Title (en)

METHOD FOR GENERATING A CLOSED-PORE METAL FOAM AND COMPONENT WHICH HAS A CLOSED-PORE METAL FOAM

Title (de)

VERFAHREN ZUR ERZEUGUNG EINES GESCHLOSSENPORIGEN METALLSCHAUMS SOWIE BAUTEIL, WELCHES EINEN GESCHLOSSENPORIGEN METALLSCHAUM AUFWEIST

Title (fr)

PROCÉDÉ POUR PRODUIRE UNE MOUSSE MÉTALLIQUE À PORES FERMÉS AINSI QU'ÉLÉMENT COMPRENANT UNE MOUSSE MÉTALLIQUE À PORES FERMÉS

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Application

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Abstract (en)

[origin: WO2011151193A1] The invention relates to a method for generating a closed-pore metal foam. In addition, the invention relates to a component in which such a metal foam is used. The component (11), for forming the metal foam (18) having closed pores (17), before a heat treatment, is provided with a composite (21) of particles (19) of a metal, wherein these particles can have, for example, a layer (20) of a blowing agent. Alternatively (which is not shown) the metal and the blowing agent can also be arranged in a plurality of layers of a sheet, or as a mixture of particles. By means of the heat treatment, the blowing agent liberates a propellant gas, wherein it is provided according to the invention that the blowing agent consists of fullerenes or nanotubes to which the blowing agent is chemically or physically bound. Owing to the high temperature stability of the nanotubes or fullerenes, blowing agents may be generated thereby which liberate propellant gas at comparative high temperatures of above 1000°C, wherein, therefore, even metals having comparatively high solidus temperatures of above 1000°C may be processed to metal foams. A greater versatility of metal foams that can be generated results thereby as well as, consequently, a greater structural freedom.

IPC 8 full level

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CPC (source: EP US)

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See references of WO 2011151193A1

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