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Traditional Ceramics Value in the Middle East

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Abstract : The Stability in harsh environments thanks to excellent electrical, mechanical and thermal properties is what ceramics are all about selected materials for many applications despite advent of new materials such as plastics and composites. However, ceramic materials have disadvantages, including brittleness. Fragility is often attributed to pottery strong covalent and ionic bonds in the ceramic body. There is still much to learn about brittle cracks in a attention to detail, hence the fragility of the ceramic and its catastrophic failure of a frequently studied topic, particularly in charging applications. One of the most commonly used ceramics for load-bearing applications such as veneers is porcelain. Porcelain is a type of traditional pottery. Traditional pottery consists mainly of three basic ingredients: clay, which gives plasticity; silica which maintains the shape and stability of the ceramic body over temperature high temperature; and feldspar affecting glazing. In traditional pottery, the inversion of quartz during cooling the process can create microcracks that act as a stress concentration centers. Consequently, subcritical crack growth is caused due to quartz inversion origins unpredictable catastrophic failure of the work of ceramic bodies when reloading. In the case of porcelain, however, this is what the mullite hypothesis says the strength of porcelain can be significantly increased with felt Interlocking of mullite needles in the ceramic body.in this way realistic assessment of the role of quartz and mullite Porcelain with a strength of is needed to grow stronger and smaller fragile porcelain. Currently,the lack of reports on Young's moduli in the literature leads to erroneous conclusions in this regard mechanical behavior of porcelain. Therefore, the current project uses the Young's modulus approach for the investigation the role of quartz and mullite on the mechanical strength of various porcelains, in addition to reducing particle size, flexural strength fractographic forces and techniques.

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