

P2 DETERMINATION OF PRESSURE LOSS COEFFICIENTS IN THE ELEMENTS OF THE IEA-R1 REACTOR NUCLEI

A.J. Alvim de Castro^a and P.E. Umbehaun

^a alfredoalvim@gmail.com

Nuclear and Energy Research Institute, São Paulo, Brazil

The flow distribution in the different elements that compose the core of the IEA-R1 reactor is one of the main parameters for its thermo-hydraulic analysis. Currently this distribution is estimated with the code "FLOW" that uses existing correlations in the literature for the estimation of the singular and distributed pressure losses. In order to validate the code, a test bench was set up to survey the load loss in the elements that make up the reactor core for different levels of flow in the elements.

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P26 EXPERIMENTS OF LOSS OF COOLANT IN THE IEA-R1 REACTOR

E. Maprelian^a, W.M. Torres, A. Belchior Junior, P.E. Umbehaun, S.C. Santos, R.L. França, A.C. Prado, L.A. Macedo, A. Texeira e Silva, J.R. Berretta and G. Sabundjian

^a emaprel@ipen.br

Nuclear and Energy Research Institute, São Paulo, Brazil

The Loss of Coolant Accident (LOCA) has been considered Design Basis Accident (DBA) for several kind of reactors. The test section for experimental (STAR) for simulation of LOCA, using the Instrumented Fuel Assembly (IFA) EC-208 was designed, assembled, commissioned, and used for the experiments at the IEA-R1 Reactor. The experiments were performed for five different levels of fuel uncovering and two heat decay conditions. The five levels consisted of one total and four partial uncovering of the IFA. The results obtained for each experiment were the section level and 13 IFA temperatures. A data acquisition system was used to record the process parameters. The STAR section has proved to be a very safe and efficient tool for fuel uncovering experiments to obtain thermal-hydraulic data for research and development, and for the data to be compared with safety analysis code calculations.
