Record Nr. UNINA9910953613903321 Autore Blight G. E. **Titolo** Unsaturated soil mechanics in geotechnical practice / / Geoffrey E. Blight Pubbl/distr/stampa Boca Raton, : CRC Press, 2013 Boca Raton:,: CRC Press,, 2013 **ISBN** 1-134-68707-9 0-429-22788-4 1-62870-721-6 0-415-62118-6 Edizione [1st ed.] Descrizione fisica 1 online resource (636 p.) Classificazione TEC009150TEC003000TEC009020 Disciplina 624.1/5136 Soggetti Soils - Testing Soil moisture - Measurement Soils - Plastic properties Zone of aeration Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Contents: Preface: Acknowledgements: About the author: Scales. plotting conventions for graphs and reference lists; List of abbreviations and mathematical symbols; 1. HISTORICAL REVIEW OF THE DEVELOPMENTOF UNSATURATED SOIL MECHANICS: 2. DETERMINING EFFECTIVE STRESSES IN UNSATURATED SOILS; 3. MEASURING AND CONTROLLING SUCTION; 4. INTERACTIONS BETWEEN THE ATMOSPHERE AND THE EARTH'S SURFACE: CONSERVATIVE INTERACTIONS - INFILTRATION, EVAPORATION AND WATER STORAGE; 5. INTERACTIONS BETWEEN THE ATMOSPHERE AND THE EARTH'S SURFACE: DESTRUCTIVE INTERACTIONS - WATER AND WIND EROSION. PIPING EROSION 6. THE MECHANICS OF COMPACTION7. STEADY AND UNSTEADY FLOW OF WATER AND AIR THROUGH SOILS - PERMEABILITY OF UNSATURATED AND SATURATED SOILS; 8. COMPRESSIBILITY, SETTLEMENT AND HEAVE OF UNSATURATED SOILS: 9. MEASUREMENTS OF THE STRENGTH OF

UNSATURATED SOIL

Sommario/riassunto

Soil will, either seasonally or occasionally, pass from the unsaturated to the saturated state and even from unsaturation to dryness. The theory of unsaturated soils is dealt with, including its application to natural undisturbed soils and compacted soils. Application of the theory to soil-like materials such as mine waste and municipal solid waste is also covered. Application of the theory to practice is illustrated by a number of detailed case histories. Unsaturated soil mechanics principles can also successfully and usefully be applied in related fields such as the bulk storage of particulate materials, underground mine support, solution mining and concrete structures--