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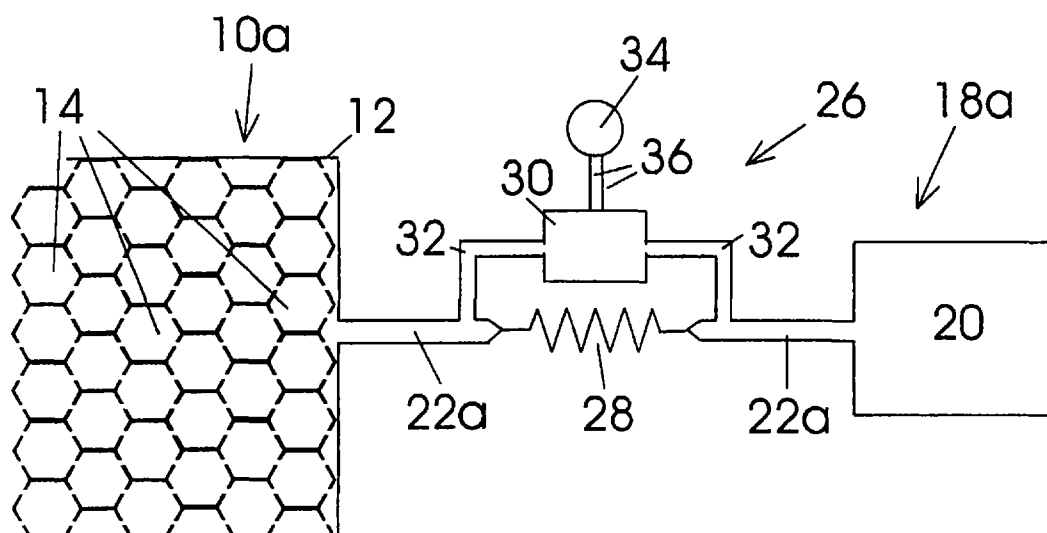
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(54) Title: METHOD AND APPARATUS FOR MONITORING THE INTEGRITY OF COMPONENTS AND STRUCTURES



(57) Abstract: A method and apparatus provided for monitoring the integrity of a structure (10) disposed in an environment containing a fluid (F) at an ambient pressure. The structure (10) includes a skin (12) and a plurality of internal cavities (14). The method involves applying a further fluid to the cavities (14), the applied fluid being at a pressure which is marginally greater than the atmospheric ambient pressure (F). The flow rate of the applied fluid is monitored for detection in a change in the flow rate. The change in flow rate is indicative of additional fluid seepage through the structure (10) providing advance warning of a failure in the integrity of the structure (10). Monitoring is achieved by passing the applied fluid through a high fluid flow impedance (28) and monitoring for a change in pressure across the impedance (28) using a transducer (30).