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Autore	Han Jie <1964->
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Nota di contenuto	Cover; Title Page; Copyright; Contents; Preface; Chapter 1 Introduction; 1.1 Introduction; 1.2 Problematic Geomaterials and Conditions; 1.2.1 Problematic Geomaterials; 1.2.2 Problematic Conditions; 1.3 Geotechnical Problems and Failures; 1.4 Ground Improvement Methods and Classification; 1.4.1 Historical Developments; 1.4.2 Classification; 1.4.3 General Description, Function, and Application; 1.5 Selection of Ground Improvement Method; 1.5.1 Necessity of Ground Improvement; 1.5.2 Factors for Selecting Ground Improvement Method; Structural Conditions; Geotechnical Conditions Environmental Constraints Construction Conditions; Reliability and Durability; 1.5.3 Selection Procedure; 1.6 Design Considerations; 1.7 Construction; 1.8 Quality Control and Assurance; 1.9 Recent Advances and Trends for Future Developments; 1.9.1 Recent Advances; 1.9.2 Trends for Future Developments; 1.10 Organization of Book; Problems; References; Chapter 2 Geotechnical Materials, Testing, and Design; 2.1 Introduction; 2.2 Geomaterials and Properties; 2.2.1 Classifications; 2.2.2 Physical Properties; 2.2.3 Mechanical Properties; 2.2.4 Hydraulic Properties; 2.2.5 Compaction of Geomaterial 2.3 Geosynthetics and Properties 2.3.1 Type of Geosynthetic; 2.3.2 Function; 2.3.3 Properties and Test Methods; Physical Properties; Hydraulic Properties; Mechanical Properties; Geosynthetic-Soil/Block

Interaction Properties; Allowable Properties; 2.4 In situ Testing; 2.4.1 Standard Penetration Test; Introduction; Measured Parameter; Correlation; 2.4.2 Cone Penetration Test; Introduction; Measured Parameters; Soil Classification and Correlation; 2.4.3 Vane Shear Test; Introduction; Measured Value; 2.4.4 Pressuremeter Test; Introduction; Measured Parameters; 2.4.5 Plate Load Test; Introduction Measured Parameters 2.5 Shallow Foundation Design; 2.5.1 Bearing Capacity; 2.5.2 Settlement; Elastic Solution; Consolidation Test-based Method; Empirical Method; Secondary Compression; 2.5.3 Consolidation; 2.6 Slope Stability Analysis; 2.6.1 Introduction; 2.6.2 Methods for Slope Stability Analysis; Stability Conditions for Analysis; Factor of Safety; Infinite Slope Analysis; Ordinary Method of Slices; Simplified Bishop's Method; Spencer's Method; Minimum Factor of Safety and Safety Map; Numerical Methods; 2.7 Earth Retaining Wall Analysis; 2.7.1 Type of Wall 2.7.2 Lateral Earth Pressure Coefficient 2.7.3 Rankine's Theory; 2.7.4 Coulomb's Theory; 2.8 Liquefaction Analysis; 2.8.1 Liquefaction Potential; 2.8.2 Earthquake-Induced Settlement; Problems; References; Chapter 3 Shallow and Deep Compaction; 3.1 Introduction; 3.2 Densification Principles; 3.3 Conventional Compaction; 3.3.1 Introduction; Basic Concept; Suitability; Applications; Advantages and Limitations; 3.3.2 Principles; Compaction Curve; Relative Compaction; One-Point Method; Influence Factors; Influence Depth; 3.3.3 Design Considerations; Performance Requirements Selection of Compaction Equipment

Sommario/riassunto

"The proposed book focuses on the principles and design of ground improvement technologies"--
