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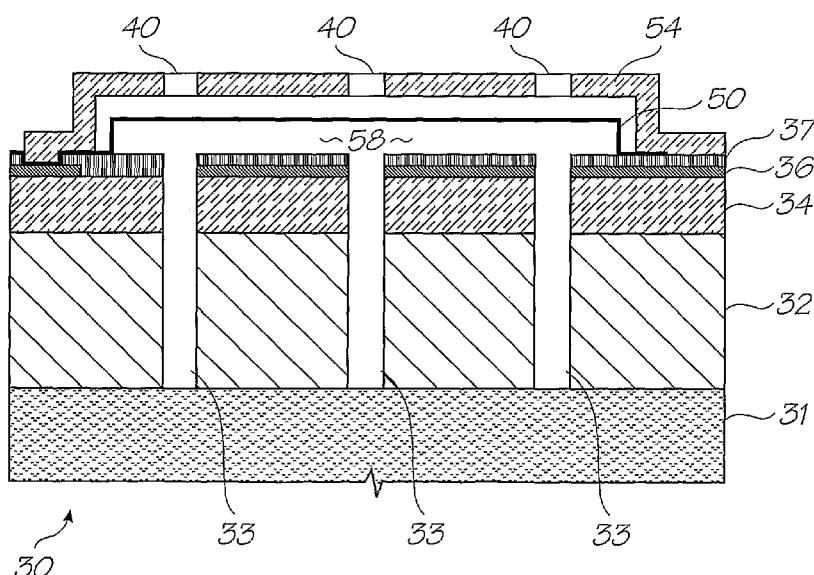
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(54) Title: MICRO-ELECTROMECHANICAL PRESSURE SENSOR



(57) Abstract: A pressure sensor (30) for harsh environments such as vehicle tires, the sensor having a chamber (58) partially defined by a flexible membrane (50), the chamber (58) containing a fluid at a reference pressure. In use, the flexible membrane (50) deflects due to pressure differentials between the reference pressure and the fluid pressure, so that, associated circuitry (34) can convert the deflection of the flexible membrane into an output signal indicative of the fluid pressure. The sensor is a MEMS device whereby the recess, the flexible membrane and the associated circuitry are formed using lithographically masked etching and deposition techniques. MEMS fabrication techniques can produce the sensor in such high volumes that the unit cost of each sensor is very low. The MEMS sensor is so small that it can be installed in very restricted areas such as the stem of the tire valve.

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