

Bangladesh should set its eyes on the global advanced ceramics market

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What is the present scenario of the ceramics industry in Bangladesh?

The ceramics sector is booming in Bangladesh. The ceramics industry in Bangladesh started its journey in the late 1950s. Since then the local ceramics industry has mainly been focusing on producing traditional ceramics namely tableware, sanitaryware, insulators and tiles. Glass is also a kind of ceramic and its main raw material is sand.

Currently, more than 70 ceramics companies are in operation in the country and about 25 more are expected to go into operation within a year. Bangladesh earned more than USD 42 million through export of ceramic products last year to 50 different countries of which 95 percent is tableware. More than 0.5 mil-

lion people are employed in the ceramics sector in Bangladesh. However, Bangladesh's share of export was only 0.97 percent in the global ceramics market compared to China's 61 percent. It is clear that there is plenty of scope to improve the ceramics sector in future.

The main raw materials are clay, feldspar and quartz. In addition, some chemical additives are being used for shaping and colouring the products. Some of the raw materials and most of the machineries are usually imported. However, this should not be our approach; we should be able to optimise and take advantage of locally available raw materials and design kilns as the key part of the ceramics plant including refractories, insulators and control systems of the plants.

In recent years, the field of ceramics has expanded to include a much wider array of functional applications beyond traditional ceramics. This is referred to as "advanced ceramics" which focuses on issues such as energy conservation, water filtration, electronic and biomedical applications. The global market of advanced ceramics is expected to reach around USD 135 billion by 2024. Unfortunately, till now Bangladesh has not been able to enter this major high-tech ceramics market.

How can our local ceramics industry take advantage of global innovations made in the industry?

In the 21st century, ceramics is no longer limited to only tiles, tableware or

sanitaryware; rather it has expanded its domain from engineering ceramics such as cutting tools, bearings, gears, etc. to electroceramics, biomedical, and aerospace—it even encompasses emerging technologies like nanotechnology. In recent years, developed countries such as Japan and US and EU nations have been focusing on the production of antibacterial and self-cleaning tiles and sanitaryware. Although in Bangladesh there are a number of ceramics companies that are using high-tech precision machineries to produce high-quality tiles and sanitaryware, they are still not producing antibacterial and self-cleaning products which will be a prerequisite to export ceramic products. To survive in this competitive free-economy market, the quality of the products should satisfy stringent global requirements. Especially when it comes to tableware, heavy metal and toxic elements should be kept within the prescribed limit put forth by the importing country. For quality control and quality assurance of tableware, it should be tested with high-tech precision equipment. Our local industry should have a product development cell that will continuously work on the gradual enhancement of product quality—product diversification, in particular, to fulfil the requirement of the global market.

Other important aspects of ceramic materials are water, exhaust noxious gas



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