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Spark plasma sintering of a commercial TiAl 48-2-2 powder: densification and creep analysis.

David Martins ^{a,b}, Fanny Grumbach ^a, Audrey Simoulin^a, Pierre Sallot ^c,
Katia Mocellin ^b, Michel Bellet ^b, Claude Estournès ^{a,*}

- (a) Université de Toulouse, CIRMAT CNRS UPS INPT, 118 route de Narbonne,
31062 Toulouse cedex 9, France
- (b) Mines ParisTech, PSL - Research University, CEMEF - Centre for Material
Forming, CNRS UMR 7635, CS 10207 rue Claude Daunesse
06904 Sophia-Antipolis Cedex, France
- (c) Safran Tech, Rue des Jeunes Bois, 78114 Magny-les-Hameaux, France.

Keywords: Spark plasma sintering, Intermetallic TiAl, Creep parameters, Titanium carbide, Duplex and Lamellar microstructures

Abstract

Commercial 48-2-2 TiAl powder was densified by spark plasma sintering. Fully dense materials with duplex and lamellar microstructures were obtained. An original protocol was developed to avoid carbide formation due to reactions between TiAl and graphite molds. TiAl materials with lamellar microstructures and high creep behavior were produced.

* Corresponding author: **CE**: CIRIMAT, 118 route de Narbonne, 31062 Toulouse,

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