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Nota di contenuto	Introduction to Rock Mechanics Overview and Key Concepts -- Stress Analyses in Rocks Illustrative Examples and applications -- Plane Strain Analyses In depth Exploration of Plane strain in Rock Mechanics -- Rock Behavior and Theories of Failures Understanding the behavior and predicting failures in rock masses -- Failure of Brittle Anisotropic Rocks: Examination of failure mechanisms in specific rock types -- Miscellaneous Rock Properties Coverage of various rock characteristics and properties -- Strength Properties of Rocks Comprehensive study on the strength aspects of rock materials -- Design of Underground Openings in Competent Rocks Introduction and practical applications -- Distribution of Stresses around Underground Excavations Analyzing

stress distribution in rock environments -- Design of Multiple Openings in Massive Rocks Techniques and considerations for designing multiple openings.

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#### Sommario/riassunto

This book extensively covers rock mechanics and engineering, playing a vital role in mining, geological, and civil applications. It explores the stability, failure, and behavior of rock masses, offering control and prediction methods. Fundamental concepts, stress and strain analyses, failure theories, and rock characteristics are addressed, essential for safety in mining and construction. Applications like geological hazard assessment, slope stability, and foundation design demonstrate its significance in civil and geological engineering. The book's structured approach includes an overview in Chapter 1, stress analyses in Chapter 2, and plane strain analyses in Chapter 3. Subsequent chapters delve into rock behavior, failure theories, and specific properties. Practical aspects, such as designing underground openings, are covered in later chapters. The incorporation of numerous solved tutorials enhances its value for students and educators seeking a comprehensive understanding of these pivotal topics.

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