INDUSTRIAL MANUFACTURING, MATERIAL AND TRANSPORT TECHNOLOGIES technology Request

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Silicon nitride feedstock for extrusion

Abstract

For the production of silicon nitride parts, a feedstock for extrusion of silicon nitride is necessary. A Swiss company is looking for a company, who offers commercial silicon nitride feedstock for extrusion. The feedstock should be ready for use and should content all necessary sinter additives. Alternatively the company is interested in contacts with companies who have the know-how for the formulation of the silicon nitride feedstock.

Valid until: 21/10/2011

For further information (including IPR status) please contact:

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Description

This Swiss company has its core competences in non oxide ceramics like silicon carbide. Additionally the company is a specialist for bonded and soldered ceramic composites. Solutions with silicon nitride are also offered but not being produced by extrusion.

To expand their possibilities they plan to start an own production of silicon nitride parts. Therefore a silicon nitride feedstock for extrusion is requested. This feedstock should be usable for production of max. 1 m long rods of 2-20 mm in diameter.

Technical Specifications / Specific technical requirements of the request

Feedstock:

- Easy debindering
- Defect free extrusion

Sintered silicon nitride:

- Density > 3,2 g/cm
- Bending strength > 800 MPa