CERAMIC THERMAL CONDITIONING PANEL

PATENTED TECHNOLOGY

CONTACT DETAILS:

Research Results Transfer Office-OTRI
University of Alicante
Tel.: +34 96 590 99 59
Email: areaempresas@ua.es
http://innoua.ua.es

ABSTRACT

The research group of technology and sustainability in the architecture of the University of Alicante, together with the Spanish Association of manufacturers of tiles and ceramic floor tiles (ASCER) and the Institute of technology ceramic (ITC) have developed an innovative thermal conditioning panel in ceramic material able to cool or heat any environment in a simple, sustainable and energy-efficient way.

It requires minimal maintenance and can be deployed using a wide range of designs and configurations. Important advantages are achieved in terms of lightness, aesthetics and cleanliness. They are mainly looking for companies licensing the technology, although, they are also open to technical collaboration.

ADVANTAGES AND INNOVATIVE ASPECTS

MAIN ADVANTAGES

- The technology consists of a cooling and heating system more sustainable and efficient. This system allows the usual air conditioners, forced air convective or hot water radiators to be replaced.
- The installation and fastening system is very simple, so the panels could be easily mounted and dismounted.
- Panels can be arranged horizontally, vertically or any other inclination, applied on walls and ceilings.
- The use of ceramic materials enables greater lightness, so it can take larger formats (up to 300 x 100 mm; thickness 3 to 5 mm)
- Ceramic material panels are more resistant to the effects of humidity, condensation, adsorption of dirt and moisture, as well as a higher mechanical strength.
- Ceramic materials provide greater flexibility in terms of aesthetics and design, so different colour, texture or image could be applied to the walls and ceilings of a room.

INNOVATIVE ASPECTS

The main innovation of system is the use of ceramic materials in the composition of the panel of thermal conditioning. So far it had not been used this material combined with a system of capillary tubes of water distribution.

This material has characteristics that make it ideal for use in sustainable construction, since it is respectful of the environment by containing pottery and polypropylene.

The system, working with moderate water temperatures, allows the use of renewable energy, solar, geothermal or biomass, both in summer and in winter.

The material also provides other benefits such as lightness, easy maintenance and the possibility of establishing custom formats.

COLLABORATION SOUGHT

The research group is looking for institutions and companies interested in acquiring the technology for commercial exploitation by:

- Licensing agreement.
- Technical cooperation if any industry needs to implement the technology according to their necessities.