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Key features of design, manufacturing and implementation of laboratory and industrial equipment for Mixed Uranium –Plutonium Oxide (MOX) and Nitride fuel pellets fabrication in Russia

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The presentation describes the author's experience in design, manufacturing and installation of equipment used in Mixed Uranium –Plutonium fuel pellet fabrication in Russia. The key features of mixed uranium-plutonium oxide and nitride powders are described, as well as their influence on main process (furnaces, presses) and auxiliary (gloveboxes) equipment design. Technical solutions for working with low fluidity powders, automatic dimensional and weight control, automatic readjustment of the manufacturing parameters, automatic powder gathering are discussed. Conveyance of boats prone to deformation and gas separation systems, insulation material choice are described, as well as rules and regulations applicable for this kind of equipment.

Country/Int. Organization

Russia, France

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