

CDM based finite element code for concrete in 3-D

Al-Gadhib, A.H., Asad-Ur-Rahman, K., Baluch, M.H.

Computers and Structures

Vol. 67, Issue.6, 1998

Abstract: This paper presents a three dimensional finite element code DAMAG3D for nonlinear analysis of concrete type materials modeled as elastic-damage. The CDM model adopted is the one as proposed by SUARIS W, OUYANG C, FERNANDO V. M. Damage model for cyclic loading of concrete. J Engng Mech, American Society of Civil Engineers 1990; 116(5): 1020-35. for monotonic and cyclic loading of concrete structures. Code DAMAG3D is applied to simulate response of concrete under monotonically increasing load paths of uniaxial compression, Brazilian test, strip loading and patch loading, with reasonable correlation established with experimental results and results from other nonlinear constitutive models.