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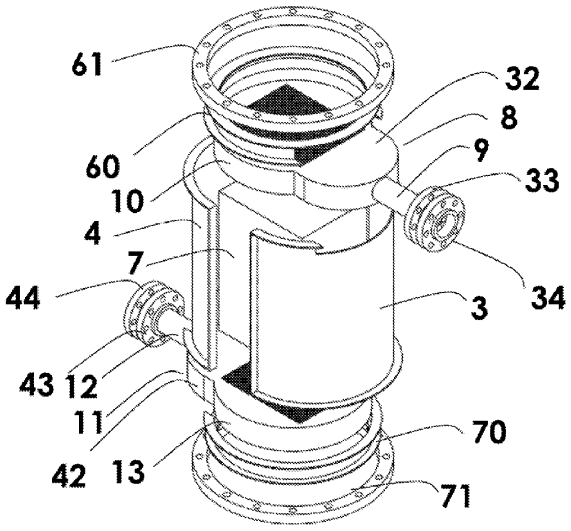


FIG. 1

(57) Abstract: A microchannel heat exchanger apparatus which is designed so that the fluid exchanges heat for reuse. Inside said heat exchanger apparatus, there is a heat exchanger, comprising a part that allow the fluid, which is selected from liquid or gas, to flow through by using a microchannel heat exchange plate, which has micron-scale small channels to increase contact surface area to achieve good heat transfer; and another part being a flat open-channel heat exchange plate to allow gas to flow in and out easily, wherein the two types of heat exchange plates are alternately positioned to achieve high-efficiency heat exchange.

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