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Vennelakanti et al.

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(54) **SYSTEM AND METHOD FOR HANDLING WIDE DYNAMIC RANGE SIGNALS ENCOUNTERED IN VIBRATION ANALYSIS USING A LOGARITHMIC AMPLIFIER**

(58) **Field of Classification Search**
USPC 702/56
See application file for complete search history.

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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 375 days.

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(57) **ABSTRACT**

A data acquisition system for vibration analysis signals includes a logarithmic amplifier for compressing wide dynamic range signals. The logarithmic amplifier replaces attenuators, gain amplifiers, and gain switches used in a conventional system. Further, only a low bit-count analog to digital converter is needed in combination with the logarithmic amplifier. Consequently, the footprint of the system and system cost are reduced.

(51) **Int. Cl.**
G01F 17/00 (2006.01)

(52) **U.S. Cl.**
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19 Claims, 2 Drawing Sheets

