



Ignition of Grease in Underground Coal Mine



▶ What happened?

A face crew was using a “gopher drill” (rotary drill on an air leg) to install rib bolts. During the installation, grease on the support mesh ignited and generated a flame.

The flame extinguished itself as the bolter was lowered from the hole.

No one was hurt, but this incident but could have had very serious repercussions.

Investigation

While drilling a 4m hole for the installation of a cable bolt, the friction of the drill rods against the mesh created sufficient heat to ignite the grease that had been deposited on the mesh (the mesh is used to support the roof and ribs between bolts).

Low ignition temperature grease (2500C) had been left in the area and had been used to lubricate the drill rod threads. Excess grease had been deposited on the mesh and this led to ignition during drilling.

Recommendations

1. Ensure the right type of grease is used for each lubrication job.
2. Low ignition temperature grease must be removed from work areas or locked away to prevent general use.
3. Clean grease off all bolting gear and mesh.
4. Cut an aperture in the mesh if there is a likelihood of rubbing or friction between the mesh and spinning steel rods and chucks.
5. Train bolting crews in the hazards of greasing threads.

