

Title (en)  
NON-DESTRUCTIVE CHARACTERIZATION METHOD, ESPECIALLY FOR CHARACTERIZING PARTICLES OF NUCLEAR FUEL FOR A HIGH-TEMPERATURE REACTOR

Title (de)  
NICHT DESTRUKTIVES KENNZEICHNUNGSVERFAHREN, SPEZIELL ZUR KENNZEICHNUNG VON NUKLEARBRENNSTOFFPARTIKELN FÜR EINEN HOCHTEMPERATURREAKTOR

Title (fr)  
PROCEDE DE CARACTERISATION NON DESTRUCTIF, NOTAMMENT POUR LES PARTICULES DE COMBUSTIBLE NUCLEAIRE POUR REACTEUR A HAUTE TEMPERATURE

Publication  
**EP 2047240 A2 20090415 (FR)**

Application  
**EP 07823300 A 20070718**

Priority  
• FR 2007001236 W 20070718  
• FR 0606950 A 20060728

Abstract (en)  
[origin: WO2008012417A2] The aim of the method is to characterize an element (21) comprising a plurality of superposed layers separated from one another by interfaces. It comprises at least the following steps: The element (21) is illuminated with radiation (15) emitted by a source (13); radiation (23) transmitted through the element (21) is collected on a detector (17), this transmitted radiation forming an experimental image of the element (21) on the detector (17), the detector (17) being placed at such a distance from the element (21) that interference fringes appear on the experimental image at the interfaces between the layers; and an approximate value of at least one physical characteristic of at least one given layer is determined by calculation from the experimental image, the determination step being implemented by minimizing the difference between the experimental image and a simulated image of at least part of the experimental image of the element (21).

IPC 8 full level  
**G01N 23/04** (2006.01); **G01B 11/06** (2006.01); **G01B 15/02** (2006.01); **G01N 23/20** (2006.01); **G21C 17/06** (2006.01)

CPC (source: EP US)  
**A61B 6/484** (2013.01 - EP US); **G01B 15/025** (2013.01 - EP US); **G21C 17/06** (2013.01 - EP US); **G01N 2223/615** (2013.01 - EP US); **G21K 2207/005** (2013.01 - EP US); **Y02E 30/30** (2013.01 - EP)

Citation (search report)  
See references of WO 2008012417A2

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**FR 2007001236 W 20070718**; CN 200780034846 A 20070718; EP 07823300 A 20070718; FR 0606950 A 20060728; JP 2009522295 A 20070718; US 37532707 A 20070718; ZA 200900597 A 20090126