Australian Government

Department of Education, Employment and Workplace Relations

CPCCST3008A Inlay lead to stone

Release: 1

CPCCST3008A Inlay lead to stone

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit specifies the outcomes required to inlay lead to lettering or shapes carved into stone surfaces.

Application of the Unit

Application of the unit This unit of competency supports the achievement of skills and knowledge to inlay lead to stone products, which may include working with others and as a member of a team.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	1.1. Work instructions and operational details are obtained using relevant ***information***, confirmed and applied for ***planning and preparation*** purposes. 1.2. ***Safety*** (***OHS***) requirements are followed in accordance with safety plans and policies. 1.3. Signage and barricade requirements are identified and implemented. 1.4. ***Tools and equipment*** selected to carry out tasks are consistent with job requirements, checked for serviceability and any faults are rectified or reported prior to commencement. 1.5. Material quantity requirements are calculated in accordance with plans, specifications and ***quality requirements***. 1.6. ***Materials*** appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. 1.7. ***Environmental requirements*** are identified for the project in accordance with environmental plans and ***statutory and regulatory authority*** requirements, and are applied.
2. Prepare background surface.	2.1. Appropriate equipment is selected and used for removing excess material so that surface is even and flat. 2.2. Surface is made suitable for designed treatment as per specifications for setting out and cutting letters, with protection to surrounds of lettering area applied using appropriate masking and covering technique. 2.3. Surface is painted with weak water-based paint to specifications for ease of marking out letters and shapes.
3. Identify and draw to scale various types of lettering, insignias and monograms.	3.1. Drafted designs are set out and drawn to appropriate scale on set-out material. 3.2. Designs are transferred to prepared surface either directly or by using templates or stencils. 3.3. Designs are marked by pencils or scribers accurately to stencil/template or direct set-out.
4. Use hand and power tools for cutting letters.	4.1. Material is safely held in most suitable position ready for cutting/shaping operation with stone, less than 30mm thick, fixed to a larger section of stone to minimise risk of breaking.

ELEMENT	PERFORMANCE CRITERIA
	4.2. Tools and equipment are selected for cutting/shaping process in accordance with size and shape of letters, and are adjusted correctly for operation according to standard operating procedures and work to be undertaken.
	4.3. Start-up and shut-down procedures for use of equipment are carried out in accordance with specifications, where applicable, and tools and equipment are used to carefully cut letters to set-out.
	4.4. Letters are cut to size and depth specified and holes are drilled for cut out letters to specifications, to provide keying for securing load.
5. Perform lead inlay process on lettering of stone surfaces.	5.1. Pre-cut ***lettering*** is inlaid with solid or melted lead using appropriate tools or method and without damage to stone.
	5.2. Molten lead is heated and handled safely in accordance with job and OHS requirements.
	5.3. Lead is inlaid to give a flat or raised finish to stone in accordance with specifications.
	5.4. Letters or insignias are finished clean on their edges and surface is finished to specifications.
6. Clean up.	6.1. Waste and unwanted material is disposed of safely.
	6.2. Re-usable and recyclable materials are salvaged and stored.
	6.3. Tools and equipment are cleaned, maintained and stored.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to recognise procedures, respond to change and contribute to workplace responsibilities, such as current work site environmental or sustainability frameworks or management systems
- communication skills to:
  - enable clear and direct communication, using questioning to identify and

REQUIRED SKILLS AND KNOWLEDGE

confirm requirements, share information, listen and understand
- follow instructions
- identify letters in order to check spelling
- read and interpret drawings and specifications
- use and interpret non-verbal communication
- use language and concepts appropriate to cultural differences

- innovation skills to select appropriate tools and equipment, respond to workplace challenges and put ideas into action
- numeracy skills to apply measurements and calculations
- planning and organisational skills to identify requirements, apply relevant resources and sequence tasks
- problem solving skills to recognise and take action to rectify minor faults and problems
- teamwork skills to be able to work with others to action tasks and relate to people from a range of cultural, social, ethnic backgrounds and with varying physical and mental abilities.

Required knowledge

Required knowledge for this unit is:

- effect of lead on the human body and organs, and related safety precautions
- interpretation of drawings and specifications
- job safety analysis (JSA) and safe work method statements
- measuring and marking techniques used in stonemasonry work
- methods of inlaying lead to stone
- methods of working stone
- traditional and contemporary font styles used in stonemasonry work
- types and use of templates or stencils
- types of stone and their characteristics
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to lead inlay lettering using both solid and melted metal, providing evidence of the ability to: • select and use appropriate tools, equipment and processes consistent with requirements of activity • comply with OHS regulations applicable to workplace operations • apply organisational quality procedures and processes within context of inlaying lead to stone • prepare face for lettering and finish to specification • accurately set out lettering to form balanced presentation • check spelling prior to cutting letters • provide appropriate protection to surrounding area • use safe and effective procedures to inlay lead to recesses • complete inlaying of lead and finishing of surface to specifications • accurately cut letters on design to specifications • communicate with others to ensure safe and effective workplace operations.
Context of and specific resources for assessment	This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

EVIDENCE GUIDE

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- workplace location
- tools and equipment appropriate to inlaying processes
- stone relevant to proposed activity
- drawings, specifications and documentation relevant to activity.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm a reasonable inference that competency is not only verified under the particular assessment circumstance, but is able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and

EVIDENCE GUIDE

separated by further learning and practice with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions, where specified
- material safety data sheets (MSDS)
- memos
- regulatory and legislative requirements pertaining to handling lead and stone
- relevant Australian standards
- safe work procedures relating to handling lead

RANGE STATEMENT

	and stone • signage • verbal, written and graphical instructions • work bulletins • work schedules, plans and specifications.
Planning and preparation include:	• assessment of conditions and hazards • determination of work requirements and safety plans and policies • equipment defect identification • work site inspection.

Safety (***OHS***) is to be in accordance with state and territory legislation and regulations and project safety plan and may include:	• emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
	• hazard control
	• hazardous materials and substances
	• organisational first aid
	• PPE prescribed under legislation, regulations and workplace policies and practices
	• safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
	  • concealed services (water, power and gas)
	  • lighting
	  • restricted access barriers
	  • traffic control
	  • working at heights
	  • work site visitors and the public
	  • working at heights
	  • working in proximity to others
	• use of firefighting equipment
	• use of tools and equipment
	• workplace environmental requirements and safety.

Tools and equipment include:	• clamps • hammers • lettering chisels • mallets • masonry drills • measuring tapes and rules • pneumatic lettering chisels

RANGE STATEMENT

	• power grinders • power leads • punch • scribers • sculptor's chisels • squares • straight edges.

Quality requirements include:	• attention to specifications of work
	• control of handling procedures
	• finishing of stone surfaces
	• quality of materials
	• relevant regulations, including:
	  • Australian standards
	  • internal company quality policy and standards
	  • manufacturer specifications where specified
	  • workplace operations and procedures.

Materials include:	• aluminium sheet • cardboard • lead • plastic sheet • plywood • zincalume sheet.
Environmental requirements include:	• clean-up management • dust and noise • vibration • waste management.
Statutory and regulatory authority includes:	• federal, state and local authorities administering applicable Acts, regulations and codes of practice.
Lettering uses operations that include:	• cutting • forming • melting • shaping.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units

Functional area

Functional area