

Training Package	Metal and Engineering (MEM05)			HSC Requirements and Advice
Title	Apply quality systems			
Unit code	Competency field	Band	Unit weight	HSC Indicative Hours
MEM15002A	Quality	A	2	10

Unit descriptor	This unit covers working within a quality improvement system, either individually or in a team situation.
Prerequisites	Nil
Application of the competency	This unit is applicable for any work within a quality improvement system in a manufacturing, engineering or related environment. The definition of customer is wide and applies to the next person or organisation receiving the product or service. Application may include quality inspection of own or other employee's work up to the level of the employee's technical competence.
Related units	None

Evidence Guide

The evidence guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the unit descriptor, performance criteria, range statement and the assessment guidelines for the Metal and Engineering Training Package.

Overview of assessment requirements	Context of assessment	Interdependent assessment	Method of assessment
A person who demonstrates competency in this unit must be able to apply quality systems.	This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.	This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with applying quality systems or other units requiring the exercise of the skills and knowledge covered by this unit.	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Evidence Guide cont/d			HSC Requirements and Advice
Consistency of performance	Required skills	Required knowledge	Key Terms and Concepts
Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.	<p>Look for evidence that confirms skills in:</p> <ul style="list-style-type: none"> • reading, interpreting and following information on written job sheets, instructions, standard operating procedures and drawings • checking and clarifying task-related information • entering information onto workplace documents • checking for conformance to specifications • identifying duties of the individual within the quality improvement system • identifying customers' requirements with respect to the operation or quality of the product or service • reporting where appropriate, defects detected • carrying out work in accordance with the process improvement procedures • carrying out work in a manner consistent with the improvement of customer/supplier relationships • performing numerical operations, geometry and calculations/formulae within the scope of this unit. 	<p>Look for evidence that confirms knowledge of:</p> <ul style="list-style-type: none"> • quality system terminology and concepts e.g. <ul style="list-style-type: none"> - quality assurance – planning to meet customers' requirements - quality control – checks and procedures to ensure customer requirements are met - quality inspection – inspecting and testing products and services - total quality control – a company-wide approach that combines both quality assurance and quality control so that the customer is always satisfied • commonly accepted meaning/s of the terms quality and quality system • the reasons for following the requirements of the quality improvement system • strategies and approaches for working within a quality system • procedures to be followed in undertaking the work • specifications to which the individual's work is to comply • reasons for ensuring work conforms to specification • benefits of good quality: <ul style="list-style-type: none"> - quality products/services - reduced costs - customer confidence, satisfaction and loyalty - good reputation - job satisfaction - solving problems - increased competitiveness - keeping up with technology 	<ul style="list-style-type: none"> • benefits of a team approach • conformance to specifications • costs/consequences of poor quality • customer • customer satisfaction • detection and reporting/recording of defects • engaging in quality improvement • importance of training • monitoring process/procedure for performance of operation and quality of product/service • performance measure • products and service • quality • quality assurance • quality control • quality cycle • quality improvement • quality improvement system • quality inspection • quality system • responsibilities of the employer/organisation • role of the individual employee • safe work practices and procedures • specifications • standard operating procedures (SOP) • total quality control • work instructions and procedures.

		Required knowledge cont/d	
		<ul style="list-style-type: none"> • costs and consequences of poor quality e.g. <ul style="list-style-type: none"> - lost customers - accidents - wastage - lost time - low morale - conflict • procedures for reporting defects • examples of common defects • quality improvement procedures • four steps of the quality cycle: plan, do, check, act • reasons for following process improvement procedures • examples of ways in which customer/supplier relationships can be improved • benefits of good customer/supplier relationship • hazards and control measures associated with applying quality procedures, including housekeeping • safe work practices and procedures. 	

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
1 Work within a quality system	1.1 Instructions and procedures are followed and duties are performed in accordance with requirements of <i>quality improvement system</i> .	<p>The range statement provides information about the context in which the unit of competency is carried out. The variables [in bold] and scope [dot points] cater for different work requirements, work practices and knowledge between States, Territories and the Commonwealth, and between organisations and workplaces. The range statement relates to the unit as a whole and provides a focus for assessment. Text in italics in the performance criteria is explained here.</p> <p>The following variables may be present and <i>may include</i>, but are not limited to, the examples listed under the scope. All work is undertaken to relevant legislative requirements, where applicable.</p> <p>Quality improvement system</p> <ul style="list-style-type: none"> • a system comprising some or all of the following elements: <ul style="list-style-type: none"> - quality assurance - quality control - quality inspection - quality improvement - total quality control. 	<p>Learning experiences for the HSC must address:</p> <p>An awareness of commonly accepted meaning/s of the terms, quality and quality systems, within the manufacturing, engineering and related services industries.</p> <p>Definitions of quality system terminology and concepts:</p> <ul style="list-style-type: none"> • quality improvement system • quality assurance • quality control • quality inspection • quality improvement • total quality control. <p>An awareness of:</p> <ul style="list-style-type: none"> • the costs and consequences of poor quality including <ul style="list-style-type: none"> - lost customers - accidents - wastage - lost time - low morale - conflict • the reasons/benefits of following the requirements of the quality improvement system. <p>An overview of:</p> <ul style="list-style-type: none"> • quality assurance, quality activities and continuous improvement in the manufacturing, engineering and related services industries environment • the role of the individual employee within the total quality process • the benefits of a team approach to work within a quality system • responsibilities of the employer/organisation for implementation of quality systems. <p>A basic knowledge of:</p> <ul style="list-style-type: none"> • the quality cycle <ul style="list-style-type: none"> - plan - do - check - act

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> • strategies/approaches for working within a quality system • procedures to follow in undertaking work duties/ tasks. <p>Acknowledgement of the importance of training of workers to achieving quality work outcomes.</p> <p>A range of sources for work instructions and procedures including:</p> <ul style="list-style-type: none"> • work schedules • job card/sheet/plans/specifications • standard operating procedures (SOP) • standard operation sheets • Material Safety Data Sheets (MSDS) • diagrams/sketches • regulations/legislation • manufacturer/workplace guidelines, policies and procedures • Australian Standards. <p>An awareness of safe work practices and procedures including:</p> <ul style="list-style-type: none"> • occupational health and safety (OHS) induction training (general, work activity and site-specific) • selection, use and maintenance of personal protective equipment (PPE) • selection of appropriate tools for the task • correct use, maintenance and storage of tools, equipment and machinery • correct handling, application, transport and storage of hazardous and non-hazardous materials • safe posture (sitting, standing, bending and lifting) • correct manual handling (lifting and transferring) • hazard identification and risk control • procedures to follow in the event of an emergency • basic first aid training and access to first aid kits • correct use of fire fighting equipment: <ul style="list-style-type: none"> - fire blanket - fire extinguishers - fire hydrant and hose • effective communication and teamwork • adherence to work instructions, workplace policies and standard operating procedures

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> housekeeping/clean-up procedures with due consideration to OHS and the environment.
	1.2 Conformance to specifications is ensured.		<p>Learning experiences for the HSC must address:</p> <p>A definition of:</p> <ul style="list-style-type: none"> specification/s. <p>Knowledge of process and product specifications to which work outcome is to comply for a range of tasks/duties within a manufacturing, engineering and related services industries workplace.</p> <p>An awareness of the reasons for ensuring work conforms to specification (or benefits of good quality) including:</p> <ul style="list-style-type: none"> quality products/services reduced costs customer confidence, satisfaction and loyalty good reputation job satisfaction solving problems increased competitiveness keeping up with technology. <p>SOP for non-conformance of work outcome to specifications.</p>
	1.3 Defects are detected and reported according to standard operating procedures.		<p>Learning experiences for the HSC must address:</p> <p>An awareness of examples of common defects.</p> <p>A knowledge of:</p> <ul style="list-style-type: none"> methods of detection procedures for reporting/recording <ul style="list-style-type: none"> verbal/written formal/informal.
1.4 Performance of operation or quality of product or service is monitored to ensure <i>customer</i> satisfaction.	<p>Customer</p> <ul style="list-style-type: none"> the next person or organisation receiving the production or service. 	<p>Learning experiences for the HSC must address:</p> <p>A definition of:</p> <ul style="list-style-type: none"> customer <ul style="list-style-type: none"> internal external 	

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> • product • service • performance measure. <p>An awareness of:</p> <ul style="list-style-type: none"> • the benefits of good customer/supplier relationships. • examples of the ways in which customer/supplier relationships can be improved. <p>Knowledge of monitoring process/procedures for:</p> <ul style="list-style-type: none"> • performance of operation • quality of product/service.
2 Engage in quality improvement	<p>2.1 Current performance is assessed.</p> <p>2.2 Established performance measures are identified.</p> <p>2.3 Specifications and standard operating procedures are identified.</p> <p>2.4 Defects are detected and reported according to standard operating procedures.</p> <p>2.5 Process improvement procedures are participated in.</p> <p>2.6 The improvement of internal/external customer/supplier relationships is participated in.</p> <p>2.7 Performance of operation or quality of product or service is monitored to ensure <i>customer</i> satisfaction.</p>	<p>Customer</p> <ul style="list-style-type: none"> • the next person or organisation receiving the production or service. 	<p>Learning experiences for the HSC must address:</p> <p>A basic knowledge of the requirements of at least one quality improvement system currently in operation in a manufacturing, engineering and related services industries workplace.</p> <p>Application of quality improvement system concepts (in relation to performance of operation as well as end product/service) to a range of tasks within a manufacturing, engineering and related services industries workplace.</p> <p>Acknowledgement of:</p> <ul style="list-style-type: none"> • the importance of workers understanding the quality requirements for their own job • the effects on the workplace/company if workers do not take responsibility for the quality of their own work.