Analyse vibration and rotodynamic problems and implement repair solutions • Coordinate the maintenance and repair of hydraulic systems • Coordinate the maintenance and repair of equipment insulation and protection systems	• Develop mechanical maintenance work instructions and practices • Lead the maintenance and troubleshooting of static and rotating mechanical equipment and systems • Manage the alignment and balancing of various types of rotating equipment • Apply mechanical diagnostic and troubleshooting to a wide range of static and rotating mechanical equipment and systems • Diagnose vibration and rotodynamic problems and repair solutions • Oversee the maintenance and repair of hydraulic systems • Lead the maintenance and repair of equipment insulation and protection systems		