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Watson

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(54) **HIGH Q ANGULAR RATE SENSING GYROSCOPE**
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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 196 days.

(58) **Field of Search** 73/504.13

(56) **References Cited**
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(57) **ABSTRACT**
A structure and arrangement for improving the accuracy and efficiency of an angular rate sensing gyroscope is herein disclosed. Voltage pick-off conductors are applied to an area of the surface of a resonating element of an angular rate sensing gyroscope that is subject to substantially zero stress when the gyroscope is rotationally stationary. Actuator conductors are similarly applied to a resonating element at a location bounded by areas of the resonating element subject to substantially uniform levels of stress when the gyroscope is rotationally stationary. A method for improving the voltage response of a piezoelectric resonating element is also disclosed.

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(51) **Int. Cl.**⁷ **G01C 19/00**
(52) **U.S. Cl.** **73/504.13**

4 Claims, 8 Drawing Sheets

