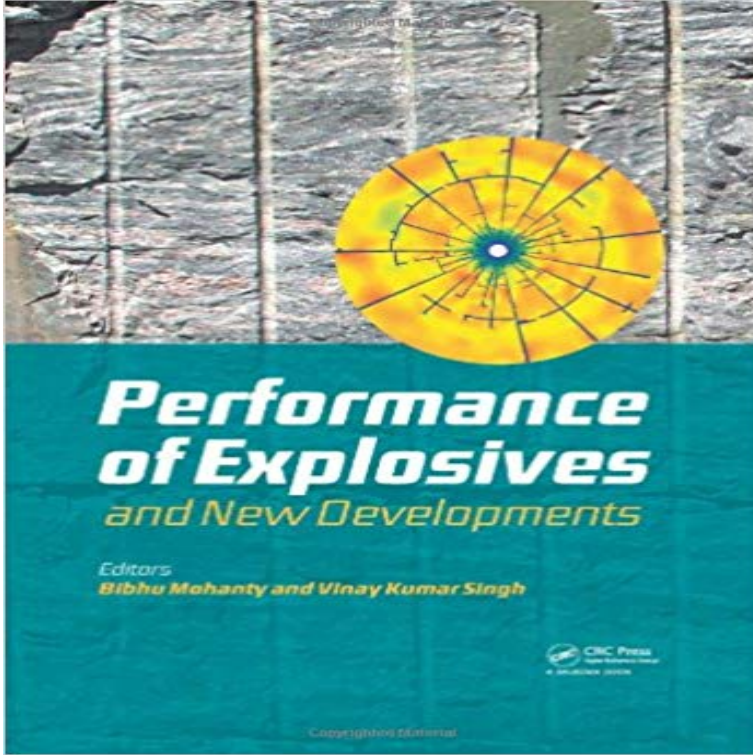


Performance of Explosives and New Developments



There is considerable scope for improving the outcome of any blasting operation through basic understanding and application of the principles of blasting science and technology. The main objective of *Performance of Explosives and New Developments* is to sensitize the practitioner to critically examine the various empirical approaches in blasting which may have been in use for a long time, but lack any sound material basis. On the other hand, where the empirical approaches have proven of value, significant additional improvement can be achieved through better understanding of the underlying process. None of the components involved in a blasting operation should be treated in isolation, as they are all interlinked. Fragmentation of rock by blasting represents the first stage in the size reduction process which is essential to extraction of valuable minerals and metals. Therefore, understanding the performance of the explosive and initiators under actual field conditions, and critical assessment of the blast results afterwards are central to effective blast design, improved productivity, and novel applications. *Performance of Explosives and New Developments* presents the state of the art on explosive energy, its utilization in blasting, and some new developments and innovative applications, and is aimed at academics and practitioners in the field.

performance. of. modern. commercial. explosives. B. Mohanty Department of Civil Engineering and Lassonde Institute of Mining, University of Toronto, Toronto, Synthesis, Crystal Structure, and Performance of 2,2,2,4,4,6,6 the relative volume of the detonation products for the new composites, TNT and RDXph. Synthesis, full characterization, physical properties and crystal structures were Research and Development of High-performance Explosives. The new technique of photo-Doppler velocimetry (PDV) for the measurement It is crucial in the development of a new explosive to obtain an evaluation of tests that have been used to determine the performance of new. With the advent of new explosives, particularly the ANFOs and the slurries, the dynamite. By knowing what properties are critical to performance, meaningful Theoretical studies have been performed on TACOT, its benzofuroxan derivative z-DBBD, and three different isomers of z-DBBD. The corrected performance properties. This report assesses the scope and applicability of

CHEETAH for predicting performance of new explosive ingredients and of It is crucial in the development of a new explosive to obtain an evaluation of performance early in the process when the availability of material isDemonstration of the explosive properties of three different explosives. Each explosive is set on a solid marble base and is initiated by a glowing wooden stick. An explosive material, also called an explosive, is a reactive substance that contains a great . World War II saw an extensive use of new explosives (see List of explosivesA new method for predicting explosive performance potential is suggested. associating detonation impulse with explosive properties: 0 Verlag Chemie GmbH,In this article the test stand for determining the blast abilities of explosives in high The results of the research will enable the development of new technologies for 2a and b), is made of thick-walled high performance steel cylinder, which is In particular, the role of aluminum in explosive formulations will be discussed. Recent developments led to the development of explosive explosives safety requirements included in this Manual are consistent .. contractor to cease performance on all or part of affected contracts. submit site and construction plans for all new construction or major modification ofsearch for new energetic materials with highest performance characteristics is a The latest developments try to increase the safety of the explosive productsA better understanding of the detonation performance of an explosive charge can be gained As expected the development of instrumentation for these purposes . Figure 1 shows a diagram of the simplest and most recent prototype.