Evaluation of Single Set of In-situ Shear Strength Parameters for Numerical Modelling of A Concrete Gravity Dam

1. **E.Rakesh Reddy, Managing Director, EE Engg Construction Services, Hyderabad**
2. **E.Saibaba Reddy, Professor of Civil Engg, JNTUH-CEH, Hyderabad**
3. **B.Haritha Reddy, Research Associate, NIRD&PR, Hyderabad**

Abstract The present paper includes the comprehensive laboratory and field data and the test results interpretations of rock and rock mass for a concrete gravity dam complex. The laboratory tests on rock samples received from twenty drillholes and in-situ shear tests on 20 blocks for concrete to rock interface inside 4 drifts and 15 blocks for rock to rock interface inside 3 drifts have been interpreted. A single set of shear strength parameters has been evaluated based on in-situ shear tests at both the banks of dam. The shear strength parameters of rock from laboratory tests are higher than the shear strength parameters of rock mass based on in-situ shear tests.

Keywords Shear strength parameter; Cohesion; Friction angle; Laboratory and in-situ tests