Eye on the future

Ballydehob-based Ceramicx is set to grow sales and jobs through expert and energy-saving technology

CERAMICX Ireland Ltd is an infrared heater manufacturer situated in the picturesque countryside of Gortnagrough, Ballydehob in West Cork. Founder and managing director of Ceramicx, Frank Wilson, has a clear eye on the future with a number of proprietary innovations planned.

The heart of Ceramicx is based on its expert product development and consultancy in the growing world of infrared heating. Frank Wilson says: 'From the outset we had the confidence of the market and the vision to back ourselves technically and commercially. And because we set ourselves to satisfy our demand worldwide, we are now in a position to make another quantum leap in our development.'

Ceramicx was set up in 1992 and in 1994 moved into its new premises in Ballydehob on a site previously owned by Infrared Internationale. Today, Ceramicx employs a range of expert manufacturing practitioners and delivers its heating products, systems and heat-consultancy to 63 countries across all five world continents. The factory output is 98% exported, and Frank says that the planned developments and expansion will include higher value jobs supported by increased levels of automation and know-how at the factory works.

The engine for success at the company is based on a passion for what Frank Wilson calls 'heat work'.

Heat work – an art and a science

'In some ways – as every blacksmith knows – heat work is a bit of a black art,' says Frank. 'But in many other ways, it is an extremely involving and evolving science. We are in a fortunate position in that Ceramicx has fostered relationships with centres of expertise and universities such as the University of Limerick, who are all helping us play a key part in advancing and developing this new science. Based on that know-how and on solid scientific fundamentals we are able to go out and create new infrared heating products and heating systems for industry and the consumer alike.'

Ceramicx products and systems are already extensively used in a wide range of industrial and consumer areas. Whether they know it or not, the worldwide plastics and packaging industries are all key users since much of their processing equipment already contains Ceramicx heating elements or Ceramicx heating design. Thermoformed plastic products surround us all in the day to day – from butter tubs to burger boxes and from fridge linings to car door linings – and Ceramicx has played its part in the heat forming.

Key applications for Ceramicx infrared know-how include plastics thermoforming, industrial non-contact drying, spot heating, warming food, infrared saunas and numerous other industrial processes.

Frank Wilson points out that infrared radiation is a lot closer than we think. Beginning with our solar system, infrared radiation (IR) is emitted from all everyday objects in our world – 'in fact,' he says, 'from anything with a temperature above absolute zero. Infrared radiation has many uses in everyday life but at Ceramicx our focus is on its ability to heat objects without direct contact with the heat source.'

In scientific terms, Infrared is electromagnetic radiation, similar in nature to light but in a longer wavelength range. Infrared elements are generally classified into three categories according to their peak energy or peak emission wavelength. These are: Long wave: ceramic elements; Medium wave: quartz elements; and Short wave: quartz tungsten elements.

All of these elements offer an immense range of heating types and heating performance: Ceramicx makes ceramic and quartz emitters which range in surface temperature from 150°C (302°F) to 730°C (1346°F) and the Ceramicx tungsten bulbs are capable of reaching in excess of 2,400°C (4,352°F).

That's a pretty broad palette of heating options – and part of the Ceramicx genius has been to mix and match these in the best interests of the customer. Frank says that 'at Ceramicx you will find a company that is not satisfied with the established standards for the industry. We have developed many new products that better fit the needs of today's manufacturer who has no choice but to be reliant on process heating. Our niche is in giving this customer a much superior product at a competitive price. In addition, the energy content of every product is a very important cost and ecological issue.'

Frank Wilson, founder and managing director, Ceramicx.

Around the world ... in one day

Manufacturing the best products and systems is one thing – but delivering them on schedule – worldwide – is another. The company's trade and logistics abilities are the envy of many and Ceramicx co-founder Grainne Wilson delivers this service to customers.

Grainne says: 'The Transport and Logistics industries are always in development. At Ceramicx we are duty bound to stay on top of all the trends and get the best from a constantly changing picture.'

The credit crunch crisis of the past twelve months has posed its own questions. Grainne says that 'the IATA estimates that the airline cargo industry has suffered recent losses of over US$1 billion and that much sea freight business worldwide is also struggling to remain afloat. As a result of the present market conditions some carriers are removing aircraft and ships from service in an effort to realign the equilibrium of supply and demand. However, other parts of the transport industry have flexed and have profited from these moves. As a user, there are always new options and bargains to be found.'

Every day Ceramicx ships its goods out of Ballydehob to many different locations and by different methods. 'The goods range from the smallest carton of around 6kg to full pallets and containers. The company ships by road, sea and air and the requirements vary greatly for different countries. Destinations outside the EU, for instance, require import documentation such as movement certificates and export documents, certificates of origin, invoices and other documents.

'For some markets such as Brazil or Russia the slightest discrepancy – such as a misspelling – can lead to the goods being held up in Customs. Great care has to be taken to make sure this does not happen,' says Grainne.

Since many countries have various restrictions – particularly for the importation of timber or any kind of wooden products – pallets have to be fumigated. Ceramicx, however, mostly uses plastic recycled pallets which elimates the need for this.

Ceramicx pays great attention to the packaging and safety of its goods in transit. Grainne says: 'All Ceramicx goods are very carefully wrapped and packed. Most of our production is made from ceramic and glass and has to survive the handling throughout the route. This can mean being loaded and unloaded several times until final destination. We make a conscious effort to use recycled packing for all of our shipments wherever possible.'

Frank Wilson (front left) and his team in front of the gas fired roller hearth kiln at the Ceramicx factory in Ballydehob.

Branding the best

Also coming up in this mix will be the visible branding of the company's packaging and the product with the newly redesigned Ceramicx company logo and distinctive company colours in yellow and ochre.

At this point in the company's development, Frank Wilson acknowledges that great products now need great branding. 'The Ceramicx product – our componentry and our consumer products – has, on numerous occasions, been found to be the best in the world. We have independent test house data – from Europe, from the Far East – that says so. Thanks to our investment in heat work we have nothing to fear from anyone else on the score of product excellence or product development. So the time has now come to give our Ceramicx product profile its matching due in terms of marketing and international brand profile,' says Frank.

Ceramicx has accordingly given its corporate design an upgrade and a refresh. This new Ceramicx logo will now adorn the bulk of the stock leaving the warehouse for worldwide destinations. 'The new branding,' says Frank, 'is backed by price, quality and by our commitment to true service.'

'We make it here' – the Ceramicx engineering commitment

A tour of the Ceramicx factory reveals yet one further passion from its founder and director, and that is the commitment to home-grown design, engineering and manufacturing. 'At Ceramicx,' says Frank, 'we have always made sure to keep our design and our product-build and our value-added in-house and in-hand. We don't contract out – and we don't sub-contract out for others. We make it here,' he says, 'from design and build to packaging and branding and export.'

Over the past five years Ceramicx has invested in a large machinery shop, with CNC milling machines and metal cutting, shaping and finishing machinery to ensure the continuing independent manufacturing success of the company – with no dependence on outsourcing and full control of the innovation and materials they use and offer.

Wilson adds: 'Not only do we manufacture the best heating product, we also have to guarantee its excellence. We have to ensure that through its repeatability and quality – industrial or customer – that every Ceramicx product is the best in manufacturing depth.'

Quality assurance and traceability tagging and so forth are standard practices, of course, in the best parts of industry but Ceramicx is set to go further. A joint venture project has just begun with the University of Limerick and will see real performance data for every Ceramicx product available online.

'This kind of data – numerical and graphical – will be available to any buyer or user of Ceramicx product who wishes to use the science and the figures behind the product. It's a radical new form of customer assurance,' Frank adds.

'It makes the Ceramicx product performance and quality completely "transparent" to the customers – and further guarantees its excellence.'

Producing for the new energy agenda

As an industrial company, a user of energy – and a producer of energy products for a multitude of other industrial companies – Ceramicx is highly aware of the new energy agenda in the world and the need for ecological and low carbon footprint products and practices.

'Like it or not,' says Wilson, 'we all live in a world where the carbon footprint of us all can and must be reduced. There is actually no going back on this point.

'I pay great heed to the pace setters in this area. People like Tom Delay, Chief Executive of The Carbon Trust, who, for example, recently said that in today's global economy "there will be a large creation and re-distribution of shareholder value in the transition to a low carbon economy. There will be winners and losers at sector level and within sectors at company level. The winners are more likely to be those businesses that take the time to understand and address this complex area."'

Accordingly, Ceramicx is making plans to become more self-sufficient in its own energy consumption – and therefore that of its products – by building a wind turbine facility that, in time, will satisfy the full energy needs of the plant.

Ceramicx is already no stranger to the energy efficiency field. Many of the company's existing Ceramicx heating installations have saved 30 to 40% of the energy used – but wind energy offers a different dimension.

'Wind energy power will eventually make our energy needs self-sustaining,' says Wilson, 'and – as importantly – will reduce the carbon footprint of all the products that we make and sell. I believe that this factor alone will greatly help our competitiveness and help sustain competitiveness and jobs. The support that this issue gives to our Ceramicx brand image is incalculable and also gives great support to the value contained within the brand,' he continues.

'The day will come, I believe – and sooner than we think – when the proveable energy cost of a product will determine whether it succeeds or not in the marketplace. It is no understatement for us at Ceramicx to say the future of the company depends on the future of our energy plans,' says Frank.

Wilson believes that this issue has a wider importance. 'Energy saving saves a lot more than energy. It is vital, in fact, to send out a message that the savings in productivity at the factory – and the Ceramicx exports from Ireland are a source of green produced products in addition to being green energy-efficient in operation.' Wilson is clear that Ceramicx will offer these innovations and improvements as a cost-effective development and without the need to charge the so-called 'organic premium'.

'In this way,' he says, 'we shall be able to sustainably grow business and jobs for the new global industrial agenda.'