Nuclear Data Library in Design Calculation

Go HIRANO
TEPSYS, 2-37-28 Reitai, Koto-ku, Tokyo, 135-0034 Japan

The characteristics of the lattice codes used for the core design calculation of light-water reactors in Japan are reported from the viewpoint of nuclear data library.

At the time of the light-water reactor introduced into Japan, various technologies including the lattice code were also introduced from the nuclear fuel vender such as W.H. or GE. Those lattice codes are based on ENDF/B-4/5 library. They have been constantly improved, and are widely used for the commercial core design.

Decades have passed since the introduction of initial lattice codes, and domestic venders are currently developing next generation's lattice codes. Some domestic venders have started employing JENDL series (3.2/3.3) as one of the main nuclide data besides ENDF series.

Besides the nuclear data library, the current methodologies of energy groups and resonance calculation will also be reported.