



Long term thinking

For a long time now, Dudson has adopted a proactive approach towards production methods, introducing new technologies and methods of production to reduce the impact of its manufacturing operations on the environment.



MANUFACTURING CERAMIC products has traditionally been costly to the environment, with firing and glazing in particular requiring high energy use. But with rocketing increases in the price of gas and electricity alongside the detrimental effect on the environment of burning fossil fuels, the situation was fast becoming unsustainable.

A reduction in firing temperature was one possible solution, but previous attempts to achieve this aim had proven to be uneconomic or had resulted in a negative effect on the quality of tableware. However, in 2004, local company Endeka Ceramics embarked upon the development of new energy efficient bodies and glazes to provide a solution to these issues.

“By reducing firing temperatures, ThermECO brings benefits to producers, end users, and the environment,” explains Stuart Adams, managing director of Endeka Ceramics. “We in the UK lead the world in low-temperature ceramics, and work continues at Endeka to reduce firing temperatures further and reduce the number of firings required to produce ceramics to ensure that we maintain that lead.”

Today, all Dudson ceramic products are protected by a ThermECO glaze, one of the

new high-performance, energy-efficient products from Endeka Ceramics Ltd. developed during this intensive programme. A low temperature glaze has many benefits for customers, including increased hardness of the glaze, a high-gloss finish and improved metal marking resistance, as well as many benefits to Dudson production:

- Lower temperature firing = less energy used;
- Lower temperature firing = lower emissions;
- Improved stability during firing process = less waste generated;
- Unleaded glaze = cleaner effluent from the glazing process;
- Greater durability of product = a higher level of customer satisfaction

The use of ThermECO glaze has been particularly acclaimed in the development of ‘Evolution’, a new ceramic body developed by Dudson with the prime objective of reducing the carbon footprint created during manufacture. Carbon emissions produced in the manufacture of Evolution are 79 per cent* less than those produced in the manufacture of an equivalent porcelain product. The use of energy efficient glazes demonstrates just one of the many

initiatives that form part of Dudson’s ongoing programme of environmental improvements to the production process.

A recent recycling project concentrated on trying to reduce the amount of glaze used when spraying flatware, with the aim of both reducing the amount of glaze used on a daily basis, and also the quantity of glaze going to waste (effluent.) Any waste glaze was thoroughly cleaned and sent through a filtration system, before being added to new glaze and re-used in the spray-glaze process. The initial trial produced a saving of 40 per cent, and it is hoped that with improvements to the re-claiming process, this figure will increase to an overall saving of 60 per cent of the quantity of glaze used in the spraying process. As the waste glaze is recycled, the quantity going to effluent is negligible, resulting in a positive environmental outcome.

Having been accredited with the ISO14001 Environmental Management Standard, Dudson remains even more committed to a sustainable environmental strategy, developing innovative solutions to reduce the effect of production on the environment.

**According to independent testing by Endeka Ceramics Ltd on kiln firing processes.*