

Development of finite element computer code for thermal analysis of roller compacted concrete dams

ABSTRACT

Thermal analysis of roller compacted concrete (RCC) dams plays an important role in their design and construction. This paper deals with the development of a finite element based computer code for the determination of temperatures within the dam body. The finite element code is then applied to the real full-scale problem to determine the impact of the placement schedule on the thermal response of roller compacted concrete dam. Based on the results obtained, it could be concluded that for a given roller compacted concrete dam, changing the placing schedule can optimize the locations of maximum temperature zones.

Keyword: RCC dams, Birth, Death, Thermal analysis, Field problems, Schedule of construction, Finite element