

Title (en)  
DISCONTINUOUS FIBER AND PARTICULATE REINFORCED REFRACTORY METAL COMPOSITE

Publication  
**EP 0305766 A3 19900404 (EN)**

Application  
**EP 88112814 A 19880805**

Priority  
US 9296387 A 19870903

Abstract (en)  
[origin: EP0305766A2] A method of making a reinforced refractory metal composite. A composition is prepared which comprises about 50 to about 99.9% by volume of niobium and about 0.1 to about 50% by volume of a particulate or fibrous dispersoid. The particulate dispersoid is an oxide, carbide, or boride of titanium, hafnium, zirconium, silicon, or a mixture thereof. The fibrous dispersoid is a carbide or boride of titanium, hafnium, zirconium, silicon, or a mixture thereof. The composition is mechanically alloyed in vacuum or in an inert atmosphere if a particulate dispersed is used. It is then hot pressed at a temperature greater than at 1000 DEG C and a pressure greater than 70 atmospheres, and is extruded to form a shape. A fiber reinforced refractory metal composite made by this method is also described.

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**C22C 32/00**; **C22C 1/10**; **B22F 3/20**

IPC 8 full level  
**C22C 1/10** (2006.01); **C22C 27/02** (2006.01); **C22C 47/14** (2006.01); **C22C 49/10** (2006.01)

CPC (source: EP KR)  
**C22C 1/1084** (2013.01 - EP); **C22C 27/02** (2013.01 - KR); **C22C 47/14** (2013.01 - EP); **C22C 49/10** (2013.01 - EP)

Citation (search report)  
• [Y] US 3738817 A 19730612 - BENJAMIN J  
• [Y] US 4117565 A 19781003 - ASADA CHIAKI, et al  
• [Y] US 3098723 A 19630723 - MICKS WILLIAM R

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CN114807659A; CN107829005A; WO2014044433A1

Designated contracting state (EPC)  
DE FR GB IT SE

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**EP 0305766 A2 19890308**; **EP 0305766 A3 19900404**; JP S6475636 A 19890322; KR 890005288 A 19890513

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**EP 88112814 A 19880805**; JP 22121388 A 19880902; KR 880011414 A 19880903