

Title (en)
METHOD FOR PRODUCING A CERAMIC FOAM HAVING REINFORCED MECHANICAL STRENGTH FOR USE AS A SUBSTRATE FOR A CATALYST BED

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES KERAMIKSCHAUMS MIT ERHÖHTER MECHANISCHER FESTIGKEIT FÜR EIN SUBSTRAT FÜR EIN KATALYSATORBETT

Title (fr)
PROCÉDÉ D'ÉLABORATION D'UNE MOUSSE CÉRAMIQUE À RÉSISTANCE MÉCANIQUE RENFORCÉE POUR EMPLOI COMME SUPPORT DE LIT CATALYTIQUE

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Application
EP 10752014 A 20100715

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Abstract (en)
[origin: WO2011018568A1] The invention relates to a method for manufacturing a ceramic foam, including the following steps: a) a first step of impregnating a polymer foam having an open porosity with a first suspension of ceramic particles in a solvent; b) a first step of drying the impregnated polymer foam at a temperature between the ambient temperature and 200 °C and/or for a duration of between 30 min and 24 hrs; c) a heat treatment of the dried polymer foam comprising: (i) a step of thermally decomposing the dried polymer foam at a temperature of between 150 and 700 °C and/or for a duration of between 30 min and 48 hrs; (ii) a step of unbinding the organic compounds contained in the polymer foam from step (i), at a temperature of between 200 and 900 °C and/or for a duration of between 30 min and 48 hrs; and (iii) presintering the ceramic particles contained in the polymer foam from step (ii), at a temperature of between 900 and 1400 °C and/or for a duration of between 30 min and 6 hrs; d) a second step of impregnating the polymer foam from step c) with a second suspension of ceramic particles in a solvent; e) a second step of drying the polymer foam impregnated in step d); f) a step of sintering the ceramic particles contained in the polymer foam dried in step e), at a temperature of between 1200 and 2000 °C and/or for a duration of between 30 min and 6 hrs; the size of the ceramic particles of the second suspension being smaller than the size of the ceramic particles of the first suspension.

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