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(54) Title: FLUIDIC SEALING SYSTEM FOR A WET DRUM MAGNETIC SEPARATOR

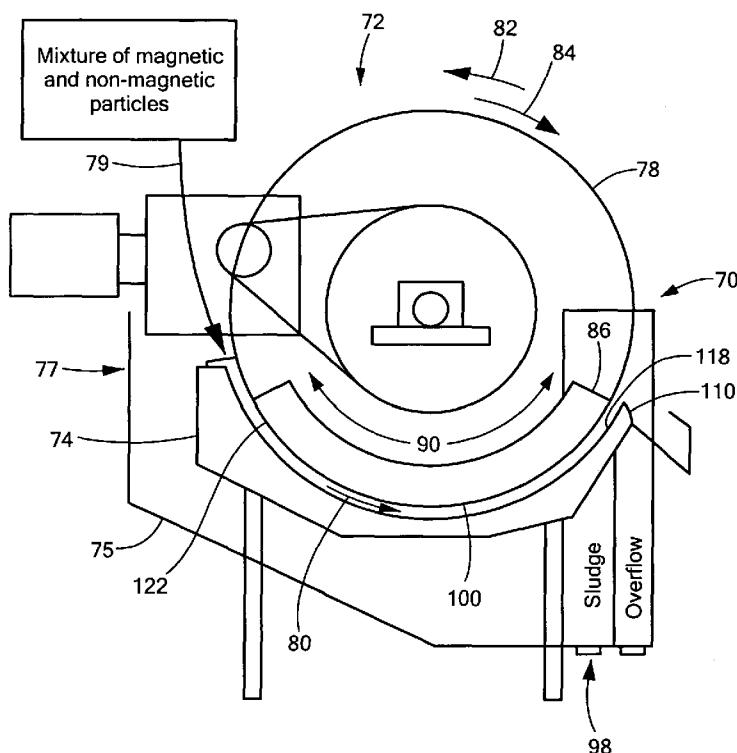


FIG. 4

(57) Abstract: A magnetic fluidic and a mechanical fluidic sealing system for a wet drum magnetic separator including a tank for receiving a flow of a mixture of magnetic and non magnetic particles, a rotating drum disposed in the tank, an array of permanent magnetic elements disposed inside the drum arranged in a fixed position relative to a azimuthal section of the drum for attracting the magnetic particles to the surface of the drum, and at least one seal disposed proximate each axial end of the array concentrically shaped and spaced from the surface of the drum and extending to a bottom wall of the tank for establishing a magnetic fluidic seal and/or a mechanical fluidic seal between the surface of the drum and an inner concentric surface of the seal that maintains the magnetic particles inside the magnetic field of the array and reduces end losses of the magnetic particles.



FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
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IPC: B03C 1/00(2006.01)

USPC: 209/223.2

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. : 209/223.2,215,219,224,218,221

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,686,035 (Estabrook) 11 August 1987, 11.08.1987.	1-30
A	US 1,948,080 (Thomas) 20 February 1934 (20.02.1934).	1-30
A	US 2,326,575 (Stearns) 10 August 1943 (10.08.1943).	1-30
A	US 2,597,561 (Blind) 20 May 1952 (20.05.1952).	1-30
A	US 6,832,691 B2 (Miles) 21 December 2004 (20.12.2004).	1-30
A	US 2005/0035030 A1 (Oder et al.) 17 February 2005 (17.02.2005).	1-30

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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