

MDG 25 – Cutting and Welding Incidents

Incident Information	Agent of fatality	Events	Recommendations
30/07/2006 United States Coal Open-Cut	Tyre Explosion	Welder was fatally injured while welding and grinding on a truck wheel which still had an inflated tyre mounted.	Initiation of policy regarding safe repair and/or replacement of tyres on trucks.
7/01/2003 United States Non-Coal Open-Cut	Fire	A contract employee was fatally injured utilizing welding machines to air gouge a metal flange when an ignition occurred inside scrubber. Apparently hot slag fell inside scrubber and ignited a combustible membrane used to filter exhaust gases.	Conduct risk assessments prior to work commencing and ensure personnel are trained. Ensure heat sources are separated from combustible material. Provide safety data information for material used on site and ensure contractors have access to.
1/11/2002 United States Non-Coal Open-Cut	Contact with Moving or Rotating Plant (Guarding/Access to Danger Zone)	A machinist was seriously injured in a workshop using a horizontal band saw to cut a groove in a hammer. He was holding hammer under saw blade when the saw blade grabbed handle forcing victim's hand into saw blade. He later died from injuries.	Ensure that personnel are trained in safe work procedures. Use tools and equipment compatible with the job being done. Secure any part or piece of material before work is performed to prevent accidental movement.
16/09/2002 United States Non-Coal Open-Cut	Electrocution	A welder was fatally injured at a crushed stone operation. The victim was lying on a wet, metal screen deck welding a wear plate in a confined area when he apparently touched the energized welding rod to his chest and received an electrical shock.	Establish procedures requiring welders to cover metal with insulated material when lying to weld in confined areas. Ensure maintenance is planned and possible hazards are eliminated. Provide the proper supplies and equipment to complete all tasks.
20/03/2001 United States Non-Coal Open-Cut	Gas Ignition Explosion	A foreman was fatally injured attempting to thaw an accumulation of ice in a sump with a propane torch. He covered the sump and found a second torch. On lighting the second torch he ignited an explosive mixture of gases in the scale sump.	Open flame heating devices not to be left unattended. Devices with open flame are not to be used in confined spaces where oxygen could become depleted. Tests for explosive gases be conducted prior to using any possible ignition source in a confined space.
15/02/2000 Australia New South Wales Non-Coal Open-Cut	Pressure Vessel Explosion	An employee received fatal burns while repairing a leak in a steel fuel tank for a grader. The victim was using oxy acetylene equipment when the tank exploded engulfing him in burning diesel fuel. The tank had been filled and pressurised to find leak.	
22/04/1998 United States Non-Coal Open-Cut	Tyre Explosion	A maintenance worker was killed and two co-workers seriously injured when they attempted to remove a brake drum from a scraper tyre. The tyre wasn't deflated and they had used an oxy/acetylene torch to cut brake drum when tyre exploded.	Never apply a heat source to a tire rim/hub until tire is removed from assembly. Manufacturer's guidelines for tire and brake drum removal be adhered to. Tire and rim safety training be provided to maintenance personnel who service tires and rims

14/12/1997 Australia Queensland Non-Coal Open-Cut	Electrocution	Electrocuted while welding in an underground crib room.	Implementation of welding procedures, including installation of voltage reducing devices (VRD's) on welding equipment. Effective Standard Work Instructions for working in heat must be implemented. Contractors must have Safety Management Systems in place.
1/07/1997 United States Coal Open-Cut	Fall of Roof/Sides/Highwall	A belt repairman was fatally injured when he was installing a conveyor belt structure with co-workers. After a lunch break the victim was preparing material for welding when the fall of roof occurred.	
6/03/1997 United States Non-Coal Open-Cut	Other Explosion	A welder with 10 months of mining experience was killed at a limestone quarry. The employee was fatally injured when one end of a dredge pipe floatation tank exploded while he was in the process of welding a bracket on the tank.	All pressure vessels should be vented prior to cutting or welding operations.
17/12/1996 Australia Tasmania Non-Coal Open-Cut	Pressure Vessel Explosion	Explosion of an acetylene torch causing multiple burns and death.	
10/04/1996 United States Non-Coal Open-Cut	Gas Ignition Explosion	A crusher operator was welding on a diesel fuel tank which contained approximately 200 gallons of fuel. The tank exploded and inflicted 2nd and 3rd degree burns to 87 percent of the victim's body. The employee later died from his injuries.	Fire suppression systems should be kept on hand whilst welding and cutting processes are being completed.
7/09/1995 United States Non-Coal Underground	Electrocution	An underground mechanic was fatally injured whilst in the process of providing temporary electrical power to a welding machine. He was found holding an energized 480-volt cable to the intake face fan. He died from electrocution.	All the employees were instructed in the proper procedures for handling power cables. Isolate energy before conducting work.
27/01/1995 New Zealand Non-Coal Underground	Electrocution	Was killed due to electrocution by welding machine used in wet and confined conditions in a crusher bin	
30/01/1991 Australia Western Australia Non-Coal Underground	Other Explosion	Was struck by fragments when a section of hollow steel drill rod that he was heating exploded. The rod was being attached to an excavator bucket as a wear plate.	
19/09/1990 Australia Queensland Non-Coal Underground	Gas Ignition Explosion	Fatally injured after receiving serious burns as the result of a gas explosion from a build-up of LPG in the revolving frame of a dragline during gouging and welding operations.	
30/03/1989 Australia Western Australia Non-Coal Underground	Catastrophic Failure	Was struck in the abdomen by fragments of a stone grinding wheel which disintegrated while he was sharpening a drill bit	

25/11/1988 Australia Western Australia Non-Coal Underground	Other	It is believed while welding miner sustained an electric shock. He was then thrown backwards and struck his head on a valve protruding from a support column.	
15/09/1988 Australia Western Australia Non-Coal Underground	Other	Was under a 400mm diameter pipe welding a spool in place. The pipe spool fell off its support and landed on him.	
13/01/1988 Australia New South Wales Non-Coal Underground	Electrocution	Injured when the electrode of his arc welder struck his forehead, causing electrocution.	
5/05/1977 United States Non-Coal Underground	Gas Ignition Explosion	Welding in a shaft causes a methane explosion	
1977 United Kingdom Non-Coal Underground	Gas Ignition Explosion	Died from burns received while he was working in a steel compartment at the base of a large working dragline excavator when an ignition occurred in the oxygen rich atmosphere. Was caused by 'blow back' from the cutting gear being used to weld cracks up.	
21/10/1974 United States Non-Coal Underground	Tyre Explosion	Welding of an already inflated tyre causes explosion	
1/01/1972 Australia New South Wales Non-Coal Underground	Tyre Explosion	Struck by the steel wheel and rim of a battery shuttle car wheel when the tyre exploded. The welder was using an oxy-acetylene torch to remove sprocket holding studs and the build up of heat caused a violent explosion of the already pressurised tyre.	
1966 Australia New South Wales Non-Coal Underground	Gas Ignition Explosion	Following shaft sinking, ventilation equipment had been withdrawn from the shaft and this caused a build-up in gassy conditions. While cutting a bolt from the top of the shaft, the gas ignited and caused one man to be thrown clear and sustain fatal injuries	
1965 Australia New South Wales Non-Coal Underground	Other Explosion	Fractured skull when 44 gallon drum to which he was welding angle irons exploded. Drum was found to contain residual yellow paint	
3/12/1963 Australia New South Wales Non-Coal Underground	Fire	Front end loader was being used to hold in position an iron plate to be welded to the chute of a surface loading ramp, when welding caused a fire under the loader. As he tried to move the loader he became trapped between the loader arms and the fuel tank.	

25/04/1963 United States Non-Coal Underground	Gas Ignition Explosion	Methane explosion from a welding arc	
10/01/1962 United States Non-Coal Underground	Gas Ignition Explosion	Methane explosion from a welding arc	
2/03/1961 United States Non-Coal Underground	Gas Ignition Explosion	Methane explosion from an arc or flame	
21/03/1958 Australia New South Wales Non-Coal Underground	Electrocution	Welder was electrocuted in course of electrically welding a spillage plate on a Marcus screen	