

Diaphragm In Pressure Pipe: Steady State Head Loss Evolution And Transient Phenomena

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Abstract

With liberalization of European market, many high head power plants in Switzerland increase their potential generation to remain competitive. The existing surge tanks have to be modified to keep the flow management constant. A relevant way to limit the time of mass oscillation is to increase head losses at the entrance of a surge tank with an orifice. This study focuses on the influencing parameters of head losses at the entrance of an existing surge tank by a variation of geometry and position between this surge tank and the headrace tunnel. Then, the temporal evolution of head losses is evaluated under unsteady conditions during an emptying of the surge tank

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