

DUCTS AND PIPES

FUNCTIONALITY

Transport pipes and ducts are enclosures that move coal dust from one piece of equipment to another, or that brings heated gases into the equipment for process operation. These enclosures can range from lightweight sheet metal to heavy wall pipe. They can be round with diameters up to approximately 5 feet, or rectangular with cross sections up to approximately 2'x3'

EXPLOSION HISTORY

- Damage to transport pipes and ducts are usually the result of an explosion in a connected piece of equipment. For example, an explosion that occurred in the pulverizer usually damages the pulverizer heated gas inlet, because the inlet is of lightweight construction.
- Loss history for the past ten years due to dust explosions from FM Global Data Sheet 7-76:
 - Eight in coal processing for a loss of \$4,654,000

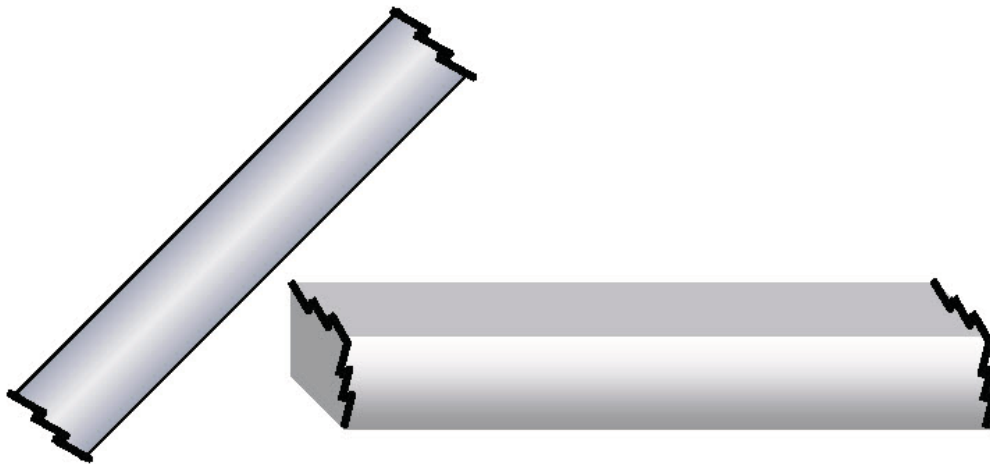


Figure 1: Ducts and Pipes

SOURCES OF IGNITION

Sparks, flame, or smoldering embers are potential ignition sources that can ignite an explosion in transport pipes and ducts.

SOLUTION

Transport pipes and ducts are best protected by either an explosion chemical isolation system, or by explosion venting.

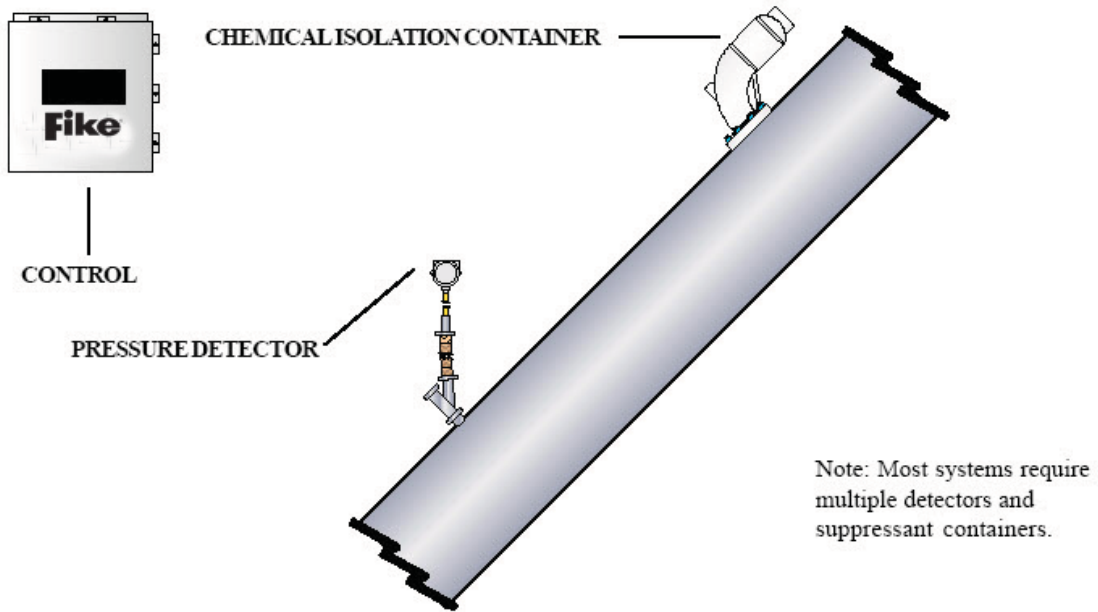


Figure 2: Transport Pipe Protected by Chemical Isolation

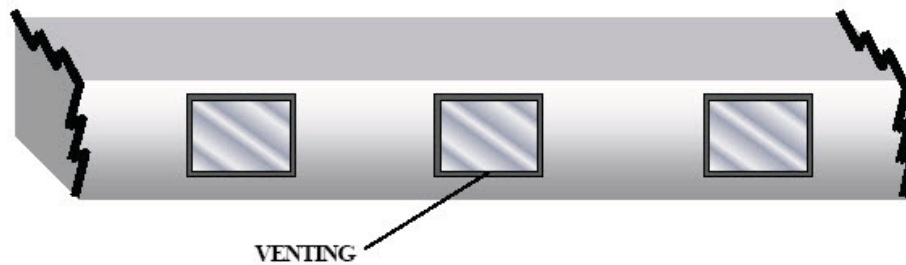


Figure 3: Heated Air Duct Protected by Explosion Venting

