Analysis of concrete shell structures subjected to high temperature by using layered elements

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Abstract:

This work is a development of constitutive model for concrete by the theory of plasticity at high temperature. In this model, non-uniform work hardening plasticity model adopts the most sophisticated failure model of Willam - Warnke five-parameter model. This model was modified to include the effect of the temperature on concrete structures. The developed model can predict the effect of the fire on concrete structures at different types of temperature loading from room temperature to very high temperature.

Keywords:

Shell structure, High temperature, Layered Element and plasticity modeling

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