

## Modelisation of a Full-Scale Closed Cement Grinding

**Authors :** D. Touil, L. Ouadah

**Abstract :** An industrial model of cement grinding circuit is proposed on the basis of sampling surveys undertaken in the Meftah cement plant in Algiers, Algeria. The ball mill is described by a series of equal fully mixed stages that incorporates the effect of air sweeping. The kinetic parameters of this material in the energy normalized form obtained using the data of batch dry ball milling are taken into account in developing the present scale-up procedure. The dynamic separator is represented by the air classifier selectivity equation corrected by empirical factors. The model is incorporated in computer program that predict full size distributions and mass flow rates for all streams in a circuit under a particular set of operating conditions.

**Keywords :** grinding circuit, clinker, cement, modeling, population balance, energy

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