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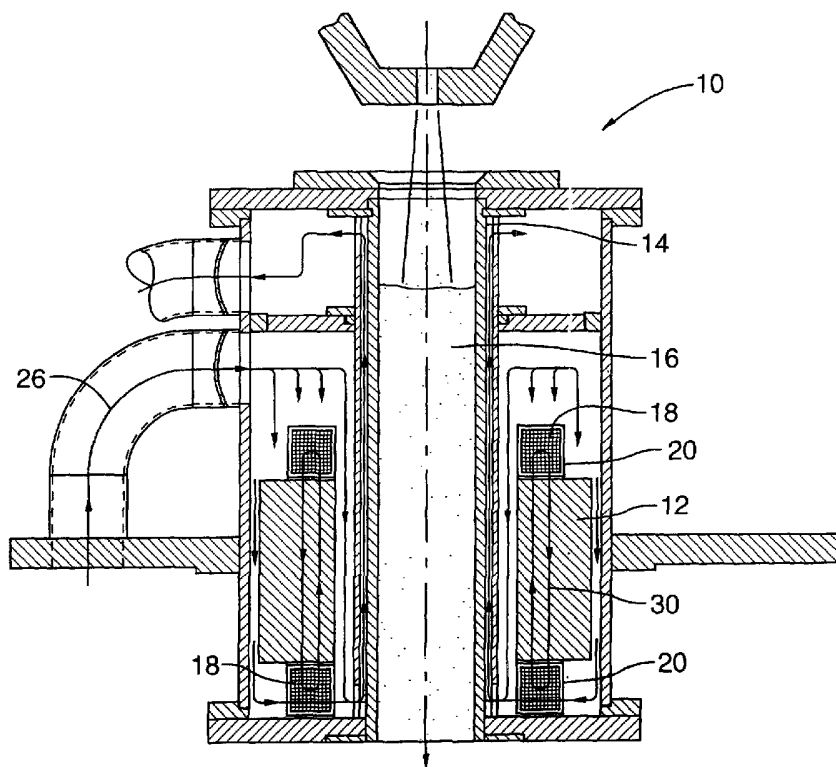
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[Continued on next page]

(54) Title: COOLING ELECTROMAGNETIC STIRRERS



(57) Abstract: Cooling of the electrical coils of an electromagnetic stirrer is effected using a ferrofluid. An electromagnetic stirrer, comprising: a cylindrical housing having an axial mold tube for receiving molten metal, an inner wall spaced from the mold tube and defining a cooling water flow channel, an electromagnetic stirring assembly surrounding the inner wall and spaced therefrom and from an outer wall, said stirring assembly comprising a yoke, a plurality of magnetic poles and electrical windings mounted on each of the magnetic poles, said plurality of magnetic poles and said electrical windings mounted on the magnetic poles being located in enclosed non-magnetic heat conductive housings filled with dielectric ferrofluid, an annular wall dividing said cylindrical housing into a larger lower chamber in which are located said enclosed non-magnetic heat conductive housings and a smaller

upper chamber, said inner wall defining having an inlet to said cooling water flow channel in fluid flow communication with the lower end of said lower chamber and an outlet from said cooling water flow channel in fluid flow communication with the upper end of said upper chamber, a cooling water inlet in fluid flow communication with the upper end of said lower chamber and a cooling water outlet in fluid flow communication with said upper chamber.

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INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B22D11/11 F27D23/04 B22D11/115

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

B. FIELDS SEARCHED

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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 practical, search terms used)

WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 5 863 455 A (SEGAL VLADIMIR) 26 January 1999 (1999-01-26) cited in the application claims 1-11,16,20 ---	1-3
A	US 5 898 353 A (CADER TAHIR ET AL) 27 April 1999 (1999-04-27) cited in the application abstract; figure 1 ---	1
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	PATENT ABSTRACTS OF JAPAN vol. 006, no. 004 (M-106), 12 January 1982 (1982-01-12) & JP 56 128650 A (SUMITOMO METAL IND LTD;OTHERS: 01), 8 October 1981 (1981-10-08) abstract -& JP 56 128650 A (NISSIN ELECTRIC CO TTD) 8 October 1981 (1981-10-08) figures 1-3 ---	1
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