

International Conference on Management of Spent Fuel from Nuclear Power Reactors: An Integrated Approach to the Back End of the Fuel Cycle



Contribution ID: 131

Type: POSTER

BORATED STAINLESS STEEL STORAGE PROJECT TO THE SPENT FUEL OF THE IEA-R1 REACTOR

The IEA-R1 research reactor operates in a regimen of 64h weekly, at the power of 4.5 MW. In these conditions, the racks to the spent fuel elements have less than half of its initial capacity. Thus, maintaining these operating circumstances, the storage will have capacity for approximately six years. Whereas the estimated useful life of the IEA-R1 is around twenty years, it will be necessary to increase the storage capacity for the spent fuel. Dr. Henrik Grahn, expert of the International Atomic Energy Agency on wet storage, visiting the IEA-R1 Reactor (September/2012) made some recommendations: among them, the design and installation of racks made with borated stainless steel and internally coated with an aluminum film, so that corrosion of the fuel elements would not occur. This work objective is the project of high capacity storage for spent fuel elements, using borated stainless steel, to answer the Reactor IEA-R1 demand and the security requirements of the International Atomic Energy Agency.

Key words: Research Reactor, Storage, Spent Fuel

Country/ int. organization

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