PROMT25
Working safely on mechanical equipment in mines

Overview

This unit is about a mine mechanical technician being able to plan and carry out activities involving mechanical equipment (plant, systems, services, tools), in a mine using techniques that will avoid danger from the mechanical equipment and stored energy, and will not constitute a hazard to the mine or others within it.

This unit has three elements

1 Safe isolation of mechanical equipment

2 Correct use of “permit to work” system

3 Identifying, testing and working on mechanical equipment

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Performance criteria

Safe isolation of mechanical equipment

You must be able to:

P1 identify equipment to be worked on and their correct isolation point(s)
P2 communicate effectively with other members of team should unscheduled work arise that may require use of a permit to work
P3 identify whether the isolation will have any effect on the safe operation of the mine and take appropriate action
P4 where practicable ensure that circuit earthing is carried out
P5 ensure that isolation points are locked in a safe position in accordance with company / organisation procedures
P6 post warning notices according to organisational procedures
P7 check relevant safety equipment prior to acceptance/use in accordance with manufacturers' instructions/company procedures
P8 carry out work in accordance with company / organisational requirements
P9 complete records/reports according to legislative requirements and organisational procedures

Correct use of permit to work system

You must be able to:

P10 recognise who is authorised to issue a permit to work
P11 plan the job to minimise danger to those involved
P12 communicate effectively with those involved in the activity
P13 obtain a permit to work in accordance with organisational requirements
P14 ensure relevant equipment is isolated
P15 ensure equipment is locked off/isolated
P16 confirm all works completed and staff/tools accounted for according to organisational procedures
P17 cancel permit according to organisational procedures
P18 restore mechanical services in accordance with company/organisational requirements
P19 complete permit as required by organisational procedures

Identifying, testing and working on mechanical equipment

You must be able to

P20 identify/mark/trace services in accordance with company/organisational procedures
P21 follow organisational procedure when it is not possible to trace a service
P22 check and ensure all tools/equipment used have organisational approval
P23 carry out tests on mechanical equipment/systems in accordance with statutory/ organisational requirements
P24 use all test and ancillary equipment in accordance with manufacturers' and organisational instructions
P25 carry out tasks safely and in accordance with organisational procedures
P26 when required, carry out live work safely and in accordance with specific

	procedures
P27	take appropriate steps to minimise danger from mechanical equipment that is found to be defective
P28	complete records/reports according to legislative requirements and organisational procedures

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Knowledge and understanding		General
You need to know and understand:	K1	the isolation procedure(s) to be followed to comply with organisational procedures
	K2	the meaning of the terms, “approved lock”, “personal lock”, “authorised”, “scheduled work”, “hierarchy of isolation”, “isolated”, “mechanical equipment”, “dead”, “danger notice” “safe system of work”, “permit to work”, “stored and dissipated energy”
	K3	the legal status of a “permit to work”, when a “permit to work is required, the circumstances when a permit may not be required, why a “permit to work” system is used when isolating equipment
	K4	organisational procedures for the issue and signing off of “permits to work”
	K5	organisational method statements
	K6	methods used to identify mechanical services (e.gs. water, compressed air)
	K7	tests to be carried out on mechanical circuits
	K8	circumstances when “live work” is permitted and the procedures to be followed when carrying out “live work”
		Dealing with an mechanical/high pressure injuries
You need to know and understand:	K9	causes of “high pressure” injuries in mines
	K10	potential injuries associated high pressure equipment/services/systems
	K11	purpose and use of equipment and facilities provided for dealing with high pressure injuries
	K12	treatment of casualty who has received an injury
	K13	organisational and legislative reporting requirements should an high pressure injury/incident emergency occur
	K14	procedures to be followed to communicate details of the high pressure emergency
		Mine environments
You need to know and understand:	K15	the main principles of health and safety and environmental legislation and regulations relevant to using mechanical equipment in mines
	K16	industrial Standards relevant to using mechanical equipment and systems in mines
	K17	approved codes of practice and guidance for working safely with mechanical equipment and services in mines
	K18	the different types and categories of hazards and hazardous situations in mines in general, and in your area of responsibility in particular
	K19	organisational and legislative requirements for inspections, examinations and testing

	K20	methods of communication in hazardous or emergency situations
		Equipment and tools
You need to know and understand:	K21	types, use and maintenance requirements of personal protective equipment provided to protect from hazards arising from mechanical equipment
	K22	legislation, approved codes of practice and guidelines for safe use of equipment
	K23	the use of equipment/tools provided in accordance with manufacturers' instructions
	K24	the causes and sources of stored energy, and safe methods for dissipation
	K25	organisational procedures for the isolation of plant and machinery
		Working with others
You need to know and understand:	K26	your own responsibilities and limitations
	K27	methods of effective communication
	K28	the allocation of tasks and duties
	K29	the benefits of team work, and how to achieve it

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