

Title (en)
AN EXCESS-FLOW SAFETY SHUT-OFF DEVICE

Title (de)
ÜBERFLUSSSICHERHEITSABSCHLUSSVORRICHTUNG

Title (fr)
DISPOSITIF DE SECURITE POUR ARRETER UN ECOULEMENT EN CAS DE TROP-PLEIN

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Abstract (en)
[origin: WO9505554A2] A fluid flow safety device comprising a body having an inlet end for connection to a fluid supply and an inlet passageway which leads to a selective fluid flow sensor chamber and located at the outlet end of the said sensor chamber is a sealing means which encircles the outlet orifice and this outlet orifice is of smaller cross section than that of the sensor chamber, said outlet orifice leading from the sensor chamber into a pressure chamber within the body. Between the inlet end of the sensor chamber and the sealing means is a tapered section, wherein the bore of the sensor chamber decreases in diameter as it nears the sealing means. A movable plug which is positioned within the selective fluid flow sensor chamber can move between the inlet passageway end stop of the sensor chamber and the outlet orifice, and the movable plug is of greater diameter than the sensor chamber outlet orifice and is able to form a seal with the sealing means. This seal can occur when the flow of fluid through the sensor chamber is above a predetermined value. Within the pressure chamber is a movable piston which makes a sliding and sealing contact with it and whose sliding movement from a rest position increases or decreases the volume of the said pressure chamber. A passageway leading from the pressure chamber to an outlet aperture is connectable to further fluid transport mechanisms. One embodiment includes an indicator mark on the movable piston which is visible only when the pressure in the pressure chamber is above a predetermined value and a movement of the movable piston from a rest position fully towards the sensor chamber will deny a seal to be made between the movable plug and the sealing means. In the preferred embodiment, the movable piston is the primary valve mechanism which forms a seal between the inlet and outlet passageways. A sensor chamber shield encircles the sensor chamber by forming, defining and separating the internal length of the sensor chamber passageway from that of the inlet or any other passageway.

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