

Energy consumption and CO_2 and NO_x emissions Minimised in an Intermittent Ceramic Kiln

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Dear communication professionals,

This is a document created to help you to do your job easier. This press dossier contains the basic information of the project, with links to the project web, so you can get more information.

Here you can find the press release of the launch of the project:
press release 2016/09/25

Take a look at the **project description** and **key benefits**.

If you want to know more about the main work we are doing, you can consult the **activities page** and **expected results** on our website.

Finally, if you are looking for information about the ECONOMICK Consortium, you can also consult **partners section**.

INTRODUCTION | The European ceramic industry is facing several challenges to its competitiveness, many of which have been driven by increased environmental regulation, reliance on raw materials from non-EU producers, and rising energy costs.

ECONOMICK faces these challenges by developing an **innovative shuttle kiln** for sanitary ware, tableware, refractories and other ceramic productions except from tiles, which consumes about **45% less energy** than actually existing technologies, allowing a significant **decrease in production costs** and environmental impact.

OBJECTIVES | ECONOMICK kiln will help the ceramic sector achieving a twofold objective:

REDUCING THE ENVIRONMENTAL IMPACT

- contributing to mitigate climate change by significantly reduce CO2 emissions;
- reducing pollutant emissions of NOx, HF, SOx and particle matter;
- reducing consumption of energy and raw materials.

INCREASING EFFICIENCY AND COMPETITIVENESS

- reducing operating costs (of which 30% is energy-related)
- reducing costs for under-production by substituting tunnel kilns with ECONOMICK kilns
- optimizing the logistic thanks to a more flexible production

After the kiln's design and construction, its performances and transferability potential will be tested and demonstrated in industrial environment, involving sanitary ware and tableware producers in Italy and Romania.

ADDED VALUE | The following features make the ECONOMICK kiln a unique case in the technological landscape of the ceramic sectors concerned:

- nearly full **flue-gas heat recovery**
- **innovative burners** which boost the kiln's performances
- optimized combustion thanks to **computerized flows management**
- **advanced insulation materials** to reduce thermal dispersion

EXPECTED RESULTS |

- up to -55% NOx emissions
 - -45% CO₂ emissions
 - -45% energy consumption
 - reduced operating costs
- compared with state-of-the-art intermittent kilns

ABOUT US |



SE.TE.C. srl

Technology provider for ceramic production. SE.TE.C. is in charge of developing and validating the prototype. SETEC will also lead the dissemination of the new technology.

KERASAN



Sanitary ware producer. KERASAN will test the kiln performances' in its sanitary ware ceramic plant.

LIFE CYCLE ENGINEERING



Environmental consultancy company. LIFE CYCLE ENGINEERING will evaluate the prototype's environmental, social and economic sustainability through the LCA approach.