

**SKILLS FRAMEWORK FOR PRECISION ENGINEERING
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Precision Manufacturing Process					
TSC	Non-destructive Testing					
TSC Description	Execute non-destructive tests to ensure structural integrity, insulation resistance, continuity and satisfactory performance of electrical equipment and installations against organisational and regulatory standards and requirements					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		PRE-OPR-2019-1.1	PRE-OPR-3019-1.1	PRE-OPR-4019-1.1		
		Prepare and set up manufactured components for non-destructive testing (NDT)	Perform non-destructive testing (NDT) on manufactured components, interpret and record the results	Determine appropriate non-destructive testing (NDT) methods and develop inspection specifications for the required sensitivity levels and material types to be tested		
Knowledge		<ul style="list-style-type: none"> Types of NDT methods Requirements for component preparation and cleaning for NDT Workplace Safety and Health (WSH) requirements and personal protective equipment (PPE) 	<ul style="list-style-type: none"> Types of NDT techniques, tools and methods of using them Purposes and methods to calibrate NDT equipment Interpretation of NDT results Types of flaws and defects identifiable through NDT 	<ul style="list-style-type: none"> Characteristics of different NDT methods NDT codes, standards and specifications NDT certification requirements 		
Abilities		<ul style="list-style-type: none"> Select and use suitable PPE appropriate to the job requirements Clean component surfaces to enhance test accuracy Set up component to fixtures securely Prepare manufactured components according to the requirements of the NDT to be conducted 	<ul style="list-style-type: none"> Perform pre-operational checks on NDT equipment to ensure they are in safe and useable conditions to minimise safety risks Verify NDT equipment's expiry dates on calibration labels and/or certificates for compliance with test validity Set up NDT equipment according to job requirements Review test results to identify flaws and defects for rectification 	<ul style="list-style-type: none"> Interpret codes, standards, specifications and procedures for NDT Develop and assess NDT inspection procedures for feasibility in relation to different types of materials, manufacturing processes and products Evaluate new inspection procedures against existing codes, standards and specifications Establish acceptance criteria for new inspection procedures Conduct training for NDT Level I and II personnel 		

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			<ul style="list-style-type: none">Update documents according to approved formats and ensure they are legible, accurate and complete	<p>for certification in the various NDT methods</p> <ul style="list-style-type: none">Communicate new NDT inspection procedures to stakeholders		
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