技术及应用

桶装放射性废物非破坏分析系统测量模式设计

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摘要　为解决核设施退役过程中产生的桶装放射性废物活度非破坏测量，在某几何条件下，废物桶内分布条件为理想情况以及部分条件为理想情况下，利用蒙特卡罗方法改变某些变量对探测效率进行了计算，并对结果进行了分析，给出了废物桶内非理想分布条件简化成理想分布条件的方法，进而提出了桶装放射性废物非破坏测量模式及探测效率获取方法。并用此方法进行了简单的比对实验，实验结果表明该方法是可行的。

关键词　　桶装放射性废物　　非破坏测量　　探测效率　　理想情况

分类号

Design of Measure Mode for Barreled Radwaste Non-destructive Assay System

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Abstract To set up a non-destructive assay mode for barreled radwaste brought by the process of getting nuclear establishment out of mission, some variables were changed using the Monte- Carlo method to calculate the detecting efficiency when the distributing condition was ideal or partly ideal. The calculation result was analyzed to obtain a method to transform nonideal distributing condition to ideal distributing condition. A non-destructive assay mode for barreled radwaste and a method of getting the detecting efficiency were put forward. The comparison of calculating and experimental results indicates that this method is feasible.

Key words barreled　radwaste　non-destructive　assay　detect　efficiency　ideal　condition

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