

研究简报

UT_x老化释氦研究

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摘要 为研究老龄氟化铀释放氦的规律, 对室温贮存多年的老龄UT_{0.9~1.2}释放的氦压力与组分进行了分析。结果表明, 氟化铀经过6~7 a老化, 氦衰变产生的 ³He气体约有38.1%~45.3%释放至贮氟铀床空腔内, 其纯度为99.9%, 贮氟铀床空腔气体压力达1.11~1.36 MPa; 部分He保留在固相中, He和U的原子比为0.177~0.201。

关键词 [氟化铀](#); [老化](#) [³He释放](#)

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Helium Release From Aged Uranium Tritide

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Abstract

Helium desorption rule from aged uranium tritide was investigated through the pressure measurement and the composition of helium released from uranium

tritide stored at room temperature was analysed. After 6 to 7 years aging of uranium tritide, about 38.1%-45.3% He produced by disintegration of ³He from uranium tritide was released in the cavum of the uranium bed with the gas pressure of 1.11- 1.36 MPa and the purity of 99.9% above, the rest of helium is kept in the solid of uranium tritide with the He/U ratio of 0.177-0.201.

Key words [uranium](#) [tritide](#) [aging](#) [effect](#) [³He](#) [release](#)

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