

Título del trabajo: Toward determining the behavior of fragmentation functions during the impact crushing of minerals

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## ABSTRACT

The subject of this paper is particle population balance models (PBM) that describe mineral impact crushing behavior; it is mainly concerned with the selection and fragmentation distribution function due to their importance in this context. The data obtained by Datta (1999) by applying impact pendulum testing to single limestone particles, used by Austin (2002, 2004a and 2004b) to obtain the principal parity of fragmentation functions, were processed in order to compare them with the results of other authors, such as Nikolov (2002 and 2004) and Vogel and Peukert (2003 and 2005) so as to increase knowledge of impact crushing. From this data it has been possible to obtain the performance models of the principal parameters of fragmentation function, thereby reducing the number of experiments necessary to model the impact crushing process. The authors also propose a simplification of the selection function model posited by Austin (2002).

Key words: Impact crushing, Fragmentation, Modeling and simulation.