



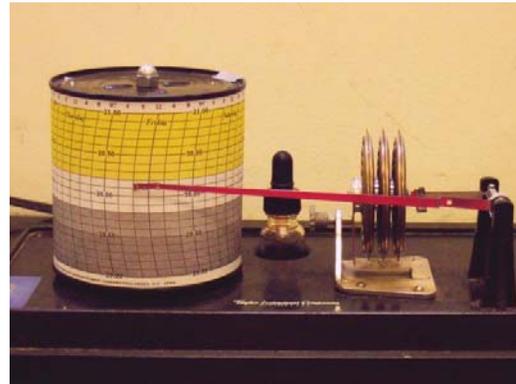
U. S. Department of Labor MSHA's Accident Prevention Safety Idea



Barometer Basics for Coal Mines

Most underground coal miners understand that a falling barometer (a decrease in atmospheric pressure) often results in higher methane concentrations at the working face. Methane and other gases are liberated from gobs and from behind seals into the active areas of the mine as the barometer falls. A falling barometer usually indicates an approaching storm front in the area. Mines are required to keep methane well below explosive levels with engineered ventilation systems and control coal dust with application of rock dust. Observation of the barometer will often provide a warning or an indication to alert miners that more frequent inspections and gas checks need to be made.

Each mine should have a recording barometer to alert miners of changes in the atmospheric pressure. Barographs continuously record a graph of local atmospheric pressure. Barometers are also available that record atmospheric pressure digitally.



Best Practices

- Make frequent checks for gases in work areas and abandoned and sealed area when the barometer is falling.
- Take extra gas readings when traveling in areas near seals or gobs when the barometer is falling since methane and low oxygen levels may be present.
- Maintain a recording barometer at the mine and check the trend each shift for changes in the barometric pressure. Understand how these changes affect mine ventilation.
- Obtain a regional barometer forecast that will indicate expected changes and alert miners of the potential hazards associated with the changing barometric pressure.

Additional information can be found in the following safety ideas:

- ❖ [Hazards with a Falling Barometer](#)
- ❖ [Hazards with a Rising Barometer](#)

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