

TSC Category	Engineering Construction, Operations and Maintenance					
TSC	Equipment and Systems Repair					
TSC Description	Execute equipment and systems repair procedures to correct faults and restore functionalities					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		EGS-MAI-2005-1.1-1	EGS-MAI-3005-1.1-1	EGS-MAI-4005-1.1-1	EGS-MAI-5005-1.1-1	
		Identify the causes of minor faults with equipment and systems and make necessary repairs	Implement repair procedures to ensure correct operation of equipment and systems	Develop solutions to restore and sustain optimal functionality of equipment and systems	Provide technical expertise to guide the development of solutions to repair, restore and optimise equipment and systems functionality	
Knowledge		<ul style="list-style-type: none"> Types of mechanical, civil, structural, geotechnical, instrumentation and control, and electrical malfunctions and defects Methods of repairing malfunctions and defects Types of tools required for repair works Safety isolation procedures for equipment and systems Cleaning and preparation processes Hazards and safety precautions associated with repair works Health, Safety and Environment policies, procedures and regulations 	<ul style="list-style-type: none"> Repair procedures Resources required for repairs Methods of analysing equipment manuals, system diagrams and structural plans Techniques for targeting and determining malfunctions and defects Methods of determining follow-up measures to ensure repair works are successful Engineering processes and workflows Health, Safety and Environment policies, procedures and regulations 	<ul style="list-style-type: none"> Root-cause analysis and other techniques for determining the causes of major malfunctions and defects Impact of equipment and system faults on other parts of the processes Methods of determining follow-up measures to ensure repair works are successful 	<ul style="list-style-type: none"> Impact of repair activities on wider operations and processes Interdependencies among processes Best practices in equipment and system repairs 	
Abilities		<ul style="list-style-type: none"> Identify mechanical, electrical, instrumentation and control, geotechnical, civil or structural faults with equipment or system components Dismantle equipment according to standard operating procedures and safety protocols 	<ul style="list-style-type: none"> Estimate time and costs needed for repair activities Oversee the resolution of minor equipment and system component failures, and provide guidance and input where required 	<ul style="list-style-type: none"> Identify the root causes of complicated equipment and system failures and malfunctions Guide repair procedures and provide information on standard protocols Measure the impact of major repair works on processes 	<ul style="list-style-type: none"> Evaluate root cause analysis of major equipment and system failures Assess viability of recommended activities and steps to repair and restore equipment and systems 	

**SKILLS FRAMEWORK FOR ENGINEERING SERVICES
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE**

		<ul style="list-style-type: none"> Remove defective parts, using appropriate tools Inspect damaged machine parts and mark defective areas Conduct repairs on system components Adhere to relevant Health, Safety and Environment risk control measures when conducting repair works Record repair steps and results in accordance with organisational procedures 	<ul style="list-style-type: none"> Conduct repair work of non-standard equipment or system components Monitor success of repair work Maintain repair logs for future analysis Ensure repair work is conducted in compliance with Health, Safety and Environment policies, procedures and regulations 	<ul style="list-style-type: none"> Develop interim solutions to replace faulty equipment if there are no alternative solutions Analyse patterns in equipment breakdowns to identify potential design or process modifications Develop risk control measures to mitigate possible issues in executing repair works Outline procedures for monitoring successes of repair works Ensure completion of documentation procedures in relation to equipment and systems repair works Outline standard quality and safety procedures to adhere to during repair works 	<ul style="list-style-type: none"> Review equipment breakdown trends and analyses Design modifications to minimise or eliminate equipment or system malfunctions Provide expert technical guidance for repairing and restoring equipment and systems to optimal performance 	
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