

Title (en)

METHOD OF MICROWAVE PROCESSING CERAMICS AND MICROWAVE HYBRID HEATING SYSTEM FOR SAME

Title (de)

VERFAHREN FÜR MIKROWELLENBEARBEITUNG VON KERAMIK UND MIKROWELLEN-HYBRIDHEIZSYSTEM DAFÜR

Title (fr)

PROCEDE DE TRAITEMENT MICRO-ONDE DE CERAMIQUES ET SYSTEME DE CHAUFFAGE HYBRIDE MICRO-ONDE ASSOCIE

Publication

EP 1665889 A4 20090603 (EN)

Application

EP 04782755 A 20040901

Priority

- US 2004028331 W 20040901
- US 50168203 P 20030910
- US 52550903 P 20031126

Abstract (en)

[origin: WO2005027575A2] A method for sintering ceramic materials using a microwave hybrid heating system includes the steps of providing a ceramic member to be sintered, providing a microwave furnace, providing a thermal containment box comprising a material that is virtually transparent to microwave energy, providing at least one susceptor comprising a material that directly couples to microwave energy at room temperature substantially immediately within the thermal containment box, positioning the ceramic member within the thermal containment chamber proximate the susceptor, and irradiating the thermal containment box with microwave energy. The susceptor couples to the microwave energy and generates heat within the thermal containment box and the temperature of the ceramic member increases to the microwave coupling-trigger temperature, at which time the ceramic member couples directly to the microwave energy and is directly sintered by the microwave energy in cooperation with radiant energy from the one susceptor.

IPC 8 full level

G21G 4/00 (2006.01); **H05B 6/00** (2006.01); **H05B 6/64** (2006.01); **H05B 6/80** (2006.01)

IPC 8 main group level

H05B (2006.01)

CPC (source: EP)

A61C 13/203 (2013.01); **H05B 6/80** (2013.01); **H05B 2206/046** (2013.01)

Citation (search report)

- [X] US 2002108949 A1 20020815 - GEDEVANISHVILI SHALVA [US], et al
- [X] GB 2263967 A 19930811 - ELECTRICITY ASS TECH [GB]
- [A] WO 02054829 A2 20020711 - CORNING INC [US]
- [A] EP 1060713 A1 20001220 - WIELAND EDELMETALLE [DE]
- See references of WO 2005027575A2

Cited by

CN114486988A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

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WO 2005027575 A2 20050324; WO 2005027575 A3 20051006; EP 1665889 A2 20060607; EP 1665889 A4 20090603

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