

A REVIEW OF ANALYSIS OF PRE STRESSED CONCRETE CONTAINMENT STRUCTURE WITH RESPECT TO ISP-48

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Abstract

A large scale over pressurization test performed on the NUPEC/NRC 1:4 scale model of a prestressed concrete containment vessel (PCCV) at Sandia National laboratory, USA. The several pretest analysis and posttest analysis of this model were carried out as a part of this ISP48 project. This paper presents a critical review of the work carried out by different teams of researchers/scientists within the framework of ISP48 for analysis of NUPEC/NRC 1:4 scale model of PCCV of a nuclear power plant by using finite element methods. After thorough study of the analysis procedures and the corresponding results obtained some areas of future work have been identified.

Keywords: Containment, pre-stressed concrete, ISP48, failure, pressure loading, thermal loading, finite elements, analysis.