

## **EVOLUTION OF SPANISH TILE MANUFACTURING INDUSTRY. SUSTAINABILITY MARKS THE FUTURE**

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The manufacture of ceramic tiles in Spain has a long tradition. Spain is one of the main world producers, with a product of excellent quality endorsed by the great penetration in a large number of world markets. It is a sector in constant technological evolution that has led to the transformation of a productive process derived from the purest artisanal tradition, to a highly technified process in line with the digital era.

However, the production of ceramic tiles still presents important challenges derived, fundamentally, from the need to harmonize their evolution with an increasingly sustainable development. The large consumption of material resources (raw materials and water), energy, as well as greenhouse gas emissions are the great future challenges of this industry.

This paper describes, in a first part, the main milestones of the Spanish ceramic tile industry in the last 40 years, including the role that the Institute of Ceramic Technology of the Universitat Jaume I of Castellón has developed during all these years.

Based on this evolution, the ongoing and future developments necessary to achieve an increasingly sustainable industry are described. The full development of water-based digital decoration, the use of energy and its exploitation for water recovery, the reduction of the carbon footprint and the incorporation of renewable energies in an efficient way in the process are some of the aspects that, without any doubt, will be part of this sector in the near future.