

Title (en)
METAL HEAT EXCHANGER TUBE

Title (de)
METALLISCHES WÄRMEAUSTAUSCHERROHR

Title (fr)
TUBE MÉTALLIQUE D'ÉCHANGEUR DE CHALEUR

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Application
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Abstract (en)
[origin: WO2022089773A1] The invention relates to a metal heat exchanger tube (1), comprising integral fins (2) formed on the outside of the tube and having a fin base (3), fin flanks (4), and a fin peak (5), wherein the fin base (3) protrudes radially from the tube wall (10), and a channel (6) having a channel bottom (61) is formed between the fins (2), in which channel additional structures (7, 71, 72) spaced apart from each other are arranged. The additional structures (7, 71, 72) divide the channel (6) between the fins (2) into segments (8). The additional structures (7, 71, 72) locally reduce the cross-sectional area through which flow can pass in the channel (6) between two fins (2) and at least thereby limit a fluid flow in the channel (6) during operation. First additional structures (7, 71) are projections (71) starting from the channel bottom (61) and directed radially outward, each of which are limited in the radial direction by a terminating surface (713) located between the channel bottom (61) and the fin peak (5), thus defining a radial extension of the projections (71). At the location of the projections (71), radially outer material protrusions (72) are arranged as second additional structures (7, 72), which protrusions are formed from the material of the fin flanks (4). The material protrusions (72) are each arranged between a terminating surface (713) and the fin peak (5) in the radial direction, such that the material protrusions (72) are formed about the radial extension of the projections (71) over the channel bottom (61) of the channel (6), lying laterally on the fin flank (4). The material protrusions (72) extend further in the axial and radial direction than in the circumferential direction.

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