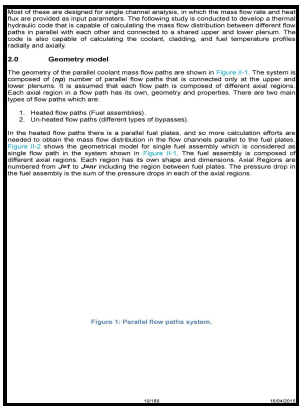
Validation of the Keno and su-Hammer Codes For Plutonium Systems.

s.n - Validation of the DYN3D



Most of these are designed for single channel analysis, in which the mass flow rate and heat flux are provided as input parameters. The following study is conducted to develop a thermal hydraulic code that is capable of calculating the mass flow distribution between different flow paths in parallel with each other and connected to a shared upper and lower plenum. The code is also capable of calculating the coolant, cladding, and fuel temperature profiles radially and axially.

2.0 Geometry model

The geometry of the parallel coolant mass flow paths are shown in Figure II-1. The system is composed of (*np*) number of parallel flow paths that is connected only at the upper and lower plenums. It is assumed that each flow path is composed of different axial regions. Each axial region in a flow path has its own, geometry and properties. There are two main types of flow paths which are:

1. Heated flow paths (Fuel assemblies).
2. Un-heated flow paths (different types of bypasses).

In the heated flow paths there is a parallel fuel plates, and so more calculation efforts are needed to obtain the mass flow distribution in the flow channels parallel to the fuel plates. Figure II-2 shows the geometrical model for single fuel assembly which is considered as single flow path in the system shown in Figure II-1. The fuel assembly is composed of different axial regions. Each region has its own shape and dimensions. Axial Regions are numbered from *JAT* to *JAM* including the region between fuel plates. The pressure drop in the fuel assembly is the sum of the pressure drops in each of the axial regions.

Figure 1: Parallel flow paths system.

Description: -
-Validation of the Keno and su-Hammer Codes For Plutonium Systems.
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Atomic Energy of Canada Limited. AECL -- 5535Validation of the Keno and su-Hammer Codes For Plutonium Systems.
Notes: 1
This edition was published in 1976

Tags: #SCALE/AMPX #multigroup #libraries #for #sodium

Validation of SuperMC code by simulating a Metal

However, the corresponding capture cross section is such that the probability of fission is much higher for fast neutrons. Furthermore, ISOCRIT provides the means for responding to any customer request regarding re-analysis due to changed parameters e.

NCSP

American National Standard Guide for Nuclear Criticality Safety in the Storage of Fissile Materials, ANSI-NI6. American National Standard Quality Assurance Requirements for Nuclear Facility Applications, ASME NQA-2-1989 Edition, American Society of Mechanical Engineers, New York, NY 1989. The deviations of less than 0.

SCALE/AMPX multigroup libraries for sodium

The US government retains and the publisher, by accepting the article for publication, acknowledges that the US government retains a nonexclusive, paid-up, irrevocable, worldwide license to publish or reproduce the published form of this manuscript, or allow others to do so, for US government purposes. An extensive experimental program was performed, including criticality and reactor-type parameter measurements. It suggests that the Serpent MC code can be used for the preparation of homogenized group constants and as a reference solution for code-to-code verification with the DYN3D code.

Spent fuel pool storage calculations using the ISOCRIT burnup credit tool

The first part is aimed at developing and validating a 3D full-core heterogeneous model of each of the experiments using the Serpent Monte-Carlo code MC code. Glasstone, Nuclear Reactor Theory, Van Nostrand Reinhold, New York, NY 1970.

Validation of the DYN3D

Lamarsh, Introduction to Nuclear Reactor Theory, Addison-Wesley, Reading, MA 1972.

Spent fuel pool storage calculations using the ISOCRIT burnup credit tool

This study has been performed to validate SuperMC for precise simulation of metal-cooled fast reactors using a high profile heterogeneous critical core, the BFS-62-3A. DISCLAIMER This report was prepared as an account of work sponsored by an agency of the United States Government. In order to conservatively apply burnup credit in spent fuel pool criticality safety analyses, Westinghouse has developed a software tool, ISOCRIT, for generating depletion isotopics.

Spent fuel pool storage calculations using the ISOCRIT burnup credit tool

The calculated results agreed well with the measured values on most of the neutronic characteristics.

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The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof. The computer code and data set combinations were validated against the experimental data of Stubbins, et.

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