



Australian Government

MEM09228 Detail ancillary steelwork

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSATCS504A Detail ancillary steelwork.

Application

This unit of competency defines the skills and knowledge required to detail steelwork ancillary to, or separate from, the main structural elements, along with their connections in a steel framed building or industrial construction.

This unit applies to a structural steel detailer who has to detail ancillary structural steelwork including steelwork used in stairways, ladders, landings, platforms for personnel and machinery, and other ancillary steel structures. It may also apply to the detailing of stand-alone steel constructions that are not part of, or attached to, plant or buildings, and which do not require additional specialist knowledge.

Work is completed in accordance with the National Construction Code and AS 1657 Fixed platforms, walkways, stairways and ladders – Design, construction and installation.

Design information in this unit is the information provided to the detailer and fabricator by the architects and consulting engineers for a project. For some projects, the design information may only be provided by an engineer. The design information will usually be in the form of design drawings or sketches but may also be via material lists, written instructions or computer files.

Work may be performed individually on a contracting/project basis or as part of a project team in response to combinations of paper-based and digital instructions.

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

Pre-requisite Unit

MEM09223 Interpret design specifications for structural steel detailing

MEM09229 Read and interpret technical engineering drawings

Competency Field

Drawing, drafting and design

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>

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1. Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Identify job requirements from specifications 1.4 Establish schedule of detail drawings for stairways, platforms, ladders and landings with fabricator
2. Detail stairways and landings	2.1 Check design information and make any requests for further information (RFIs) 2.2 Prepare large scale set-out or 3D model of stairway and landings and establish setting out points 2.3 Dimension and detail stairway and landings consistent with design information and the relevant code and Australian Standard 2.4 Prepare holding down bolt layout and base plate details for ground floor supports or plinths
3. Detail ladders and platforms	3.1 Check design information and make any requests for further information (RFIs) 3.2 Dimension and detail ladder and platform consistent with design information and the relevant code and Australian Standard 3.3 Prepare holding down bolt layout and base plate details for ground floor supports or plinths
4. Detail other ancillary steel structures	4.1 Confirm design information and fabrication schedule and determine requirements including allocation of components for shop and site fabrication 4.2 Determine size limitations of any sections requiring corrosion treatment or other surface finishing processes 4.3 Determine transport limitations, erection procedures and limitations, and any relevant codes and regulations 4.4 Combine rough large-scale layout and 3D model with trial assembly 4.5 Use design information to directly insert or calculate and insert all dimensions, clearances, bolt layouts, weld types and dimensions, direction marks and surface finishes on shop drawings and erection diagrams 4.6 Send detail drawings for approval by designer

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.

Other ancillary steel structures include one or more of the following:	• crane rails and connections • lift guide rails • cages • steel tankage rolled plates • chimney flumes • exhaust pipe flumes • pipe supports • conveyor structures.
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Unit Mapping Information

Release 1. Supersedes and is equivalent to MSATCS504A Detail ancillary steelwork.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM09228 Detail ancillary steelwork

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- complying with requirements prescribed by legislation, awards, agreements and conditions of employment
- researching and obtaining relevant Australian standards, codes and regulations
- assessing design information for adequacy of information needed for structural steel detailing
- liaising with architects and engineers
- assessing scope of structural steel detailing tasks and priorities
- interpreting design drawings, sketches and schedules to determine dimensions, layouts, types and grades of materials
- producing detail drawings of ancillary steelwork on at least two occasions
- producing erection drawings for ancillary steelwork on at least two occasions
- communicating at all levels about technical issues related to patterns and specifications.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- architectural and engineering design drawings including standard symbols, terms, abbreviations and sketches
- structural members used in steel construction
- ancillary steel work and structures
- difference between design and detail drawing processes
- drawing office procedures
- fabrication processes and procedures
- National Construction Code
- AS 1657, Fixed platforms, walkways, stairways and ladders – Design, construction and installation

- Australian steel structures limit state design code's (AS4 100, Steel structures) requirements in so far as they impact on steel detailing.

Assessment Conditions

- Assessors must:
 - have vocational competency in detailing ancillary steelwork at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the Standards for Registered Training Organisations 2015 or its replacement and comply with the National Vocational Education and Training Regulator Act 2011, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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