

Uncontrolled Release of Energy- Polyethylene Pipe

Mines safety alert no. 374

Incidents

There has been a recent increase in reported incidents of Coal Mine Workers (CMWs) being struck by polyethylene pipe as a result of stored energy being released suddenly and uncontrolled. These incidents have resulted in five individual CMWs receiving a fractured lower leg in separate incidents since 31 October 2018.

What is the issue?

It is common practice to relocate lengths of polyethylene pipe by towing it with mobile plant such as light vehicles or small excavators. While undertaking these activities the pipe has become bowed for various reasons then suddenly released, springing back striking the CMW who was positioned in the line of fire. CMWs have also been injured when disconnecting piping from the towing vehicle and pumps. In these cases the stored energy source had not been identified.

Example of sudden release of stored energy



Comment

There has also been incidents reported where the vehicle towing pipe has been damaged, including light vehicle rollovers or the vehicle itself being struck by the pipe. A contributing factor in the light vehicle rollovers was the weight of the pipe towed being greater than the towing capacity of the vehicle. While these incidents have predominantly occurred at surface coal mines, the hazard of stored energy in polyethylene pipe can also be present in underground coal mines.

Contributing factors to these incidents occurring have been:

- The failure of CMWs to identify the hazard of stored energy.
- CMWs placing themselves in the line of fire of stored energy.
- No risk assessment conducted for the task or work procedure developed.
- The plant and equipment being used was not fit for purpose.
- CMWs not being competent to complete the task.
- CMWs not ensuring the stored energy has been released before attempting to disconnect from a pump.

Recommendations

Mines must ensure there is a documented procedure for towing poly pipe.

Mines must ensure a risk assessment is conducted when there is a variation required to a documented procedure.

Mines must ensure plant and equipment used is fit for purpose.

Mines must ensure pump crew personnel have completed RIIWVG201A - Conduct dewatering activities in surface operations or equivalent.

Peter Newman, Chief Inspector of Coal Mines

Contact: Graham Callinan, Inspector of Mines, +61 7 417 730 567