ABSTRACT

METHOD FOR TESTING INTEGRITY OF A FILTER MEDIUM

An integrity testing method for a porous filter medium incorporated into a housing is provided. Said housing comprises an interior separated by the porous filter medium into an upstream portion and a downstream portion, an inlet in fluid connection with the upstream portion and an outlet in fluid connection with the downstream portion, said outlet being connected to a filtrate conduit comprising a closable end remote from said outlet. The porous filter medium is tested in a state wherein the pores of the filter medium are wetted and filled with liquid. The downstream portion of the interior and the filtrate conduit are filled with a liquid. The remote closable end of the filtrate conduit is closed. The upstream portion of the interior is drained and filled with a testing gas while retaining the liquid in the downstream portion. A gas-filled testing volume is fluidly connected to the downstream portion via said filtrate conduit. A pressure of the testing gas in the upstream portion corresponding to a predetermined testing differential pressure is created and maintained at this pressure level, said predetermined testing differential pressure being lower than a predefined bubble point of the porous filter medium. The pressure of the gas within the testing volume is determined after a predetermined time after the predetermined testing differential pressure has been established. Said testing volume is selected such that, when a filter medium is tested having a bubble point corresponding to the predefined bubble point, a pressure increase of the gas within the testing volume of about 100 mbar or more is obtained within a period of 10 minutes.

Figure 2c