

Title (en)

Conduit for a heat exchanger of an internal combustion engine EGR system

Title (de)

Leitung für einen Wärmetauscher eines Abgasrückführungssystems eines Verbrennungsmotors

Title (fr)

Conduit destiné à un échangeur de chaleur d'un système EGR de moteur à combustion interne

Publication

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Application

EP 12382528 A 20121224

Priority

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Abstract (en)

The present invention relates to a conduit for a heat exchanger of an internal combustion engine EGR (Exhaust Gas Recirculation) system. This conduit is particularly designed to withstand thermal fatigue due to stresses generated by expansion, primarily of the inner elements of the conduit intended for improving heat transfer, due to being embedded in resistant elements for fixing the ends of said conduits. The invention uses resistant elements with a through hole allowing the passage of the cooling fluid therethrough to prevent these resistant elements from being subjected to an expansion such as that shown by the elements which are arranged inside the conduit. In addition to reducing thermal fatigue, this conduit allows solving problems associated with bubble formation at points where the boiling temperature is reached and particularly problems associated with essentially planar and horizontally arranged conduit configurations. In such configurations, the existence of through holes facilitates the passage of the bubbles that may be formed, preventing such bubbles from being lodged at one point which also facilitates thermal fatigue. Another object of this invention is the heat exchanger built using conduits with a through hole.

IPC 8 full level

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Citation (search report)

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