

Title (en)

POROUS AND CELLULAR METALS AND METAL STRUCTURES OF OPEN POROSITY IMPREGNATED WITH CORK, PRODUCTION PROCESSES THEREOF AND USES OF SAME

Title (de)

PORÖSE UND ZELLULARE METALLE UND METALLSTRUKTUREN MIT OFFENER POROSITÄT, IMPRÄGNIERT MIT KORK, VERFAHREN ZU IHRER HERSTELLUNG UND IHRE VERWENDUNG

Title (fr)

MÉTAUX ET STRUCTURES MÉTALLIQUES POREUX ET CELLULAIRES À POROSITÉ OUVERTE IMPRÉGNÉS DE LIÈGE, LEURS PROCÉDÉS DE PRODUCTION ET LEURS UTILISATIONS

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Application

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Abstract (en)

The present invention refers to porous and cellular metals and metallic structures of open porosity embedded with strengthened or non-strengthened cork, manufacturing processes and uses thereof. The process for obtaining these new materials and structures comprises filling the open pores of porous and cellular metals and metallic structures with a cork-based material in the form of particles, granules, grains, powder, and the like and combinations thereof, obtainable from cork of several types and origins. The developed materials are light-weighted, multifunctional, have improved properties of acoustic insulation and thermal behaviour, and a significant enhancement of mechanical performance. The present invention pertains to the field of macromolecular organic compounds and the preparation thereof, in particular preparation of macromolecular compounds for porous or cellular materials, such as foams of composite materials, by the embedding process, with applications in the construction industry, transportation, furniture and design, footwear, construction of machines, tools and devices.

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