

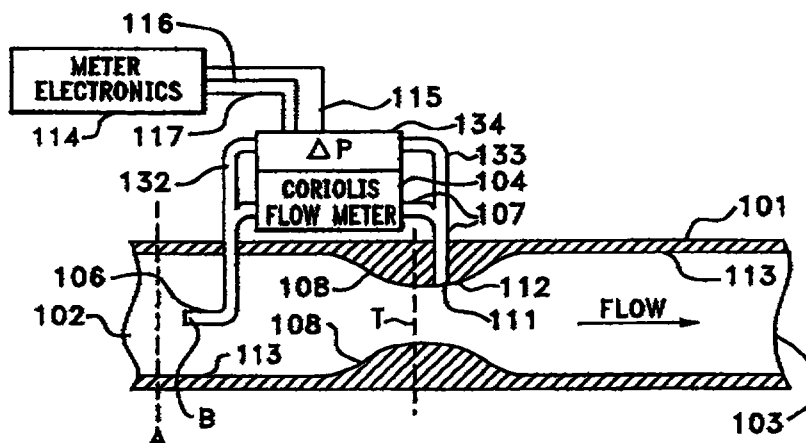
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(54) Title: BYPASS TYPE CORIOLIS EFFECT FLOWMETER



(57) Abstract

A bypass flowmeter for measuring the material flow in a conduit. An optimum pressure drop is developed across the flowmeter (104) by coupling the material outlet (107) of the flowmeter to the throat of a venturi (108) positioned within the conduit (101). This increased pressure drop improves the material flow rate through the flowmeter. This enhances flowmeter accuracy and sensitivity and the flowmeter's ability to measure mass flow rates for low density materials such as gas. The ratio of the material flow within the flowmeter to that of the conduit is derived. The material flow information for the conduit is obtained for materials having a varying viscosity by the use of a differential pressure sensor (134) which measures the pressure drop across the flowmeter and transmits this information to instrumentation which uses it to derive material flow information for the conduit with improved precision. An alternative embodiment not having a venturi operates in the same manner to derive the material flow ratio between the flowmeter and the conduit and, in turn, the total material flow in the conduit.