

23 August 2024

Mechanical engineering manager of underground coal mines

Prerequisites and written exam details

1. Prerequisites

An application for examination must be accompanied by evidence that you have the following:

Prerequisite	Requirement
Tertiary or vocational qualification	<p>Any one of the following:</p> <ul style="list-style-type: none">• Bachelor of Engineering (Mechanical Engineering) issued by an Australian university, or• Bachelor of Engineering issued by an Australian university in the following areas of practice (or equivalent):<ul style="list-style-type: none">– Mechatronics– Manufacturing– Maintenance– Aeronautical– Avionics– Refrigeration– Automotive <p>and, eligible to be registered as an Engineer in the Engineering Australia Mechanical college by Engineers Australia.</p> <ul style="list-style-type: none">• MEM60112 Advanced Diploma of Engineering (Mechanical) issued by a registered training organisation (the superseded qualification MEM60111 Advanced Diploma of Engineering, or other equivalent superseded qualification is acceptable), or• Associate Diploma of Engineering (Mechanical Engineering) issued by a registered training organisation.

Prerequisite	Requirement
	<p>If you hold a qualification/unit of competence that is not specified as a prerequisite, refer to Fact sheet - Recognition of qualifications and units of competence.</p>
<p>Practical experience</p>	<p>A minimum of five years* practical underground coal mine experience, including:</p> <ul style="list-style-type: none"> • a minimum two continuous years involved in the installation, commissioning, maintenance and repair of mechanical plant (this must be included in the five years of experience above), and • within that two years' experience above, one year must involve mechanical plant: <ul style="list-style-type: none"> — with a minimum 6 months at an extraction face during production or development works and — during other mining activities • a minimum two years in a supervisory role responsible for the control and management of mechanical plant at an underground coal mine. <p>* In the five years of experience, up to one year in any other class of mine and one year working as a mechanical engineer in another industry may be included.</p> <p>Your experience must be verifiable and/or signed off by a supervising manager who held a Mechanical Engineering Manager of underground coal mines practising certificate at the time of your employment (or an interstate equivalent or relevant). Refer to the Guide: Applying for a certificate of competence for more details.</p>
<p>Emergency preparedness unit</p>	<p>RIIERR602E Establish and maintain underground coal mine emergency preparedness and response systems, issued by a registered training organisation</p> <p>*the superseded unit numbers RIIERR602D & RIIERR602A Establish and maintain underground coal mine emergency preparedness and response systems, or other equivalent superseded unit number is acceptable.</p> <p>If you hold a qualification/unit of competence that is not specified as a prerequisite, refer to Fact sheet - Recognition of qualifications and units of competence.</p>

Prerequisite	Requirement
Portfolio of evidence	<p>You must attach the following documents as evidence of your competence which must be relevant to the function. Your name must be in the document as evidence you were involved. If not, then you must have your supervisor/manager sign off the document confirming your involvement or attach another document confirming eg email. You may attach multiple documents to provide sufficient evidence:</p> <ul style="list-style-type: none"> • Risk assessment - a copy of a WHS risk assessment that you were involved in at your mine during the last three years • Workplace inspection - a copy of a WHS workplace inspection, task observation or audit, that you carried out and documented for your mine in the last three years • Review of principle hazard management plan or control plan - evidence, such as a report, of your involvement in reviewing a principal hazard management plan or control plan at your mine • Shift handover report, shift work plan or compliance report - a copy of a WHS shift handover report, shift work plan or compliance report that you completed in the last six months. For a shift handover report, the document must include your name and role. • Delivery of workplace training program - evidence of a WHS related training program in a mining or related field that you were involved in developing and delivering for workers in full or part of it at your mine (eg. toolbox talks, shift or work group briefings). As an alternative a completed sign on list of attendees may be provided, with your name on it as the trainer, as evidence that you delivered it. • Safe work procedure or related document for standard setting - a copy of a safe work procedure or related document for standard setting (eg. work instruction, work order job detail) that you actioned at your mine during the last five years <p>For more information about portfolio requirements refer to the Portfolio requirements: certificate of competence examination process</p>
Identity verification	Refer to the Factsheet: Certifying documents and verifying identity

2. Written examination details

The written examination consists of the following papers:

Paper	Method of Examination	Duration of Paper
CME1 – Mechanical engineering applicable to underground coal mines	Closed book	3 hours
CME2 – Legislation and Australian Standards applicable to underground coal mines	Closed book	2 hours

2.1. CME1 – Mechanical engineering applicable to underground coal mines

This paper will deal with the interpretation and application of mining and engineering principles and Australian Standards together with relevant aspects of mining legislation. You will be expected to have a working knowledge of:

- safe working procedures and the causes and prevention of mine incidents
 - identification and management of mechanical hazards for different mining operations
 - maintenance and operation of mechanical plant and structures regularly used at that type of mine.
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2.2. CME2 – Legislation and Australia Standards applicable to underground coal mines

You will be required to demonstrate a working knowledge of the Work Health and Safety Act 2011, Work Health and Safety (Mines and Petroleum Sites) Act 2013, and their supporting Regulations, as they relate to the duties of a mechanical engineering manager of underground coal mines. You will also be required to:

- understand the implications and management of gazettal notices related to the mechanical engineering aspects of coal mines.
 - know all the legislative requirements for the role, and the specific requirements for the Mechanical Engineering Control Plan for that type of mine
 - demonstrate a high level of knowledge on key Australia Standards applicable to coal mining.
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