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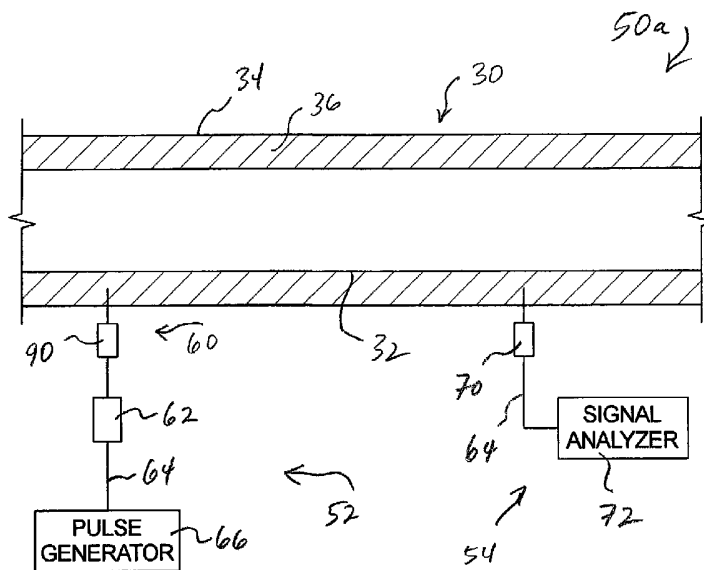
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[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR NON-DESTRUCTIVELY TESTING CONDUCTIVE MEMBERS EMPLOYING ELECTROMAGNETIC BACK SCATTERING



(57) Abstract: A method of determining an anomaly in a pipe system. The pipe system comprises a pipe, insulation around the pipe, and shielding around the insulation. An electrical pulse is applied to a test location on the pipe remote from the anomaly to cause an applied signal to travel along the pipe through the anomaly. At least one reflected signal caused by the applied signal traveling through the anomaly is detected. The at least one reflected signal is analyzed for characteristics associated with the anomaly.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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# INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : G01R 27/08 US CL : 324/700, 637, 642, 646 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 324/700, 637, 642, 646 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)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,905,194 A (STRONG) 18 May 1999 (18.05.1999), column 2, line 42 to column 3 line 39	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"
"E"	earlier application or patent published on or after the international filing date	"X"
"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)	"Y"
"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	
Date of the actual completion of the international search 27 October 2004 (27.10.2004)	Date of mailing of the international search report <div style="text-align: right; font-size: 1.2em; font-weight: bold;">20 DEC 2004</div>	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Walter Benson <i>Walter Benson</i> Telephone No. 571-272-2227	