



Trade &
Investment

NORTHERN MECHANICAL ENGINEERS U\G MEETING

Winders and Work Health and Safety Legislation

Winders and Work Health and Safety Legislation

This presentation will cover:

- Australian Standards
- Codes of Practice and Guidelines
- National Mines Safety Framework, Work Health and Safety Legislation
- Possible future outcomes for winder management in NSW

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AUSTRALIAN STANDARDS

- AS/NZS3785 Series - Underground mining—Shaft equipment
 - 3785.1:2006: Drum winding overwind safety catch systems
 - 3785.2:2006: Friction winding arresting systems
 - 3785.3:2005: Drum winding gripper systems
 - 3785.4:2002: Conveyances for vertical shafts
 - 3785.5:1998: Headframes
 - 3785.6:1992: Guides and rubbing ropes for conveyances
 - 3785.7:2006: Sheaves
 - 3785.8:1994: Personnel conveyances and Materials Transporters in other than vertical shafts

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- AS 3637 series - Underground mining—Winding suspension equipment
 - 3637.1:2005:General requirements
 - 3637.2:2005:Detaching Hooks
 - 3637.3:1997:Rope cappings
 - 3637.4:2002:Drawbars and connecting links
- AS 3751 Underground mining—Slope haulage—Couplings, drawbars, and safety chains

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- AS 4812 – 2003 Non-destructive examination and discard criteria for wire ropes in mine winding systems
- AS/NZS ISO 31000:2009 Risk management – principles and guidelines
- ISO/IEC 31010 Ed. 1 – 2010 Risk management – Risk assessment techniques
- ISO Guide 73 – Risk Management - vocabulary

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- **Current Projects within ME-018 re - Winders**
 - AS4730.3 Winding Equipment - Mechanical Brakes
 - AS4730.4 Winding Equipment – Drum Assemblies
 - AS4730.5 Winding Equipment - Winder Control Systems
 - AS/NZS3785.6 Guides and Rubbing Ropes for Conveyances
 - AS/NZS3785.8 Personnel Conveyances in other than vertical shafts

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Codes of Practice and Guidelines:

- Mining Design Guideline MDG 33 Guidelines for the Design, Commissioning and Maintenance of Drum Winders Part1
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0010/190198/MDG-33---part-1-of-2.pdf
- Mining Design Guideline MDG 33 Guidelines for the Design, Commissioning and Maintenance of Drum Winders Part2
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/190199/MDG-33---part-2-of-2.pdf
- MDG 26 Guideline for the Examination, testing and Discard of Mine Winder Ropes for use in Coal Mines
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0003/231753/MDG-26-Guidelines-for-examination-testing-and-discard-of-mine-winder-ropes-for-use-in-coal-mines.pdf

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- Design Guideline for the Construction of Friction Winders.
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0010/254485/MDG-12-Design-guidelines-for-the-construction-of-friction-winders.pdf
- Guideline for Person-riding Hoists in Gem Mines - Design.
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0010/384535/MDG-42.1-final-edited-version-April-2011.pdf
- Guideline for Person-riding Hoists in Gem Mines – Maintenance.
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/384536/MDG-42.2-final-edited-version-April-2011.pdf
- Electrical technical reference for the approval of power winding system – MDG 2005:2003.
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0020/191171/MDG-2005-Electrical-technical-reference-for-the-approval-of-power-winding-systems.pdf

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Gazette Notices are relevant to current legislation

- This gazette (25/01/2007) defines a powered winding system.
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0019/321832/powered-winding-systems.pdf
- This legislative update assists with competency arrangements for people operating shaft and winding apparatus. (Metalliferous).
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0013/313303/LU09-04-Competence-of-people-operating-shafts-and-winding-systems.pdf
- Requirements for the Design Registration of Powered Winding Systems (OHS).
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/110036/Requirements-for-design-rego-of-powered-winding-systems.pdf

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Legislation:

- Model Work Health and Safety Act
[http://safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/Publications/Documents/598/Model Work Health and Safety Bill 23 June 2011.doc](http://safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/Publications/Documents/598/Model%20Work%20Health%20and%20Safety%20Bill%2023%20June%202011.doc)
- Work Health and Safety Regulations
<http://safeworkaustralia.gov.au/AboutSafeWorkAustralia/WhatWeDo/Publications/Documents/616/Model%20Work%20Health%20and%20Safety%20Regulations.pdf>
- Model WHS Regulations – Mining.
<http://safeworkaustralia.gov.au/Legislation/PublicComment/Documents/Mining%20Public%20Comment%202011/Draft%20Model%20WHS%20Regulations%20public%20comment/ModelWHSRegsMines15July2011.pdf>
- Code of Practice for Underground Winding Systems
<http://safeworkaustralia.gov.au/Legislation/PublicComment/Documents/Mining%20Public%20Comment%202011/Draft%20Model%20Codes%20of%20Practice%20for%20Public%20Comment%2029%20July/UndergroundWindingSystems.pdf>



**NSW Mining specific
legislation (incl. Ch 9)**



WHS Regulations



WHS Act

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- Summarising above legislation, underground mine shafts and winding operations are regarded as potentially high risk and require a “Principal Mining Hazard Management Plan”.
- A national code in all probability will be referred to as per previous slides. Finalisation of code content is yet to occur.
- In NSW registration as currently required will continue.

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FUTURE OUTCOMES FOR WINDER MANAGEMENT:

- Continued development of standards in particular the winder system control and brake standards. The development of MDG 33 in this area may be a precursor to future standards development.
- Development of MDG 33 refer to **draft**:
 - Part 1 - General Requirements
http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0007/414196/Draft-MDG-33.1-mine-winders-part-1-general-requirements.pdf
 - Part 2 – Drift Winders
http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0008/414197/Draft-MDG-33.2-mine-winders-part-2-drift-winders.pdf
 - Part 3 – Vertical Shaft Winders
http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0009/414198/Draft-MDG-33.3-mine-winders-part-3-vertical-shaft-winders.pdf

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FUTURE OUTCOMES FOR WINDER MANAGEMENT:

Development of MDG 33 refer to draft:

- Part 4 Shaft Sinking Winders

http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0010/414199/Draft-MDG-33.4-mine-winders-part-4-shaft-sinking-winders.pdf

- Part 5 – Friction Winders

http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0011/414200/Draft-MDG-33.5-mine-winders-part-5-friction-winders.pdf

- Part 6 – Control Systems

http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0012/414201/Draft-MDG-33.6-mine-winders-part-6-control-systems.pdf

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FUTURE OUTCOMES FOR WINDER MANAGEMENT:

Development of MDG 33 refer to **draft**:

- Part 7 Examination, Testing and Retirement of Ropes
http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0004/414679/Draft-MDG-33.7-Nov-2011.pdf
- The final outcome of how the Work Health and Safety legislation package is unknown however in NSW:
 - registration shall continue
 - The guideline – MDG 33 - shall continue to be available to assist industry in winder safety regardless of the outcome of the national winder code. The two documents should be complimentary.

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FUTURE OUTCOMES FOR WINDER MANAGEMENT:

- Current aspiration in safety operations is to work towards certification of high risk equipment which includes winders

This presentation shall be available on our website.