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(12) **United States Patent**
Deeds

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(54) **DIFFERENTIAL PRESSURE FLOW SENSOR**

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(58) Field of Search **73/861.42, 861.52, 73/861.58, 861.63, 861.65, 181, 182, 170.14**

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(57) **ABSTRACT**

The fluid flow meter of the present invention includes a ramp inclined to the surface of a vessel so as to form a recess in the surface. A dynamic port surface extends from the lower end of the ramp to the surface of the vessel. A dynamic port is formed in the surface of the vessel, and a static port is formed in the ramp. The differential pressure between the dynamic and static ports is measured and is related to the flow velocity of fluid over the surface. The inventive flow meter has advantages of reduced drag, reduced likelihood of fouling and reduced likelihood of impact damage compared to conventional flow meters.

25 Claims, 5 Drawing Sheets

