Pressinformation

BINE Informationsdienst

Bonn, 24 July 2014

Saving energy while warming up snacks

New flow concept applies heat to food in targeted manner

In modern ovens, heated air circulates evenly throughout the oven space. When cooking small quantities of food such as frozen pizza, this creates unnecessarily high energy costs. The BINE-Projektinfo brochure “Creating microclimates in ovens” (10/2014) describes the development of a demonstration oven that can save up to 40% of the energy.

In particular, uniform heating of the entire oven interior leads to a disproportionately high energy consumption if the intention is only to warm up small dishes. However, there are numerous possibilities for blowing hot air at a body. The scientists tested various flow concepts with a pizza dummy. Highly promising was a model where the frozen product is enveloped in a hot air stream like in a bell.

The result of the project is a demonstrator with standardised oven dimensions. This is primarily designed for frozen pizza and similarly sized cooking products. It requires around 40% less energy to cook a pizza than a standard state-of-the-art oven. In the long term it is intended to adapt the flow and heating concept to other cooking products.

The research project was managed by the E.G.O. Group – which supplies manufacturers of household appliances – in collaboration with the Institute for Mechanical Process Engineering at the University of Stuttgart.

The BINE-Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info or by calling +49 (0)228 92379-0. The brochure cover and additional image material are also available for download on this web portal in the press section.

Contact
Uwe Milles
presse@bine.info

BINE information service
Kaiserstraße 185-197
53113 Bonn
www.bine.info

BINE is an information service by FIZ Karlsruhe
www.fiz-karlsruhe.de and supported by Federal Ministry of Economic Affairs and Energy
on the basis of a decision
by the German Bundestag