

硝酸羟胺在动力堆乏燃料后处理流程钚线第三循环中的应用

@于恩江\$中国原子能科学研究院!北京,102413 @黄怀安\$中国原子能科学研究院!北京,102413 @周兴权\$中国原子能科学研究院!北京,102413 @陶成英\$中国原子能科学研究院!北京,102413 @张林耀\$中国原子能科学研究院!北京,102413 @杨振书\$中国原子能科学研究院!北京,102413 @利黎明\$中国原子能科学研究院!北京,102413

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摘要 为动力堆乏燃料后处理流程的设计之用,通过还原实验,研究温度、溶液酸度、硝酸羟胺(HAN)与钚的初始浓度比值对 HAN还原 Pu(IV)的还原百分数的影响。结果表明,升温、低酸和合适的 HAN用量有利于 Pu(IV)的还原。用模拟料液进行3A槽和3B槽串级实验的结果表明:3A槽的钚回收率达99.9%以上,3B槽的达99.98%;钚中去铀分离系数达50左右。通过单级和串级实验,研究了含钚30%(V/V)TBP-煤油放置时间对钚反萃率的影响。反萃率随放置时间增长而下降。

关键词 [硝酸羟胺](#) [反萃](#) [钚](#)

分类号

PLUTONIUM PARTITIONING IN THE THIRD PLUTONIUM CYCLE OF THE PUREX PROCESS WITH HYDROZINE-STABILIZED HYDROXYLAMINE NITRATE

YU ENJIANG; HUANG HUAI AN; ZHOU XINGQUAN; TAO CHENGYING; ZHANG LINYAO; YANG ZHENSHU; LIU LIMING China Institute of Atomic Energy, P. O. Box 275(26), Beijing, 102413

Abstract The effects of some factors such as concentration of nitric acid, the molar ratio of hydroxylamine nitrate to plutonium and temperature on the stripping of plutonium are investigated. Cascade experiment with simulated 3AF and 3BF feed are carried out at room temperature and elevated temperature(45--50°C) respectively. Plutonium recovery and DF for removal of uranium from plutonium stream are given. Standing time of the organic phase loaded with plutonium influence re-extraction of plutonium significantly.

Key words [Hydroxylamine nitrate](#) [Stripping](#) [Plutonium](#)

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