

Title (en)
METAL-CERAMIC LAMINAR-BAND COMPOSITE

Title (de)
METALLKERAMISCHER SCHICHTVERBUNDWERKSTOFF

Title (fr)
COMPOSITE A BANDES LAMINAIRES EN METAL-CERAMIQUE

Publication
EP 1148962 B1 20021106 (EN)

Appication
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Priority
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Abstract (en)
[origin: WO0040359A1] A metal-ceramic laminar-band multi matrix composite, intended for use in oxidizing, reductive or inert media at temperatures up to 1500 DIVIDED 2800 DEG C and a method of the manufacture is provided. The composite material contains up to 85 vol. % of an oxide component, for example, yttria, zirconia, hafnia, up to 85 vol. % of a compound devoid of oxygen, such as zirconium carbide, and 15 DIVIDED 75 vol. % of a refractor metal, such as tungsten, molybdenum or chromium. Each of the above mentioned components of the composite exists in the form of a plurality of curved tapes. The tapes of every component are joined with the tapes of other components forming multilayer curved band-like chips, which are randomly interlaced in a compact 3-dimensional pattern of the chips. The novel composites have high mechanical properties, are thermal- and crack resistant, and have a good thermal-shock and oxidation-erosion resistance at temperatures of 1200 DEG C to 2800 DEG C.

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