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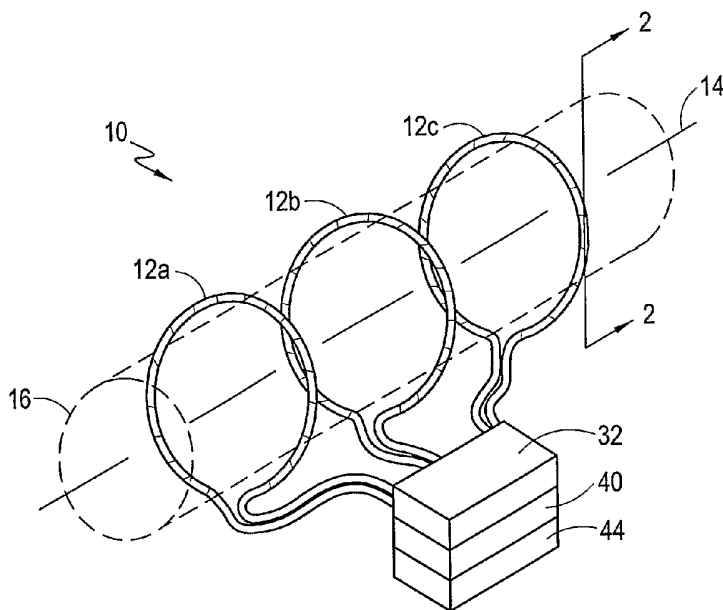
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(54) Title: SHIELDED ANTENNA



(57) Abstract: A shielded RF antenna system (10) for generating a plasma (16) from a starting material (e.g. a gas) includes a circularly shaped, loop antenna (18) that surrounds a plasma region. A conductive, elongated screen element (20) having an inner surface (22) and an outer surface (24) is wound as a helix around the loop antenna with the inner surface distanced from the antenna. Adjacent edges (34, 36,) of the helical winding are overlapped and an insulator, such as a ceramic, is positioned between the overlapped edges to create a fluid tight seal therebetween. The screen element shields the electrostatic field component of the electromagnetic field from the plasma region and prevents plasma from passing through the shield. In addition, the structure allows the insulator to be positioned between the

overlapped edges where it is not directly exposed to the plasma.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: H01Q 7/04(2006.01)

USPC: 343/741,742,841,842,866,867,895;315/111,21,111,51

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. : 343/741,742,841,842,866,867,895; 315/111,21,111,51

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
east

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,362,632 A (JACOB) 07 December 1982 (07.12.1982), entire document	1-20
A	US 6,304,036 A (FREEMAN et al) 16 October 2001 (16.10.2001), entire document	1-20

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