

1. Record Nr.	UNINA9910299394703321
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Titolo	Explosions in Underground Coal Mines [[electronic resource]] : Risk Assessment and Control / / by Jianwei Cheng
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-74893-9
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (219 pages)
Disciplina	553.0973
Soggetti	Air pollution Fire prevention Fossil fuels Quality control Reliability Industrial safety Mineral resources Mathematical models Atmospheric Protection/Air Quality Control/Air Pollution Fire Science, Hazard Control, Building Safety Fossil Fuels (incl. Carbon Capture) Quality Control, Reliability, Safety and Risk Mineral Resources Mathematical Modeling and Industrial Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1 Importance and Characteristics of Underground Mine Gas Explosions -- 2 A Historical Review of Identifying and Mitigating Mine Gas Explosions -- 3 Modelling Mine Atmosphere in a Sealed Coal Mine Volume -- 4 Improved Explosibility Diagram Method -- 5 Safety Operations and Assessment for Sealed Mine Atmosphere -- 6 Application and Illustrative Examples.
Sommario/riassunto	This book addresses the hazard of gas explosions in sealed underground coal mines, and how the risk of explosion can be

assessed, modeled, and mitigated. With this text, coal mine operators and managers will be able to identify the risks that lead to underground mine gas explosions, and implement practical strategies to optimize mining safety for workers. In six chapters, the book offers a framework for understanding the sealed coal mine atmosphere, the safety characteristics that are currently in place, and the guidelines to be followed by engineers to improve upon these characteristics. The first part of the book describes the importance and characteristics of underground gas mine explosions in a historical context with data showing the high number of fatalities from explosion incidents, and how risk has been mitigated in the past. Chapters also detail mathematical models and explosibility diagrams for determining and understanding the risk factors involved in mine explosions. Readers will also learn about safety operations, and assessments for the sealed mine atmosphere. With descriptions of chapter case studies, mining engineers and researchers will learn how to apply safety measures in underground coal mines to improve mining atmospheres and save lives. .
