



MSHA's Accident Prevention Program Safety Idea

**SAFETY
IS A
VALUE!**

"Avoiding Unplanned Air Changes"

Category : Ventilation

Mine Type: Underground Coal

Many mine explosions result from a major interruption of the mine ventilation system. One such interruption can be safely controlled by employing sound mining and engineering practices. When mining into an unregulated air course or into an air course controlled by a regulator other than the regulator that controls the air split of the area being mined, a regulator. Never cut a regulator without effective ventilation controls being installed. Before *Cutting Thru* into mine workings or another air split, make sure you follow these safeguards.

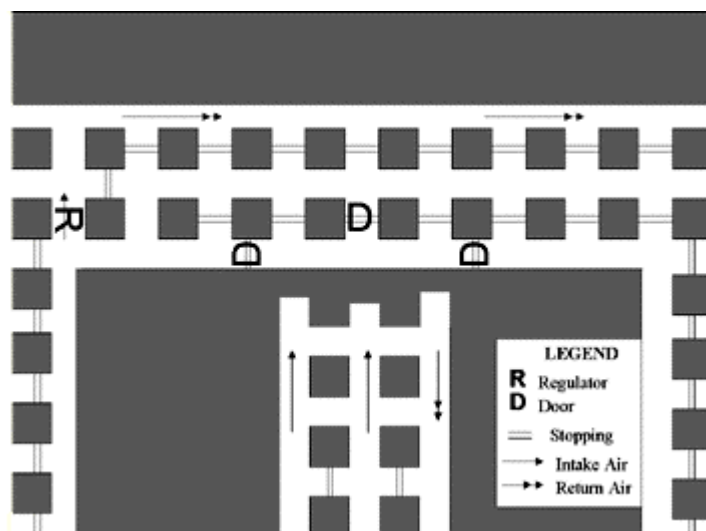
Establish a pressure relationship by:

- Conducting an altimeter survey to determine the pressure differential between the active working section and the "Cut Thru" area.

- Taking magnehelic readings across doors and thru regulators to determine total pressure at various points thereby establishing pressure relationships.

- Mining to within 10 feet of the proposed "Cut Thru" with the continuous miner, then:

- Drilling a bore hole thru the remaining coal (a drill that runs off the power take off of a scoop or roof bolter is ideal for this purpose).
- Pushing a copper tubing thru the bore hole and attaching a rubber tubing on the end nearest you. Attach this end to a magnehelic to determine the "pressure drop" or pressure differential. Select a magnehelic with the proper range and calibrate it before readings are taken.



After a pressure relationship has been established:

- "Box In" the area that you will be mining into. Brattice curtain can be used if the pressure differential is less than 0.3 inches of water. "Box In" the area with masonry block if the pressure differential is greater than 0.3 inches of water. Remember to install access doors in the stoppings and **be sure to hang them the right way** (keep in mind the new pressure relationship).

- Make sure doors are left open to provide ventilation until you "Cut Thru". Wire or post doors open and clearly mark on the door "LEAVE DOOR OPEN".

- Examine the area that is "Boxed In" for methane accumulations. Have the examiner call out to the

active unit supervisor when it is clear to "Cut Thru" with the miner. Right before "Cut Thru" close the doors. If there is enough differential, the area will be ventilated thru leakage. If there isn't enough differential, put a hole in a stopping or unloosen the line brattice. Examine the "Boxed In" area for any methane accumulations after "Cut Thru".

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Remember - Safety is a Value that you can LIVE with!