Attaining Natural Stone Appearance via Colored and Self-glazed Ceramics Stoneware Applied to Ceramics Tiles

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Abstract:
The stoneware products are characterized by their multiple colors, strength, high density and flexibility in the various stages of operation production. And it is characterized by its fine breaker, and glazed surface, which the appearance of natural stones can be simulated by it. It is similar in its properties with porcelain but it is made of elastic clay materials, while porcelain is made of pure kaolin and produces a white body after the fire. Research problem: The lack of the aesthetic appearance to external architecture, design of the ceramic surface and applied techniques have an aesthetic value that added to design of ceramic surfaces in the external architecture. Exploitation of new process formation in the production to produce self-glazed stoneware bodies.

Research Objectives: research aims at rationing the relationship between the combinations of stoneware and the aesthetic appearance of natural stones so that we get to the appearance of natural stones, which has become common in most ceramics tile products of linkable with the stoneware techniques such as body coloring and self-glazed to reach a suitable scientific classification for this relationship.

Research Methodology: The research uses analytical and experimental methods.

Results: The study found out that: the stoneware is suitable for the production formations of self-glazed bodies with a water absorption 0% as a result of the use of the plastic material (clay) with a minimum of 30%. Also, the fluxes with a maximum limit of 65% With the proposed formulations, in order to reach the self-glazed without causing any distortion in the resulting bodies. It helped to create a scientific base to connect the techniques and appearance of the exterior, which provides diversification to ceramics designers of to access products that have a natural appearance as a Natural Stones appearance. This included using of very smooth powders of colored ceramics bodies in the work of different aesthetic effects and using of different granular sizes of powders colored ceramics bodies, which helps in obtaining products called Granites, which have a distinctive natural appearance that mimics the appearance of natural rocks and can be used architecturally (externally and internally).

Keywords: Natural Stone Appearance, Colored Ceramics Stoneware, Ceramics Tiles, Self-glazed Ceramics Stoneware.