International Conference "Mathematical Modeling and Computational Physics, 2017" (MMCP2017)



Contribution ID: 135

Type: not specified

Stability analysis of the IBR-2M pulsed reactor in an automatic regulated regime at the different level of average power

Monday, 3 July 2017 17:00 (30 minutes)

The IBR-2M pulse reactor is characterized by a high level of reactivity fluctuations and, as a consequence, a high level of fluctuations in the regulated parameter-the amplitude of the power pulses. Fluctuations of the regulated parameter relative to the average level in the standard stabilization regime usually fall within the range of 20% with possible emissions up to 40%, which is close to the limits of the emergency protection operation (50%). Taking this into account, special and contradictory requirements are imposed on the automatic regulator. In this paper, the results of stability analysis of the IBR-2M reactor in the automatic regulating regime at the different level of average power are presented.

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Session Classification: Poster Session