

Title (en)

ALLOY FOR PRODUCING METAL FOAMED BODIES USING A POWDER WITH NUCLEATING ADDITIVES

Title (de)

LEGIERUNG ZUM HERSTELLEN VON METALLSCHAUMKÖRPERN UNTER VERWENDUNG EINES PULVERS MIT KEIMBILDENDEN ZUSÄTZEN

Title (fr)

ALLIAGE DESTINE A LA PRODUCTION DE CORPS METALLIQUES EN MOUSSE A L'AIDE D'UNE POUDRE AYANT DES ADJUVANTS FORMANT DES GERMES

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Abstract (en)

[origin: US6332907B1] The invention provides a metal alloy made from a metal matrix with added nucleating particles which causes uniform formation of bubbles and a homogenous foam structure. The invention also provides a method for producing metal foamed bodies including the following steps: producing a homogeneous mixture of at least one metal powder forming a metal matrix, a powder made of or made with nucleating particles causing uniform formation of bubbles and a homogenous foam structure, and at least one gas-generating gasifying agent powder; introducing the mixture into a mold or compacting the mixture under pressure, e.g., by cold or hot isostatic pressing, followed by hot forming, e.g., by extrusion or rolling, and optional further processing, e.g., by cold forming and/or machining; foaming by heating to a temperature above the temperature of decomposition of the gasifying agent, preferably inside the temperature range of the melting point of the metal used; and subsequent cooling of the body thus foamed. The invention also includes the use of a powder made of or with nucleating particles causing uniform formation of bubbles and a homogenous foam structure as an additive to a mixture consisting of at least one metal powder forming a metal matrix and at least one gas-generating gasifying agent powder in the production of metal foamed bodies.

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