PIPA Urged to Make a Statement After Electrofusion Coupler Causes Large Explosion at Australian Mine Owned by Newmont

By PPN Editor

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The fire and explosion at an Australian Mine owned by Newmont due to an Electrofusion (EF) fitting has sent shockwaves through the plastic pipe industry.

https://www.resourcesregulator.nsw.gov.au/sites/default/files/2024-08/iir24-07-dangerous-incident-involving-explosion-in-reclaim-tunnel.pdf

The Safe Work Regulator is now investigating explosion which has been attributed to an AGRU EF Coupler and a Friamat Welder supplied by Vinidex.

https://safetowork.com.au/regulator-investigation-to-boost-safety-after-cadia-explosion/

Two workers attended the Concentrator No 2 scats reclaim tunnel at the Cadia Mine in NSW to extend the existing HDPE piping that connected to the underpans of a conveyor feeder and ran towards the back of the tunnel. Part of the task involved fitting a HDPE coupling to an existing length of HDPE pipe and another prefabricated length of HDPE pipe. The end of the existing length of HDPE pipe had been damaged by mobile plant.

To prepare the pipe surfaces before the electrofusion welding process started, the ends of the 2 pieces of pipe were cleaned using an abrasive sanding pad affixed to a handheld grinder and the ends were wiped with paper towel product (WypallX80). The workers also placed this paper towel product into the existing pipe to help stop a slow leak of water coming from further up the pipe towards the welding area.

Once the coupling and 2 pipe pieces were fitted together, the workers set up the electrofusion welding unit by connecting the electrodes to the coupling. The workers then scanned the supplied barcode that was affixed to the coupling. The barcode provided the product information the welding unit required to automatically adjust the welding settings. In this instance, the welding unit determined the applicable welding time to be 1040 seconds.

This raises significant concerns about the safety and reliability of electrofusion fittings, especially for larger diameter HDPE pipes.

As the industry body, PIPA (Plastics Industry Pipe Association) should consider issuing a statement addressing the following key points:

1. Acknowledge the incident and express concern for worker safety.

2. Highlight the ongoing investigation by the NSW Resources Regulator to determine the specific cause and circumstances.

3. Emphasize the importance of proper training, procedures, and risk assessments for electrofusion welding, especially for larger diameter pipes (150mm and above).

4. Recommend a review of current industry guidelines and standards for electrofusion welding, particularly focusing on:
• Surface preparation methods including appropriate use of paper towels
• Welding time and temperature controls
• Environmental factors (e.g., presence of water, debris)
• Equipment calibration and maintenance

5. Encourage member companies to review their own safety protocols and training programs for electrofusion welding.

6. Commit to working closely with regulators, manufacturers, and end-users to improve safety standards and practices in electrofusion welding.

7. Propose the formation of a task force to study the incident findings and develop updated best practices for the industry.

8. Reiterate the importance of following manufacturer instructions and using properly certified equipment and fittings.

By addressing these points, PIPA can demonstrate its commitment to industry safety and proactively work towards preventing similar incidents in the future.

WATCH: Explosion at Newmont's Cadia Valley Mine Due to Electrofusion Welding of HDPE Pipe
https://www.centralwesterndaily.com.au/video/local/x94o4i2/explosion-at-newmonts-cadia-valley-mine/