



Devcon® Combowear FC Protects Conveying Pipe Elbow Against Extreme Environment

The pneumatic conveying pipe in a coal plant utilizes gas or air to transport coal slurry through the equipment. The slurry is a byproduct of coal cleaning to ensure the material is of the highest quality before being converted into electricity. Despite the importance of this process, plant employees must be weary of exposure to the slurries, as human exposure can cause serious health issues. Creating safety measures to contain the material is vital to maintaining plant operations.

Problem:

The pneumatic conveying pipe elbows experienced extreme abrasive wear from wet slurries running through the equipment and wearing the elbow joint. As a result, the elbows were replaced every 2 months, leading to costly and time-consuming repairs.

Continuous repairs also increased potential employee exposure to hazardous metals. The maintenance team was looking to limit repairs and replacement of the equipment, in order to promote productivity and safety throughout their operations.

Solution:

Devcon Combowear Fast Cure was chosen due to its ability to quickly repair processing equipment in extreme environments.

- Each pneumatic conveying pipe elbow was sandblasted to white metal, ensuring the surface was free of corrosive particles to allow for optimal adhesion for the Combowear Fast Cure application.
- The surface of each pipe was cleaned with Devcon Cleaner Blend 300 to rid the surface of any oil or grease deposits.
- Devcon Combowear Fast Cure was applied to a thickness of ½" to the bottom and vertical surface of the pipe elbows, ensuring maximum protection from abrasive wear.
- Acetone was used to achieve a smooth finish to each pipe elbow.



Pneumatic conveying pipe



Devcon Combowear FC application to Pneumatic conveying pipe elbow

Devcon Combowear Fast Cure

An extremely durable, versatile product. Used on pipe elbows, exhausters fans, chippers, and hoppers, it's the ideal repair solution for processing equipment exposed to extreme wear and abrasion conditions.



Project Outcome:

Quick Repair Time

At a coal plant, repairs must be completed promptly so that operations can resume, and vital electricity be produced. With Devcon Combowear Fast Cure, curing time is greatly reduced and equipment returned to service in as little as 2 hours. Comparatively, replacement of the pneumatic conveying pipe could take days to ship and install.

Abrasion Resistance

Devcon Combowear Fast Cure was applied to areas of high wear, extending the life cycle of the conveying pipe and protecting the equipment against abrasion. Due to the non-sag properties, Devcon Combowear Fast Cure was easily applied to vertical areas of the pipe facing abrasive wear.

Reduced Maintenance Cost

With Devcon Combowear Fast Cure, equipment can be repaired without having to fully replace the equipment. By prolonging the life of a conveying pipe, the plant saves on new equipment cost.



Before Combowear FC



After Combowear FC

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