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1.8 Ground treatment (geotechnical processes); 1.9 Changes of soil properties during excavation; 1.10 Post-construction foundation failure; 1.11 Practical considerations; 1.11.1 Example 6:Excavation in waterlogged ground; 1.11.2 Example 7:Variability of ground conditions 1.11.3 Example 8:Reliability of the soils investigation1.11.4 Example 9: Deterioration of ground exposed by excavation; 1.11.5 Example 10: Effect of new foundation on existing structure; 1.12 Design procedures; 1.13 References; 2 Soil Mechanics,Lab Testing and Geology; A:Soil mechanics; 2.1 Introduction to soil mechanics; 2.2 Pressure distribution through ground; 2.3 Bearing capacity; 2.3.1 Introduction to bearing capacity; 2.3.2 Main variables affecting bearing capacity; 2.3.3 Bearing capacity and bearing pressure; 2.3.4 Determination of ultimate bearing capacity
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2.8.4 General2.9 Undisturbed sample testing; 2.9.1 Moisture content; 2.9.2 Shear strength; 2.9.3 Consolidation tests (oedometer apparatus); 2.9.4 Permeability tests; 2.9.5 Chemical tests; 2.10 Summary of tests; 2.11 Analysis of results; 2.12 Final observations on testing; C:Geology; 2.13 Introduction to geology; 2.14 Formation of rock types; 2.15 Weathering of rocks; 2.16 Agents of weathering; 2.16.1 Temperature; 2.16.2 Water; 2.16.3 Wind; 2.16.4 Glaciation; 2.17 Earth movement; 2.17.1 Folds,fractures and faults; 2.17.2 Dip and strike; 2.17.3 Jointing; 2.17.4 Drift
2.18 Errors in borehole interpretation

Sommario/riassunto

This manual for civil and structural engineers aims to simplify as much as possible a complex subject which is often treated too theoretically, by explaining in a practical way how to provide uncomplicated, buildable and economical foundations. It explains simply, clearly and with numerous worked examples how economic foundation design is achieved. It deals with both straightforward and difficult sites, following the process through site investigation, foundation selection and, finally, design. The book: includes chapters on many aspects of found