

Laboratory coal-mine-dust incombustibles meter

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Publisher: United States 6-26-1972

Summary: Abstract

This report describes work done under contract for the Bureau of Mines on the incombustibles meter--a portable gage that measures the percent of incombustible content in a coal mine dust sample. The gage uses a low-energy gamma-ray backscatter technique that indicates the average atomic number of the sample, and hence, the percent of the incombustible content. For the most part, the results from this instrument checked within plus or minus 3 percent of the laboratory results. When extensively tested with samples prepared by Industrial Nucleonics and when briefly tested with samples constructed of graphite and incombustibles by the Bureau of Mines, the gage measured all samples within the required plus or minus 3 percent. More work on this instrument will be required before it can actually be taken into mines. The weight must be reduced to one-half or less that of the model described in this report.

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rev 1/8/2021