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 Applicant: **WESTINGHOUSE ELECTRIC CORPORATION**
Westinghouse Building Gateway Center
Pittsburgh Pennsylvania 15222(US)

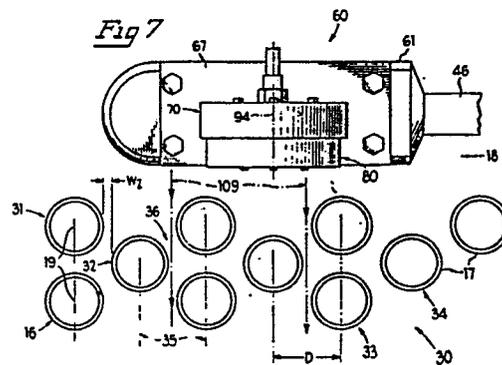
 Inventor: **Calhoun, Gregory Lee**
457 Markle Road
Apollo Pennsylvania 15613(US)

 Inventor: **Candee, Clark Bennett**
326 Maple Avenue
Pittsburgh Pennsylvania 15218(US)

 Representative: **Patentanwalte Dipl.-Ing. R. Holzer**
Dipl.-Ing. (FH) W. Gallo
Philippine-Welser-Strasse 14
D-8900 Augsburg(DE)

 **Eddy current positioning apparatus for sludge lance.**

 A sludge lance nozzle for removing a sludge from between the tubes of a nuclear steam generator includes positioning apparatus mounted on top of the nozzle. The positioning apparatus includes a cylindrical eddy-current sensor mounted inside a cup-shaped non-magnetic electrically insulating spacer, which is in turn mounted in a cup-shaped support member fixedly secured to the nozzle. The tubes are arranged in rows and columns with the axes of the tubes in each column lying in a common column plane. The nozzle is moved perpendicular to the column planes close to one of the rows of tubes. The sensor produces a maximum-amplitude output signal when the sensing axis is coplanar with the column plane of a tube in the closest row of tubes and a minimum-amplitude output signal when the sensing axis is midway between adjacent tubes in the closest row of tubes.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int Cl 4)
X	EP-A-0 077 255 (FRAMATOME) * Abstract; page 10, lines 22-35; page 11, lines 30-39; page 12, lines 1-3; claim 10; figures *	1,5	F 22 B 37/48 F 28 G 1/16
A	---	6,8,9	
A	US-A-4 124 792 (FLORA) * Abstract; column 2, lines 35-64; figures *	2,3,5	
A	---		
A	DE-A-2 543 078 (VIBRO-METER)		
A	---		
A	US-A-4 206 391 (VARACINS)		

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int Cl 4)
			F 22 B F 28 G G 01 D B 23 Q
Place of search THE HAGUE		Date of completion of the search 25-06-1985	Examiner VAN GHEEL J.U.M.
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			