

1) Family number: 1598050 (US6597178B)

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Title: Sensor for detecting the magnetic field in the area of downhole casing

Abstract: A magnetic receiver with a magnetically permeable core is positioned inside a wellbore casing and operated in a feedback mode to reduce attenuation of a measurable magnetic field. The receiver employs a feedback device to reduce mutual coupling between the core and the casing, which reduces the otherwise normal attenuation of em signals inside the casing. The feedback device may be provided in the form of an extra or feedback winding that effectively cancels the inducing field inside the core and reduces the attenuation otherwise caused by the core-casing interaction. Alternatively, the magnetic receiver may employ, as the feedback device, a current feedback amplifier circuit to cancel the inducing field inside the core. Specifically, the circuit is operated to produce a secondary magnetic field that essentially cancels the inducing field inside the core.

Classifications:

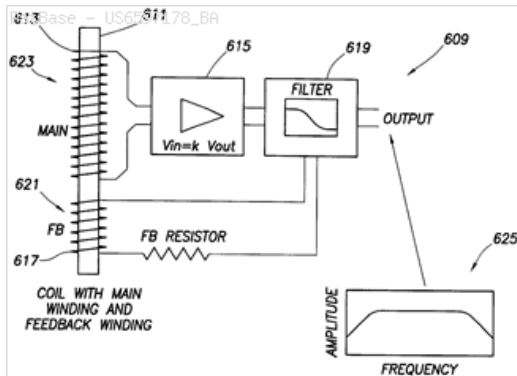
International (IPC 8-9): E21B47/12 E21B47/13 E21C39/00
G01N27/83 G01V3/28 G01V3/30 (Advanced/Invention)

International (IPC 1-7): E21C39/00 G01V3/10 G01V3/18 G01V3/28

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Family:

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CN1268939 C	20060809	CN200310102870	20031020
CN1497267 A	20040519	CN200310102870	20031020
MXPA03008679 A1	20040428	MX2003PA08679	20030924
RU2003130732 A	20050327	RU20030130732	20031017
RU2338878 C2	20081120	RU20030130732	20031017
US6597178 BA	20030722	US20020065454	20021018

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