

DIAGNOSIS AND ACTIONS TO OVERCOME ENVIRONMENTAL PROBLEMS IN MINING OF MINERALS USED BY CERAMIC TILES INDUSTRY

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Mining in Brazil is, in general, at a similar stage as in other mining centers in the world, in terms of applied technology, level of professionals involved and research centers. However, mining for ceramics raw material does not have a tradition of applying modern mining technology to their activities, even though the industrial process of ceramic tiles includes a number of significant technological innovations. This paper describes the activities of two specific research groups, Mining and Environmental Assessment carried out as part of a diagnosis project for ceramic industry financed by PADCT, a federal research board in Brazil. The objective of these research groups was to identify the main mining and environmental problems and bottlenecks of the activity. The methodology included 86 visits and meetings, involving researchers, consultants, and industry technical staff, in a total of 121 participants. The 26 main problems were identified, analyzed and then classified into 4 cluster of interrelated problems comprising of mining, management, legal and environmental technology. The resulting information lead to the specification of clear objectives and plans of action for planning and management. There were a total of 16 actions proposed, distributed in legal improvement (5), and 13 actions in research and development, including environmental technology. The knowledge of the influence of raw materials in the final properties of ceramic tiles is determinant factor to ensure improvements in the entire production chain, from geological exploration through mining, processing, design, technical specifications, construction technology and environmental control.