

## **VIABILITY OF PRODUCING PORCELAIN TILES BY THE DRY ROUTE**

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The dry route has been used to produce ceramic tiles for quite sometime. In Brazil, the second largest tile producer of the world, at present, 70% of the tiles are produced by the dry route. One of the main reasons that lead to this development is the fact that the dry route uses approximately 30% less thermal energy than the traditional wet route. During recent years there was an impressive improvement in the quality of the dry route tiles and nowadays it's quite difficult to distinguish between dry and wet route products. The increasing world concern with the environment and the recognition of the central role played by the water also has pointed towards privileging dry processes. In this context the objective of the present work is to study the feasibility of producing high quality porcelain tiles by the dry route.

A brief comparison of the dry and wet route, in standard conditions industrially used today to produce tiles that are not porcelain tiles, shows that there are two major differences:

- 1) the particle sizes obtained by the wet route are usually considerably finer and
- 2) the capability of mixing the different minerals, the intimacy of the mixture, is also usually better in the wet route.

The present work studied the relative importance of these differences and looked for raw materials and operational conditions that would result in better performance and glazed porcelain tiles of good quality.