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(54) Title: DETECTION APPARATUS AND METHOD USING MEMBRANES

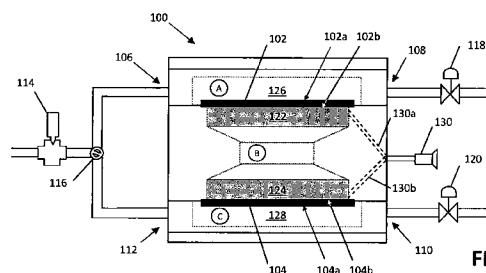


FIGURE 1

(57) Abstract: The disclosed apparatus and method allow cleaning of at least a first permeable membrane (102) and preferably a second permeable membrane (104) that are used in detecting a ratio of trans-membrane pressures for monitoring the integrity of a filtration membrane or a foulant in a fluid. In one exemplary embodiment, the cleaning is performed by reversing the flow of fluid between the first and second permeable membranes (102, 104), thus allowing foulants trapped on or in pores of the first and second permeable membranes (102, 104) to be dislodged. In another exemplary embodiment, fluid is pumped from a source to an inlet in a middle section of the apparatus to backwash at least the first permeable membrane (102).