Thematic session 30

Clays for ceramics

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Clays are the quintessential raw materials for many ceramics. The knowledge of clay deposits and the relationship between geology, composition and technological properties is always of great relevance. Understanding the role of clay minerals in ceramic batches is fundamental to improve the know-how on industrial processes. Equally important is to highlight the effect of clay minerals on the microstructure and technical performance of finished products. This session welcomes contributions on the research of new clay deposits and new applications of known clays, as well as studies on the technological behavior of clays in the production of bricks, tiles, pottery, tableware, sanitaryware, lightweight aggregates, and silicate refractories. Relevant subjects include methods to determine ceramic properties in clays, sintering or rheological behaviour, phase transformations during processing, mineralogical composition of clays actually utilized in ceramic manufacturing, waste recycling in clay-based bodies, global view on clay demand for ceramic production, and novel technologies of clay beneficiation and improvement of performance.

Keywords: Applied mineralogy, Ceramics, Clay deposits, Firing transformations, Raw materials, Technological properties, Waste recycling.

Potential Journal: Applied Clay Science.