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DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG,
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(54) **Title:** MIXED OXIDE FUEL ASSEMBLY

(57) **Abstract:** A pressurized water nuclear reactor fuel assembly designed to burn mixed oxide fuel that employs a fully annular fuel pellet stack in the fuel rods, and radial enrichment zoning within the assembly such that the intra-assembly rod power distribution is relatively smooth regardless of the characteristics of the adjacent assemblies.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US09/54244

A. CLASSIFICATION OF SUBJECT MATTER
IPC: G21C 3/17(2006.01),3/328(2006.01)

USPC: 376/417,431,435
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 376/417, 431, 435, 409, 267

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/0269036 A1 (HANAYAMA et al.) 30 November 2006(30.11.2006), see entire document.	1-19
Y	US 4,111,748 A (HAYASHI et al.) 05 September 1978(09.05.1978), see entire document.	1-19
Y	Prasad, R. Mixed Oxide Fuel Introduced into FBTR. The Hindu (Online edition of India's National Newspaper). 27 July 2003, see entire document.	1-19



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		"I"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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INTERNATIONAL SEARCH REPORT

International application No.
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Continuation of B. FIELDS SEARCHED Item 3:

EAST: plenum, fuel rod, cladding and spring, annular, same fuel same pellet same MOX, mixed oxide, guide tube, instrumentation tube, enrichment and target rod, fuel rods, weight percent fuel assembly same zones, burnable absorber, e