

Title (en)

METHOD AND DEVICE FOR TESTING THE FEATURES OF A SURFACE LAYER ON A ZIRCONIUM ALLOY ELEMENT, AND USE THEREOF FOR MONITORING NUCLEAR REACTOR FUEL PENCILS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR KONTROLLE DER EIGENSCHAFTEN EINER OBERFLÄCHE EINES ELEMENTES EINER ZIRKONIUMLEGIERUNG, SOWIE ANWENDUNG FÜR DIE KONTROLLE DER BRENNELEMENTE VON KERNKRAFTWERKEN

Title (fr)

PROCEDE ET DISPOSITIF DE CONTROLE DES CARACTERISTIQUES D'UNE COUCHE SUPERFICIELLE D'UN ELEMENT EN ALLIAGE DE ZIRCONIUM ET UTILISATION POUR LE CONTROLE DE CRAYONS DE COMBUSTIBLE POUR UN REACTEUR NUCLEAIRE

Publication

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Application

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Abstract (en)

[origin: WO9712224A1] A sinusoidal voltage V is applied between two measurement points on two zirconium alloy elements (2, 2'), the strength I of a sinusoidal current flowing between the measurement points is measured, the impedance $Z = V/I$ of the measurement area of the elements (2, 2') is determined, and the resulting impedance is compared with at least one reference value. The testing device comprises a cell (5) containing an electrolyte (6) in which the two zirconium alloy elements (2, 2') are immersed, as well as a power supply and impedance measurement module (16). A measurement may be performed on a single element (2) by means of an electrode immersed in the electrolyte (6).

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