

## **SIMULATING THE BISTABLE FLOW OF RECIRCULATION LOOP, IN A BWR NPP.**

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### **ABSTRACT**

The bistability is a very well known phenomenon in the nuclear industry and mainly in the boiling water reactor power stations. This phenomenon has had several analysis and characterization intents, but due to its nature, not lineal and not stationary, it is difficult, and they have been in vain [1]. Nevertheless from the success of the analysis and classification by the technique of the Hilbert transform [2] it has been a process of characterization and to validate the simulation.

The simulation, that is the object of this work, is based on the assumption that the phenomenon of the flow bistable is a transition phenomenon induced by the noise that is not more a variant of the transition induced by the flow, or resonant due vibrations to the turbulent character of the flow.

It is showed up in this work, the equations this process has been simulated with, as well as the results and the conclusions of the simulation.

The modifications of the geometry of the recirculation pipes to avoid this phenomenon, is also included.

### **REFERENCES**

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