

Fuels and Uranium alloys used for nuclear research reactors



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Uranium is one of the major actinide elements. It is used in nuclear fuel reactors. Two types of nuclear reactors exist. Power plant nuclear reactors, such as EDF reactors in France; they use Uranium Oxides pellets in the state of ceramics and they are dedicated to electricity production. Research nuclear reactors, such as RJH and RHF in France; they use metallic alloys of Uranium and they are used by the scientific community to produce neutrons for science, industry and medicine.

This lecture will be dedicated to fuels used in research nuclear reactors. What they stand for? How they are produced? And what are the Uranium alloy properties for their manufacturing? I will briefly present the R&D performed in Framatome in Uranium metallurgy.