

The role of Jingdezhen in the ceramic culture heritage and scientific and technological innovation of China

Yu Xiaoping*

Jingdezhen Ceramic Institute, School of Foreign Language, Jingdezhen, Jiangxi Province
333403, P.R.CHINA

yuxiaoping@jci.edu.cn

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Ceramic is the foundation and core of Jingdezhen. Since AD 10th century, China has spread porcelain making skills and industrial civilization to Korea, Japan, and Europe. For westerners, Jingdezhen becomes an important window of understanding and learning Chinese culture and is one of industrial cities with the earliest seeds of capitalism in China. In recent years, the protection and development of cultural heritage and modern industrial heritage have been strengthened. In 2014, Jingdezhen won the name of “the capital of world handicraft arts and folk arts”.

Many ceramic masters and professional talents gather in Jingdezhen. Every year, thousands of domestic and overseas ceramists are attracted here to create and exchange, which forms a large and abundant ceramic team. For example, International Artist Workshop and International Ceramic Summer Training College are organized. “JCI-WVU International Ceramist Workshop” project is listed as “the model and new peak of Sino-US nongovernmental exchanges” in Sino-US: 200 Years Relation published by US State Department. In recent years, with the development trend of international ceramic art and the profound ceramic culture of Jingdezhen, Jingdezhen Ceramic Institute has organized more than 10 international ceramic engineering, art, culture, education seminars. On behalf of China, Jingdezhen Ceramic Institute has organized ceramic art work exhibitions of teachers and students in UNESCO head office, Louvre in France, University of Cambridge in Britain, Asian Museum in Greece, the Royal Palace in France, and other important places, which fully shows that it has achieved outstanding achievements in ceramic art education and creation. It greatly promotes Chinese ceramic culture and art to move forward the world.

Jingdezhen Ceramic Institute plays a leading role in the development of scientific and technological innovation of China. For instance, a large-area flat-plate anode-supported solid oxide fuel cell (SOFC) was successfully prepared using a two-layer aqueous system casting and co-firing of an anode/electrolyte complex. The foam ceramics metallurgy industry uses foam

ceramics to filter molten steel, molten iron, and aluminum water to improve the quality of aluminum, copper, and iron product castings. It is widely used abroad as a filter absorber, a solid heat exchanger, a catalyst carrier, a packing for contacting reaction towers and gases, an in-line mixer, a diffuser tube, and a heat preservation and heat storage body. Microwave dielectric materials are used to manufacture frequency devices for mobile communications and radar devices, such as filters, resonators, duplexers, and antennas. Inorganic Nanoparticles Modified Ceramic Microfiltration Membrane, a ceramic microfiltration membrane with high separation efficiency, high permeation flux, resistance to oil contamination, and easy to clean regeneration developed for the treatment of oily wastewater and stable oil-water emulsion separation. Metal halide lamps are one of the High Intensity Discharge (HID) lamps and are the main source of light for large-area lighting and special occasion lighting.