

Introduction to Safe Cutting and Welding and MDG 25

1 day course

Based on the WTIA's TN7 and TN22 – the required safety component for MDG 25 compliance. The course also includes relevant components of MDG25 and Australian Standards including AS 1674.2 'Safety in welding and allied processes Part 2: Electrical' and AS 4839 'The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes'. The course is not as comprehensive as the 2 day course however it will provide trainees with the basics for safe cutting and welding. This course is run in two x 4 hour modules, gas and electrical.

Pre-requisites

There are no pre-requisites or co-requisites for this course.

Dates

Check the Capability Resources website for our current Training Calendar at www.capres.com.au/training

Location

The course can either be conducted at our customised skills training centre or on request, at client sites.

Training Includes

Identifying hazards and implementing risk management for safe cutting and welding operations. The competency level achieved in this course will be the ability to select, set up, operate and shutdown welding and cutting equipment safely.

Assessment

Learning and assessment activities will be conducted by assessors using a range of evidence gathering techniques throughout the course including written and practical assessments.

Your trainer and assessor will clearly explain the assessment process to you and support you as necessary to ensure you have a full understanding of the assessment process prior to commencing any assessment.

Outcomes

Practical understanding of the associated hazards and safe use of cutting and welding equipment.

Capable Training delivers WTIA Safe Cutting and Welding course on behalf of WTIA. Upon successful completion of the Introduction to Safe Cutting and Welding and MDG 25, candidates will be issued with a Participation Certificate from Capability Resources



Capability Resources Quality and Business Philosophy

Capability Resources is dedicated to the philosophy of continual improvement underpinned by the use of LEAN methodology in the business. To support this philosophy and to maintain its high reputation, Capability Resources has developed and implemented a quality management system using the Australian / International Standard AS/NZS ISO 9001:2008 for Quality Management Systems as the benchmark.



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Topics

Oxy-Fuel Gas Safety

- Cylinder labelling
- Properties of gases – oxygen, acetylene and LPG
- Maximum draw off rates of acetylene
- Equipment safety devices – flashback arrestors, regulators and hoses
- Correct assembly of equipment – AS 4839
- Equipment maintenance – daily pre-start and routine
- Correct start-up and shut down procedures
- Operating procedures
- Cylinder safety devices
- Containment of oxygen, acetylene and LPG
- Storage and handling of cylinders
- Leak testing – pressure drop method and safe leak location techniques
- System operations and procedures
- Flammability concentration limits in air and oxygen
- Personal Protective Equipment (PPE)
- Emergency procedures

Welding Electrical Safety

- Work practices – compliance with AS 1674.2
- Equipment – welding power sources and ancillaries
- Allowable Open Circuit Voltage (OCV)
- Typical electrical hazards
- Phasing of Welding power sources
- Electrode holders – types, need for vigilant maintenance, statistics on fatalities
- Insulating materials – primary and secondary
- Physiology of electrocution – AS 60479
- Hazards of AC versus DC voltages
- Personal Protective Equipment (PPE)
- Emergency procedures
- Risk assessment and personal safety – categories of environments
- Equipment maintenance – daily pre-start and routine
- Electrical connections
- Fatal electrical incidents
- Welding leads – rating, management and maintenance
- Correct work return location and connection
- Hazard reduction devices – HRDs and voltage reduction devices (VRDs)
- Switch-controlled welding power sources
- Operation procedures
- Electrocution risk factors

General Cutting and Welding Safety

- Arc, flame and laser radiation
- Employer obligations under OH&S legislation
- Noise control
- MDG25 and Welding Management Plans
- Welding or cutting in hot or humid conditions
- Fumes and ventilation
- Employee obligations under OH&S legislation
- Designated 'Hot Work' areas
- Case studies of industrial incidents

Note: Other units may be taught depending on identified individual company and personnel needs