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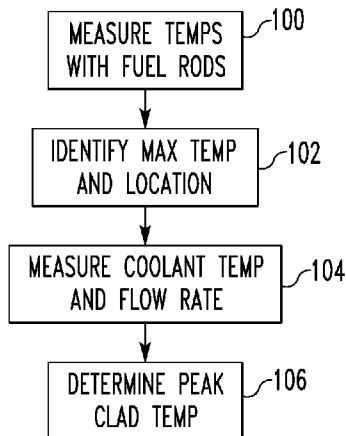


FIG. 4

(57) Abstract: A method that provides a more direct indication of peak fuel rod centerline temperature and peak fuel rod clad temperature than conventionally inferred from the power distribution by directly and continuously measuring the fuel temperatures of the fuel pellets in one or more of the hottest fuel elements in the core. The peak fuel rod clad temperature is then obtained from the maximum measured peak fuel rod centerline temperature in combination with the maximum coolant core exit temperature and the minimum coolant flow rate.



A. CLASSIFICATION OF SUBJECT MATTER**G21C 17/112(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
G21C 17/112; G06F 17/10; G06G 7/48; G21C 17/00; G21C 17/02; G21C 17/10; G21C 17/108Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: nuclear fuel rod, failure, maximum, temperature, peak, clad, coolant, core**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2015-190807 A (MITSUBISHI HEAVY IND. LTD.) 02 November 2015 See paragraphs 22-64, claims 1-6 and figures 1-3.	1-14
A	JP 2013-140150 A (GE-HITACHI NUCLEAR ENERGY AMERICAS LLC) 18 July 2013 See paragraphs 16-28, claims 1-10 and figures 2-3.	1-14
A	US 2011-0264426 A1 (BAOCHENG ZHANG) 27 October 2011 See the entire document.	1-14
A	US 2010-0128832 A1 (MASATOSHI YAMASAKI et al.) 27 May 2010 See the entire document.	1-14
A	JP 2004-279338 A (TOKYO ELECTRIC POWER CO., INC. et al.) 07 October 2004 See the entire document.	1-14

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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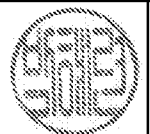
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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