



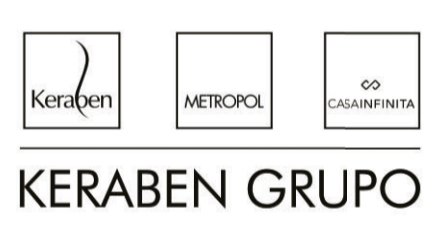
Development of an Efficient Microwave System for Material Transformation in energy INTensive processes for an improved Yield

THE PROJECT

The DESTINY project aims to realize a functional, green and energy saving, scalable and replicable solution, employing microwave energy for continuous material processing in energy-intensive industries. The target is to develop and demonstrate a new concept of firing for granular feedstock to realize material transformation using full microwave heating as alternative energy source and complement to the existing conventional production. The DESTINY system is conceived as cellular kilns in a mobile modular plant, with significant advantages in terms of resource and energy efficiency, flexibility, replicability, scalability, and a reduced environmental footprint. Availing of the DESTINY solution's capability to enhance process stability and efficiency, and given the characteristics of the used raw materials, DESTINY project will investigate intermediate/sub/final products to improve the performance of processes within 3 industrial sectors (Cement, Ceramics and Steel). New heating technologies, monitoring systems and numerical simulation tools will be used to drive the design of large-scale applicators and excel in the outcome.

DESTINY PILOT PLANT

Advances in the pilot plant of DESTINY have demonstrated the possibility of application to the industries of ceramic, cement and steel, obtaining products with similar or very close quality to the matured best available technologies obtained using conventional energy. The microwave pilot plant modules installed in CEINMAT facilities are being transferred to KERABEN facilities. Furthermore, the modules will be upgraded with the participation of the consortium. This will lead to a DESTINY demo plant of microwave firing to be used for more intensive production, optimizing the process to obtain the final, more ecologically sound products with marketable quality. DESTINY results will be used to demonstrate the competitiveness of a lower-consumption and fully-electric technology.



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COORDINATOR: KERABEN GRUPO SAU
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DURATION: 42 Months