

Title (en)
HEAT TRANSFER VENTURI

Title (de)
WÄRMETRANSFER-VENTURI

Title (fr)
VENTURI A TRANSFERT DE CHALEUR

Publication
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Application
EP 06773916 A 20060623

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Abstract (en)
[origin: WO2007002496A2] Heat pumps consume power in order to transfer heat from a source to a higher- temperature sink. This invention enables spontaneous heat transfer from a heat source to a small portion of the generally warmer working fluid that is locally cooled by the Bernoulli effect to a temperature below that of the heat source. The Bernoulli effect occurs in a Venturi shaped duct shaped to maintain laminar flow. Heat- transfer efficiency is improved by restriction of the heat transfer to a small portion of the Venturi in which the flow temperature, velocity, pressure gradient and the Nusselt effect all enhance heat transfer. Within this region, heat transfer is maximized by a thermally conducting grid extending across the Venturi neck.

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