



SUBMISSION TO MODEL WORK HEALTH AND SAFETY CHAPTER 9 – MINES

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Introduction

Custom Fluidpower is one of the largest hydraulics, pneumatics and electronics solutions providers in Australia and is known for our innovation in using hydraulics, pneumatics and electronics.

Our organisation is proudly customer focused, which means our emphasis is not just on components and parts, it's on delivering total engineered solutions.

Custom Fluidpower is wholly Australian owned and operated. The company is staffed with over 180 varied skilled personnel covering design, engineering, business development, product specialists, technicians, trainers and management. Together they form a team that can provide extensive fluid power services to industry nation wide. Our major clients are from the mining sector and we have a strong interest in promoting safety in the fluid power industry. Custom Fluid Power Training is an RTO and focuses on the delivery of Certificate IV Engineering – Fluid Power.

Custom Fluidpower seeks continuous improvement in all that we do – whether it's our quality or our service. We believe it is important to strive to grow and change with customer needs in order to maintain our position as a market leader.

Training is important to us. We are investing in the future of our industry as a Registered Training Organisation training apprentices, our staff and the staff of our industry colleagues as well as our customers in the use and application of hydraulics, pneumatics and electronics.

Custom Fluidpower Pty Ltd welcomes the opportunity to participate in the consultation on the *Model Work Health and Safety Laws: Chapter Nine – Mines*.

Custom Fluidpower Pty Ltd is supportive of measures designed to improve health and safety outcomes in the heavy construction and mining industry. As such, Custom Fluidpower Pty Ltd supports the development of a harmonised legislative approach to work health and safety within Australia.

It is vital that we have a Health and Safety Management System that is to act as a single integrated system to ensure a coordinated health and safety practices at a mine.

Custom Fluidpower Pty Ltd recommends that an extensive education program be developed and implemented by the State regulators to help mine operators understand and comply with the new regulations.

Risk Management

Custom Fluidpower Pty Ltd believes that each mine operator must develop a Work Health and Safety Management System that is to be a single document. A single document can clearly identify hazards, risk management practices and other health and safety requirements will have the greatest positive impact on improving health and safety outcomes.

Fluid power safety is vital in a mine site. Injuries and fatalities occur frequently and cause horrific injuries. As recently as a month ago a young man was killed in a hydraulic accident at the Rio Tinto Brockman2 site in the Pilbara of WA. (Article attached). Fluid power training that we deliver currently supports the OH&S practices of our clients and in doing so significantly minimizes risk.

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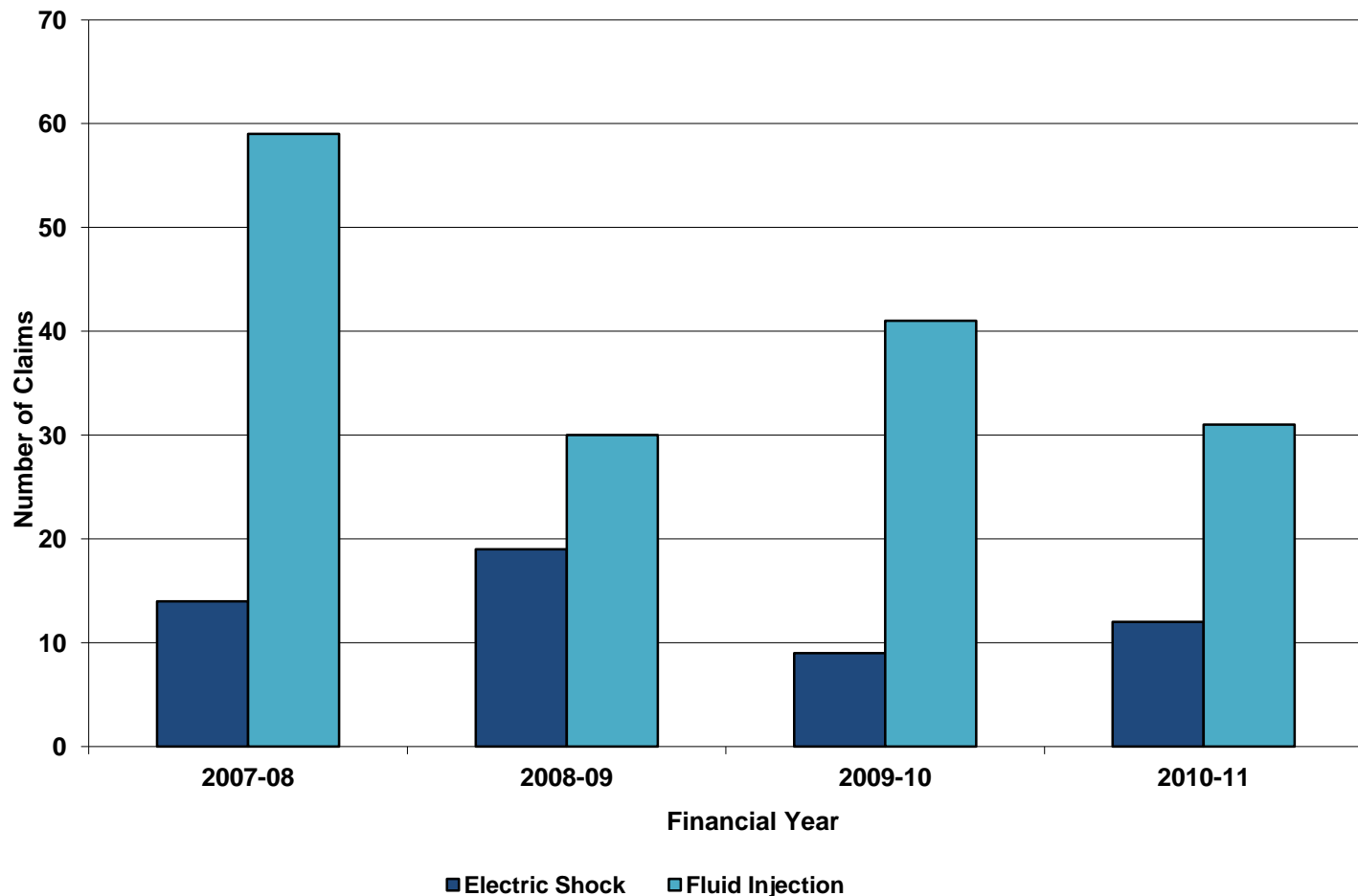


In the graph below the number of electric shock injuries and the number of fluid power injuries that occur in the NSW Coal Industry are compared. It is worth noting that over the last four years fluid power injuries have averaged rates more than double that of electric shock injuries. (data available Coal Services NSW)

Consider that this is one industry in one state. What would this look like at a national level and what would it cost industries and those individuals impacted by these injuries?



Electric Shock & Fluid Injection Claims Lodged NSW Coal Industry



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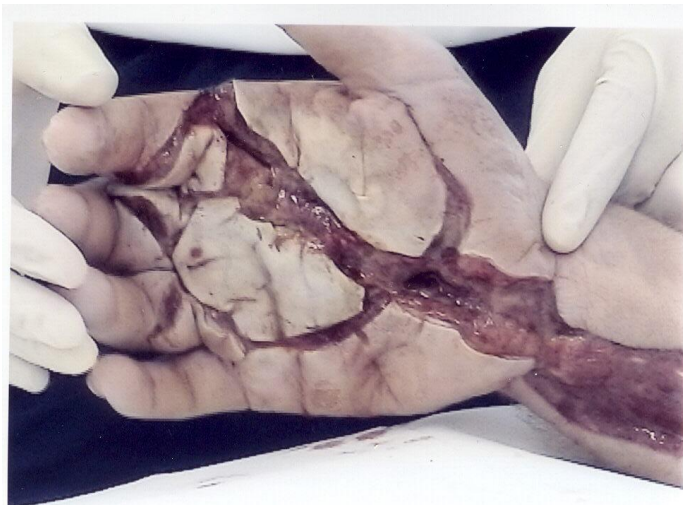
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We believe that Fluid power safety should be an integrated part of the regulations specifically for mines. Fluid power safety is critical for both above ground and underground mining. We believe that fluid power safety and the specialized first aid for fluid power injection injuries should be include in Division 3. 9.2.16 along with other important risk control measures such as Air Quality and Air Monitoring.

Custom Fluid Power has a strong commitment to training and we have developed Fluid Power Safety Induction course. We are currently getting this course nationally accredited. Visit our website and click on the safety video. <http://www.cfpt.com.au/industry-safety> - video

Fluid power safety should be a critical part of every mine site induction and training should be compulsory.



Hydraulic Injection caused a pinprick intrusion to the person's hand.

- Hydraulic Fluid in use was a Mineral Oil
- Pressure of fluid was **630Bar**(approx 9,150 psi)
- Equipment in use: Scissor cutters used at Road Traffic Accidents to release occupants.
- Location of Accident: Fire Service Training Ground
- Risk Assessments were in place and Full PPE was worn.

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The hand injury above is a stark reminder that a pin prick fluid power injection can cause devastating personal injuries. Please find attached several example articles detailing injuries and fatalities.

Recommendations:

1. We recommend that Fluid Power safety be included in the Model Work Health and Safety Regulations chapter 9 – Mines.
2. We recommend that fluid power specific first aid be included in the Model Work Health and Safety Regulations chapter 9 – Mines.

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Our Goal is Zero Harm - If it's Not Safe, Make it Safe

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"THE death of a 27-year-old man in a workplace accident at a Rio Tinto iron ore mine has sparked union calls for stronger safety laws in Western Australia.

The worker was fatally injured at a workshop at the Brockman 2 mine about 60km northwest of Tom Price in the Pilbara shortly after 8pm (WST) yesterday.

The man was killed while changing a hydraulic cylinder on a front-end loader, Rio Tinto said in a statement today.

Operations at Brockman 2 and the adjacent Nammuldi mine site have been suspended until further notice while police and the Department of Mines investigate.

Rio Tinto Pilbara operations president Greg Lilleyman said the accident was a tragic reminder of the importance of working safely.

"There should be no higher priority than this, and we cannot accept that accidents in the workplace are inevitable or acceptable," he said.

Unions WA secretary Simone McGurk said the worker's death was "a devastating reminder of the need for stronger health and safety laws in WA".

"From the start of 2012, WA will have the weakest health and safety laws in Australia as new uniform laws take effect in every state and territory except WA."

Ms McGurk said the WA government had refused to sign up to five key aspects of the new national safety laws.

They included giving WA's Director of Public Prosecutions the power to prosecute employers for serious safety breaches and increasing the maximum penalty for employer breaches from \$625,000 to \$3 million.

"WA workers and their families are right to question ... why the life of a West Australian worker is considered by this government to be worth so much less than that of a worker anywhere else in Australia," Ms McGurk said.

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She said yesterday's death was the fourth workplace death in WA in the last two months and on average one worker was killed every 17 days in WA and every 30 minutes there was a serious injury at work.

Rio Tinto said it was providing support and counselling services to the dead man's family, friends and workmates." (by Jayne Rickard and Bridget Lacy)

Mines Inspectorate

Longwall fluid-injection injury

Mine type: All mine types

Incident: A coal mine worker was energising a hydraulic power take off (PTO) on a longwall shield, unaware that a hose connected to the PTO was not connected to any equipment and had been left uncapped from a previous job. The unrestrained end of the hose then whipped uncontrollably, striking the worker, who sustained bruising to both thighs, a fractured and lacerated right index finger and emulsion fluid injection to the laceration.

Equipment: Longwall PTO hose

Hazard: Uncontrolled release of hydraulic energy and fluid

Cause: The coal mine worker was energising the hydraulic circuit after repairs had been made to a damaged fitting. When the PTO was energised, the unrestrained hose and high pressure fluid struck him on the legs and on the back of the hand. The worker had been informed that the PTO was the hydraulic supply point for the tailgate shield anti-topple ram, however the supply point had been moved to the PTO on an adjacent shield and the hose not removed.

Comments:

- ⌘ The hose run was not visible because of the large amount of built-up material caused by poor housekeeping (see photo at right).
- ⌘ Redundant hoses had not been removed from the work area, creating confusion as to the correct supply point.
- ⌘ There was poor communication on the progress of the job and isolation changes during the course of the task.
- ⌘ The hazard of having unrestrained and uncapped hoses was not recognised — energised longwall hoses can be pressurised at up to 300 bar.

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Recommendations:

1. That all supply points and hoses be clearly marked and labelled.
2. That housekeeping standards be maintained so that hose paths are readily visible and traceable.
3. That unused hoses be restrained and capped or removed from service along with redundant hoses.
4. That changes to the job process and the isolation requirements for the task be clearly communicated to all personnel involved in the task.
5. That all personnel recognise the hazard present in hoses and circuits pressurised at up to 300 bar.

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Please ensure all relevant people in your organisation receive a copy of this safety alert. Any such advice

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supplied to site should reach those who require it, and it should also be placed on the mine notice boards. See more safety alerts and bulletins at

www.dme.qld.gov.au/mines/safety_information_bulletins.cfm

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**Queensland
Government**
Natural Resources,
Mines and Energy

SAFETY BULLETIN

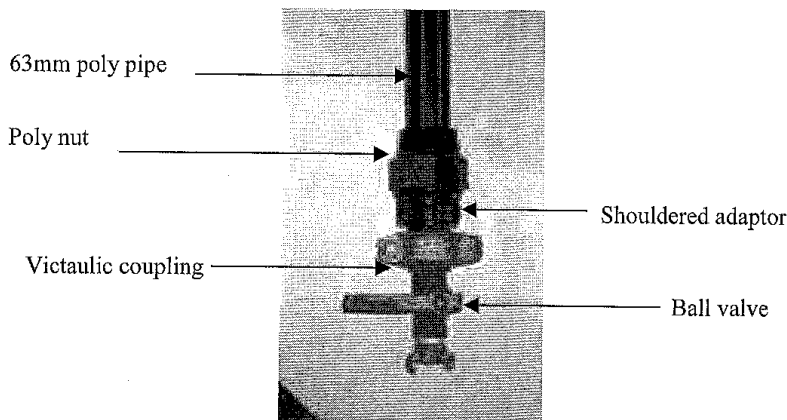
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Isolation Of Plant Containing Stored Energy

Scope

What is stored energy? There are varied and numerous examples of plant containing stored energy, a few are: springs, airlines, air receivers, hydraulic hoses, tyres, conveyor counterweights, capacitors and batteries. An example of compressed air is shown below. This is a 63 mm poly air header commonly used to provide air in underground mines.



In 2003 a worker undid the poly nut on an air header similar to the one above while the pipe was pressurised and received fatal injuries. The recent coronial inquest found that the worker *"received fatal injuries when struck a blow of considerable force to his forehead. The fatal blow was caused by an object being propelled onto the forehead of the worker by a sudden expansion of air from a 63 millimeter poly airline..."*.

The scope of isolation should always include the isolation of plant containing stored energy.

Isolation practice

There are four basic steps in isolating plant containing stored energy:

1. Isolating the energy source
2. Maintaining the method of isolating the energy source
3. Releasing or containing the stored energy
4. Proving that the stored energy has been dissipated or contained.

The isolation of plant containing stored energy often depends upon an administrative procedure and reliance on this level of control makes it imperative that the use of the procedure becomes second nature.

Training and assessment

The outcome required is that training and assessment on the isolation of plant containing stored energy should specifically target the types of energy that will be required to be isolated during activities carried out in each occupation. It is generally not practical to obtain all of these outcomes at an induction forum. However induction training and assessment will usually include generic training and assessment on isolation of plant containing stored energy.



Training and assessment on the isolation of plant containing stored energy particular to any occupation should be linked to that occupation. The training and assessment must be carried out prior to the worker commencing in the occupation.

Training material

In addition to the four basic steps training material should include:

- the physical properties of the stored energy that is to be isolated,
- instructions that whenever practicable, every person working on plant that has been isolated must check that stored energy has been released or contained, and most importantly
- instructions that mechanisms that release or contain the stored energy should remain in place while work is being carried out.

A valve that has been used to release compressed air should remain in the open position. It is then clear to everyone working in the area that the energy has been released and avoids the possibility of any pressure build-up due to a leaking valve.

National Competency Standard MNMUMS211A Install and Maintain Reticulation Systems

This is still in draft form and it is anticipated that the Australian National Training Authority will endorse it in August 2004

References

AS 4024.1 – 1996 Safeguarding of Machinery, Part 1 General Principles, Section 14.
 Department of Natural Resources, Mines and Energy Guidance Note, Isolation Procedures*
 Department of Natural Resources, Mines and Energy Safety Bulletin No 41*
 Newsflash 17 February 2004 Coroner's Inquest fatal mine accident*
 Queensland Mining and Quarrying Safety and Health Regulation 2001*.
 Queensland Coal Mining Safety and Health Regulation 2001 *.

*denotes available on the website at <http://www.nrm.qld.gov.au/mines/inspectorate>

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