RAPID DRY

WITH THE CONTRIBUTION OF THE LIFE PROGRAMME OF THE EUROPEAN UNION
LIFE19 CCM/IT/001243

RAPID DRYING OF CERAMICS REDUCING ENERGY CONSUMPTION AND CO_2 EMISSIONS WHILE PRESERVING PRODUCT QUALITY

The **RAPID DRY project** aims to optimise the DRYING OF CERAMIC CAST PIECES thanks to **two important innovations:**

CHAMBER DRYER

The design and production of a new chamber dryer prototype, optimising currently available techniques in a very cost-effective way so to be **EASILY ACCESSABLE FOR THE SANITARYWARE INDUSTRY,** and leading to a much **HIGHER ENERGY SAVING** then currently achievable

A **PLC SYSTEM** optimizes recirculation and extraction to reduce consumption and obtain a better control

Installation of **FANS** (cones) inserted to improve the mixing of fresh hot air and recirculating air and ensure uniform air flow

All the motors are subject to **INVERTERS** so as to be able to regulate efficiency and consumption

FUMES RECIRCULATION permits to use the residual heat coming from the fumes to preheat the air, saving energy

CERAMIC BODY

A rigorous modification to obtain ceramic bodies (with new formulas of Vitreous China and Fire Clay) with an 8-10 hour drying curve though **PRESERVING EXCELLENT PERFORMANCES IN QUALITY AND RESISTANCE.**

Addition of **CHAMOTTE** (derived from grinded broken ceramic pieces)

Changes to the **RHEOLOGY** and to the **GRAIN SIZE** distribution of the slip formulations

The new mixtures will be tested to assess drying curve and product quality with those of traditional bodies

REPLICABILITY AND TRANSFERABILITY

The prototype dryer will have a volume of **77 m³**, that represents about 1/2 of an average scale industrial dryer.
The objective is the widest possible market penetration worldwide in all the suitable sectors.
Current sales prognoses imply that **5 YEARS AFTER PROJECT CONCLUSION** there would be:

-1.980.000 KWh
of **ELECTRICITY** consumption

-14.241.700 kg
CO_2 EMISSIONS emitted by the factories that bought the dryer in 5 year

-7.120.850 Nm³
of **METHANE** consumption

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www.rapid-dry.com