

APPLICATION AREAS



SANITARYWARE



TABLEWARE



ORNAMENTAL CERAMICS



CERAMIC STOVES

PROJECT DETAILS



DURATION 33 MONTHS
START DATE 01/07/2016
END DATE 31/03/2019



COORDINATOR **SE.TE.C. Srl**
Market leader in services and technologies
for sanitaryware and tableware production



BUDGET 1.5 M€



PROJECT CODE
LIFE15 CCM/IT/000104

ECONOMICK



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



PARTNERS

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WITH THE CONTRIBUTION OF THE LIFE
FINANCIAL INSTRUMENT
OF THE EUROPEAN COMMUNITY
LIFE15 CCM/IT/000104

PROJECT ACHIEVEMENTS



ECONOMIC ACHIEVEMENTS*



ENVIRONMENTAL ACHIEVEMENTS*



SOCIAL ACHIEVEMENTS

ECONOMICK kiln allows to decrease operating costs:



-33% energy cost



-28% total costs over the kiln service life (corresponding up to € 970 000)



1.3 years time needed to pay back the extra investment required for substituting a conventional kiln with an ECONOMICK kiln



-33% energy cost



-35% energy cost

compared to a traditional shuttle kiln

GREEN HOUSE GASES EMISSIONS FOR TOTAL LIFE CYCLE



-44% CO₂eq emission of ECONOMICK compared to an average traditional shuttle kiln

in working life for sanitaryware firing in a ceramic company for 20 years, considering natural gas and electricity consumption.

AIR EMISSIONS DUE TO NATURAL GAS CONSUMPTION

HYDROFLUORIC ACID (HF)
DUST
SULFUR OXIDES (SO_x)

 **-49%**

NITROGEN OXIDES (NO_x)

 **-53%**

Reported emissions are related only to natural gas production and combustion.

**All measured savings are strongly dependent on the specific firing curve adopted, thus different applications might have different results.*

A Social Life Cycle Assessment was carried out on the innovative ECONOMICK kiln and the traditional shuttle kiln.

The main benefits identified are:



reduction of workers' exposure to high temperatures during the working time, thanks to a lower external temperature of kiln walls;



opportunity of avoiding night shift, thanks to shorter firing cycles



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