

[Flow behaviour analysis through a venturi designed for industrial and environmental processes](#)

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Description

The immense environmental challenges facing the world today and in the years to come can be met only through mobilizing the best engineers and scientists in the environmental sector and using innovative and cost-effective solutions. Hydraulic structures can significantly improve dissolved oxygen levels by creating turbulent conditions in which small air bubbles are caused in most of the flow. Therefore, a venturi device can be used as highly effective aerator in aeration processes. However, the hydraulic equipment can be exposed to anomalies due to pressure variations. This is generally caused by the air phase development. Moreover, it considerably induces wall materials, erosion and corrosion. In this work, particular attention was paid to the pressure change in closed venturi pipes because its decrease generates air bubbles and its increase implies their implosion. Both mathematical and ...