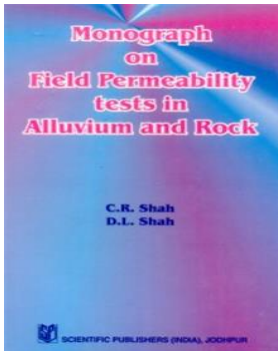


Monograph on Field Permeability Tests in Alluvium and Rock



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Blurb

The monograph on "Field Permeability tests in alluvium and Rock" is prepared with three objectives in view, viz. (i) provide theoretical background (ii) provide guidelines for selection of method, procedure for tests and computation of field permeability tests and (iii) provide procedure for selection of design value. After all elaborate field tests, some personal judgment has to be used to select a design value. Several case studies are given indicating procedure for actual selection of design value and its use in computation of seepage, drainage and dewatering etc. The monograph is therefore useful to designers and consultants, who are required to provide guidelines for field tests and select design value for a system. The monograph covers mainly tests in alluvium, where a reasonable representative value of permeability coefficient can be achieved. However, some aspect of tests in rock are included to work out a value, where, there is no other source of information. The monograph is divided in nine chapters. Chapter 1, 2 and 3 are introductory covering necessity of tests, influence of geological factors and field investigation. Chapter 4 is devoted to classification of tests in alluvium. A broad classification of field permeability tests in alluvium is worked out based on whether a test is regional or a point test in a bore or a pit. Further classification is based upon whether an aquifer is confined or unconfined, whether a test is below water table or above water table etc. Each test is identified by notation for easy reference. For each test case, theoretical and experimental basis for computation of permeability coefficient is given in Chapter 5. Chapter 6 covers test procedure and worked example of each test case. Chapter 7 and 8 cover field permeability classification in rock and test procedure and worked example of permeability determination in rock. Case studies of field permeability values and procedure for selecting a design value there from are given in Chapter 9.

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