(d) a controllable material contained within said first chamber in contact with at least the working portion of the rotor and the periphery thereof.

22. The controllable brake of claim 21, wherein said electromagnetic field generator comprises an electromagnetic coil, and poles positioned for generating a field on one side of the rotor, and wherein said rotor comprises a disk.

23. The controllable brake of claim 21, wherein said shaft is supported for rotation by bearings in said housing, and further comprising seals for sealing said first chamber to retain said controllable material therein.

24. The controllable brake of claim 21 wherein said electronics further comprises sensors for detecting relative rotational position of the rotor, for applying a magnetic field whose strength is determined by relative rotational position of the rotor.

25. The controllable brake of claim 21, further comprising a return-to-center acting device in at least one of the first chamber and the second to urge the rotor to return to a relative center position.

26. The controllable brake of claim 25, wherein the shaft and rotor are connected in a manner to allow backlash between the rotor and the shaft, and the electronics is configured for detecting movement of the shaft and for causing the magnetic field generator to reduce the magnetic field in response to shaft movement.

27. A controllable brake, comprising:

(a) a rotor shaped to have working portion on its periphery which extends parallel to a shaft on which said rotor is mounted;

(b) a shaft having said rotor connected thereto in a manner to restrain relative rotation therebetween;

(c) a housing having a first chamber rotatably housing the rotor therein, and including a magnetic field generator spaced from the rotor, and configured and positioned for generating magnetic flux through a controllable material in a direction perpendicular to the shaft and to the working portion of the rotor; and

(d) a material contained within said first chamber in contact with at least the working portion of the rotor.

28. The controllable brake of claim 27, wherein said shaft is supported for rotation by bearings in said housing, and further comprising seals for sealing said first chamber to retain said controllable material therein.

29. The controllable brake of claim 27, further comprising a return-to-center active device in the first chamber to urge the rotor to return to a relative center position.

30. The controllable brake of claim 27, wherein the shaft and rotor are connected in a manner to allow backlash between the rotor and the shaft.

31. The controllable brake of claim 27, wherein the walls of said chamber are tapered to result in larger chamber volume proximate the working surface of the rotor, said taper being an amount sufficient to enhance migration of said controllable material away from the shaft and toward the working surface of the rotor.

32. A controllable brake, comprising:

(a) a rotor manufactured from magnetically permeable material and shaped to have working portion on its periphery which extends parallel to a shaft on which said rotor is mounted;

(b) a shaft having said rotor connected thereto at one end of the shaft in a manner to restrain relative rotation therebetween;

(c) a housing having a first chamber rotatably housing the rotor therein, and including a magnetic field generator spaced from the rotor, and configured and positioned for generating a magnetic flux through a controllable material in a direction perpendicular to the shaft and to the working portion of the rotor, and a second chamber containing electronics therein; and

(d) a controllable material contained within said first chamber in contact with at least the working portion of the rotor.

33. The controllable brake of claim 32, wherein said shaft is supported for rotation by bearings in said housing, and further comprising seals for sealing said first chamber to retain said controllable material therein.

34. The controllable brake of claim 32, wherein said electronics further comprises sensors for detecting relative rotational position of the rotor, and for control of the magnetic field generator to apply a magnetic field whose strength is determined by relative rotational position of the rotor.

35. The controllable brake of claim 32, further comprising a return-to-center acting device in at least one of the first chamber and the second chamber to urge the rotor to return to a relative center position.

36. The controllable brake of claim 32, wherein the shaft and rotor are connected in a manner to allow backlash between the rotor and the shaft, and the electronics is configured for detecting movement of the shaft for causing the magnetic field generator to reduce the magnetic field in response to shaft movement.

37. The controllable brake of claim 32, wherein the walls of said chamber are tapered to result in larger chamber volume proximate the working surface of the rotor, said taper being an amount sufficient to enhance migration of said controllable material away from the shaft and toward the working surface of the rotor.

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