Based on the third edition by E Hoek and J Bray



# ROCK SLOPE ENGINEERING

CIVIL AND MINING

**4TH EDITION** 



Duncan C Wyllie & Christopher W Mah

# **Rock Slope Engineering Civil And Mining**

R K Goel, Bhawani Singh

### **Rock Slope Engineering Civil And Mining:**

Rock Slope Engineering Duncan C. Wyllie,2017-09-18 Rock Slope Engineering covers the investigation design excavation and remediation of man made rock cuts and natural slopes primarily for civil engineering applications. It presents design information on structural geology shear strength of rock and ground water including weathered rock Slope design methods are discussed for planar wedge circular and toppling failures including seismic design and numerical analysis Information is also provided on blasting slope stabilization movement monitoring and civil engineering applications. This fifth edition has been extensively up dated with new chapters on weathered rock including shear strength in relation to weathering grades and seismic design of rock slopes for pseudo static stability and Newmark displacement. It now includes the use of remote sensing techniques such as LiDAR to monitor slope movement and collect structural geology data. The chapter on numerical analysis has been revised with emphasis on civil applications. The book is written for practitioners working in the fields of transportation energy and industrial development and undergraduate and graduate level courses in geological engineering

Rock Slope Engineering Evert Hoek, Jonathan D. Bray, 1981-06-30 This classic handbook deals with the geotechnical problems of rock slope design It has been written for the non specialist mining or civil engineer with worked examples design charts coverage of more detailed analytical methods and of the collection and interpretation of geological and groundwater information and tests for the mechanical properties of rock **Rock Slope Engineering** Duncan C. Wyllie, Chris Mah, 2004-08-26 The stability of rock slopes is an important issue in both civil and mining engineering On civil projects rock cuts must be safe from rock falls and large scale slope instability during both construction and operation In open pit mining where slope heights can be many hundreds of meters the economics of the operation are closely related to the steepest stable slope angle that can be mined This extensively updated version of the classic text Rock Slope Engineering by Hoek and Bray deals comprehensively with the investigation design and operation of rock slopes Investigation methods include the collection and interpretation of geological and groundwater data and determination of rock strength properties including the Hoek Brown rock mass strength criterion Slope design methods include the theoretical basis for the design of plane wedge circular and toppling failures and design charts are provided to enable rapid checks of stability to be carried out New material contained in this book includes the latest developments in earthquake engineering related to slope stability probabilistic analysis numerical analysis blasting slope movement monitoring and stabilization methods. The types of stabilization include rock anchors shotcrete drainage and scaling as well as rock fall protecting methods involving barriers ditches nets and sheds Rock Slopes Civil and Mining Engineering contains both worked examples illustrating data interpretation and design methods and chapters on civil and mining case studies The case studies demonstrate the application of design methods to the construction of stable slopes in a wide variety of geological conditions The book provides over 300 carefully selected references for those who wish to study the subject in greater detail It also includes an

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written for practitioners working in the fields of transportation energy and industrial development and undergraduate and graduate level courses in geological engineering Rock Slope Engineering Evert Hoek, John Bray, 1977 Engineering Mr. Rohit Manglik, 2024-07-26 EduGorilla Publication is a trusted name in the education sector committed to empowering learners with high quality study materials and resources Specializing in competitive exams and academic support EduGorilla provides comprehensive and well structured content tailored to meet the needs of students across various Rock Slope Engineering Duncan C. Wyllie, 2004 **Engineering Rock Mass Classification** R K Goel, Bhawani Singh, 2011-08-09 Rock mass classification methods are commonly used at the preliminary design stages of a construction project when there is very little information It forms the bases for design and estimation of the required amount and type of rock support and groundwater control measures Encompassing nearly all aspects of rock mass classifications in detail Civil Engineering Rock Mass Classification Tunnelling Foundations and Landsides provides construction engineers and managers with extensive practical knowledge which is time tested in the projects in Himalaya and other parts of the world in complex geological conditions Rock mass classification is an essential element of feasibility studies for any near surface construction project prior to any excavation or disturbances made to earth Written by an author team with over 50 years of experience in some of the most difficult mining regions of the world Civil Engineering Rock Mass Classification Tunnelling Foundations and Landsides provides construction engineers construction managers and mining engineers with the tools and methods to gather geotechnical data either from rock cuts drifts or core and process the information for subsequent analysis The goal is to use effective mapping techniques to obtain data can be used as input for any of the established rock classification systems The book covers all of the commonly used classification methods including Barton's Q and Q systems Bieniawski s RMR Laubscher s MRMR and Hoek s and GSI systems With this book in hand engineers will be able to gather geotechnical data either from rock cuts drifts or core and process the information for subsequent analysis Rich with international case studies and worked out equations the focus of the book is on the practical gathering information for purposes of analysis and design Identify the most significant parameters influencing the behaviour of a rock mass Divide a particular rock mass formulation into groups of similar behaviour rock mass classes of varying quality Provide a basis of understanding the characteristics of each rock mass class Relate the experience of rock conditions at one site to the conditions and experience encountered at others Derive quantitative data and guidelines for engineering design Provide common basis for communication between engineers and geologists

Adopting the Melody of Term: An Psychological Symphony within Rock Slope Engineering Civil And Mining

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