Title (en)

METHOD FOR THE PRODUCTION OF SPHERICAL COMBUSTIBLE OR FERTILE MATERIAL PARTICLES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON KUGELFÖRMIGEN BRENN- ODER BRUTSTOFFPARTIKELN

Title (fr)

PROCÉDÉ DE PRODUCTION DE PARTICULES SPHÉRIQUES DE COMBUSTIBLE OU DE MATIÈRE FERTILE

Publication

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Application

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Abstract (en)

[origin: WO2008142072A1] The invention relates to a method for the production of spherical combustible or fertile material particles from an oxide of the group of the heavy metals uranium, thorium, plutonium, or mixtures thereof. For this purpose, the process steps of producing a base solution of the nitrates of the heavy metal(s), adding at least one first reagent in order to adjust the viscosity of the solution, dropping the solution to form microspheres, at least superficially solidifying the microspheres in an atmosphere containing ammonia, collecting the microspheres in a solution containing ammonia, and subsequent washing, drying and thermal treatment are carried out, wherein urea and/or ammonium carbonate and/or ammonium hydrogen carbonate and/or ammonium cyanate and/or biuret are added to the base solution before adding the first reagent, and the solution thus prepared is heated to a temperature T at 80° = T < T_s where T_s = boiling temperature of the solution, and is maintained at said temperature over a time period t where 2 h = t = 8 h.

IPC 8 full level

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CPC (source: EP US)

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