TSC Category	Special Processes					
TSC	Coating					
TSC Description	Perform surface coating processes on parts and components using appropriate tools, equipment, materials and methods in accordance with applicable technical manuals and organisational procedures.					
TSC Proficiency Description	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
	AER-ACO-1033-1.1	**AER-ACO-2033-1.1**	**AER-ACO-3033-1.1**			
	Carry out coating processes using appropriate tools, equipment, materials and methods	Identify appropriate resources and conduct conformance checks on coated parts and components for compliance with required specifications and defect-free production	Develop process plans to specify appropriate materials, techniques and parameters to be used for surface coating			
Knowledge	• Relevant local and international standards (AS7109) • Organisational standard operating procedures (SOPs) • Surface preparation and cleanliness techniques • Types and applications of fixtures and masking • Types and operation of coating processes • Types of tools, equipment and materials for coating processes • Cleanliness verification methods • Handling and storage requirements for coating processes • Workplace safety and health requirements	• Relevant local and international standards (AS7109) • Organisational standard operating procedures (SOPs) • Principles and applications of hand spray and thermal spray process • Techniques for flame spray and plasma spray • Principles and applications of vapor deposited coatings • Principles and applications of diffusion coating process • Principles and applications of painting and dry film coatings • Techniques for stripping, grinding and heat treatment of coatings • Parameters for plating of coated parts • Methods for conducting hardness tests and quality checks • Criteria for coating evaluation	• Relevant local and international standards (AS7109) • Organisational standard operating procedures (SOPs) • Types of surface coatings and techniques • Types and applications of fixtures • Types and applications of masking • Applications and limitations of surface coatings process • Types and operation of hand and thermal spray coatings process • Selection of appropriate surface coatings based on desired final product properties • Parameters and factors affecting surface coatings • Concepts of quality assurance and control in surface coating • Workplace safety, quality and audit requirements			

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		• Workplace safety, quality and audit requirements				
Abilities	• Check descriptions, part and serial numbers of parts and components against documentation • Prepare parts for coating operations using mechanical and chemical methods • Set up equipment, jigs and shields to suit job requirements • Conduct pre-operational checks and inspections to verify working conditions of tools and equipment according to job requirements • Perform spraying of components or parts according to technical manuals • Perform spray coating operations and adjust appropriately to achieve desired quality • Conduct routine checks, adjustments and lubrication of equipment • Update relevant documents upon completion of job • Adhere to technical manuals and SOPs • Observe and apply safety practices in the workplace	• Interpret task requirements from coating work plans to verify adherence by the team • Select appropriate tools, equipment and machinery for coating operations • Identify types of coating processes to be used based on job specifications • Identify plating parameters • Measure coated components or parts for conformity within specified tolerances • Monitor process parameters and verify conformance to technical specifications • Conduct visual inspections and hardness tests to identify defective coatings • Take corrective actions to address non-conformances • Obtain verification for work done from quality assurance or relevant personnel • Ensure documentation in accordance regulatory requirements • Ensure safety practices in the workplace	• Analyse base materials and characteristics of aircraft parts and components for surface coating requirements • Evaluate factors affecting surface coatings • Identify appropriate materials and techniques for coating application • Develop technical specifications and process plans • Incorporate testing methods into process plans • Define process parameters and work instructions for coating processes • Design and set up quality control procedures to address aspects of product quality and compliance to regulatory requirements • Recommend corrective actions to address non-conformances			

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