

## **FRACTURE MECHANICS ASSESSMENT FOR CNAI RPV UNDER PRESSURIZED THERMAL SHOCK ACCIDENT CONDITIONS**

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**Keywords:** Fracture Mechanics, Pressurized Thermal Shock.

**Abstract.** In view of CNAI Life Extension Project studies, the nuclear regulator requires an upgrade of the Pressurized Thermal Shock analysis in order to assure the RPV integrity under this particular accident condition up to the extended life period. Based on complementary irradiation program, actualized 3-D thermo-hydraulics and mechanics calculations; a brittle failure criterion is considered and implemented based on ASME XI App. A 2013 approach. The remaining life time is obtained via adequate irradiation-induced transition temperature shifts physical correlations such as RG 1.99. Rev.02 and EONY (J. Nucl. Mat. 433, 2013, 240-254).