

SEVENTH INTERNATIONAL
LATIN-AMERICAN
CONFERENCE ON POWDER
TECHNOLOGY

08 to 10 NOVEMBER – 2009
ATIBAIA - SÃO PAULO - BRAZIL

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Monday, 14. December, 2009, 9:44:10

Welcome

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NEWS REPORT



PTECH 2009

PRESENTATION DETAILS

Reference Number: 204-004

Theme: Ceramics - Ceramics Structural

Title: Diffusion study of alumina gray cast iron pair

All Authors: Tonello, K.P.S.(1); Hernandes, V.T.(1); Bressiani, A.H.A. (1); Bressiani, J.C.(1)

All Institutions: (1) IPEN

Presentation Form: Poster

Date: 11/09/2009

Time: 10:00 a.m.

Room: Foyer

Confirmed by Speaker: Yes

Speaker: Karolina Pereira dos Santos Tonello

Institution: Master

Abstract: Properties of structural ceramics such as, mechanical and thermal stability, allows these to be applied in high-speed cutting processes with high depths of cut and low wear rates. The process by which wear occurs in tribological contacts is complex and cannot be explained by one simple wear mechanism. The contribution of different wear mechanisms to the total wear of a component is related to the mechanical and chemical properties of both materials and contact. In this work diffusion tests were made to verify the potential influence of chemical interactions between alumina composite and gray cast iron, without the interference of mechanical wear mechanisms, by means of static interaction in 1100°C. The experiment did not generate a strong metal–ceramic interface indicating that the alumina composites are chemically stable under the conditions used in this study.

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