



Australian Government

MEM09219 Prepare drawings for fabricated sheet metal products

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM09219A Prepare drawings for fabricated sheet metal products.

Application

This unit of competency defines the skills and knowledge required to prepare detail drawings for fabricated sheet metal products to Australian Standard (AS) 1100.101 Technical drawing - General principles and is primarily for draftspersons operating within the manufacturing and engineering industry.

Critical dimensions and specifications are predetermined and drawings are created with or without the use of computer-aided design (CAD) systems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

MEM09229 Read and interpret technical engineering drawings

Competency Field

Drawing, drafting and design

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Access and interpret specifications	1.1 Follow standard operating procedures (SOPs) and comply with work health and safety (WHS) requirements at all times 1.2 Identify design process for fabricated sheet metal products 1.3 Interpret specifications and requirements for product and determine implications and requirements for fabrication 1.4 Access and interpret organisational and industry standards, information and catalogues to obtain required product specifications
2. Identify fabrication techniques	2.1 Identify features of sheet metal products and techniques used in fabrication 2.2 Identify characteristics of metal materials used in fabricated

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	products and implications for fabrication techniques 2.3 Identify terminology, symbols and standards used in drawings for fabricated products and required inclusions for fabrication drawings
3. Prepare detail drawing	3.1 Perform calculations required to complete drawings to specifications 3.2 Lay out the drawing in accordance with specifications and industry conventions 3.3 Ensure drawing accurately reflects specifications, is presented according to organisational requirements and contains all relevant information, including full notation and dimensioning
4. Document and store drawings	4.1 Document drawings and associated technical information in accordance with project requirements and SOPs 4.2 Store drawings in accordance with SOPs

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Fabrication techniques include one or more of the following:

- spigots
- flanges
- mild steel angles
- weld
- braze
- solder
- seal
- bolt
- thermal cutting

	• mechanical cutting • forming and shaping of plate • sheet and tubular ferrous and non-ferrous metal • folding and unfolding.
Drawing details include one or more of the following:	• base faces, contour flanges and contour rolls • secondary faces, contour flanges and contour rolls • sheet metal parameters • flanges • hems, folds and bends • corner rounds and chamfers • sheet metal cuts (holes, cuts and punch features) • corner seams (seams and mitres) • flat patterns • lofted flanges • rips • unfolding and refolding.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM09219A Prepare drawings for fabricated sheet metal products.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>