



First custom-built steel foundry to be commissioned in UK

The first custom-built steel foundry to be commissioned in the UK since the early 1980s has been unveiled at AMRC Castings, part of the University of Sheffield's Advanced Manufacturing Research Centre (AMRC) with Boeing, according to a news report.

The new advanced steels casting facility consists of two Inductotherm air melting induction furnaces, with a combined 2.8 tonne melt capacity, able to produce cast parts with a finished weight of up to 1300kg.

The £600,000 investment into the new foundry by the AMRC will allow the AMRC Castings group to conduct innovative research and product development projects in collaboration with its industrial partners for the benefit of industry sectors in which castings are, or could be, used in the future.

The organisation develops new casting technologies and provides design and manufacturing consultancy services for aerospace and other high-value

manufacturing sectors.

The opening of the new facility is a significant event for the UK foundry sector, said AMRC Castings' Ryan Longden: "Keeping the UK at the forefront of steel castings technology is the only way to ensure the capability survives. It's our aim to support steel foundries at home in the UK and around the world and castings users wanting to push the boundaries of current castings processes."

The new advanced steels casting facility is fully operational and being used to contribute to a collaborative project for the energy sector.

"Using the new facility alongside our MEGAshell® Process allows us to put our technical expertise to full use and conduct pioneering research for the energy sector into



producing cast steel components that are more cost and time effective to manufacture," added Longden.

The new process is a novel ceramic shell moulding and casting process that provides improved dimensional accuracy and superior surface quality compared to traditional sand-moulded castings.

Combined with the new advanced steels casting facility, AMRC Castings is the only UK organisation able to produce a ceramic shell big enough for such research projects, producing specialist cast components from material grade duplex 4A steel in a one-piece ceramic mould.

The new foundry facility will also enable the advance of research into the composition of materials. Development programmes such as these will provide a knowledge bank of process and materials data, leading to the development of new material grades and optimised material chemistries for advanced castings.

"The new AMRC Castings advanced steels casting facility allows us to develop and demonstrate innovative new castings techniques, further enhancing the integrity and improving the material properties of castings," enthused Longden.

"This kind of research will help the AMRC build up the technical knowledge and expertise needed to keep UK castings technology and manufacturers competitive within global markets."

UK's Big Ben and Liberty Bell maker to close foundry



Britain's oldest manufacturer – having traded continuously for 446 years.

The foundry has been owned by the Hughes family since 1904. Alan Hughes and his wife Kathryn have sold the grade II-listed building on Whitechapel Road and are considering options for when the foundry leaves in May 2017.

Alan Hughes said: "We have made this decision with a heavy heart, but in

response to the changing realities of running a business of this kind. The business has been at its present site over 250 years so it is probably about time it moved once again. We hope that this move will provide an opportunity for the business to move forward in a new direction."

Property prices in Whitechapel have soared in recent years because the area, once infamous for the Jack the Ripper murders, is close to the capital's financial district and is a favourite spot for growing technology companies.

The foundry's owners are considering a

The UK's oldest manufacturing business – which cast Big Ben and the Liberty Bell – is on the move for the first time since 1739

Britain's oldest manufacturing business, a London bell foundry that made Big Ben, could be sold after its owner decided to vacate its historic East End premises.

The Whitechapel Bell Foundry began life in 1570 during the reign of Elizabeth I. It moved to its site on Whitechapel Road in 1739 and has traded from the building since.

The Guinness Book of Records lists the foundry, one of only two left in the UK, as

sale that could keep it operating from new premises.

In 1752, the foundry cast the Liberty Bell for the city of Philadelphia, which became a symbol of US independence. In 1856, it made Big Ben, although the bell cracked while being tested and was recast in 1858.

More recently, the Whitechapel team designed the bell used at the start of the 2012 London Olympics but the 23-tonne structure was too big for its furnaces and was cast in the Netherlands. The foundry cast the bells used on the lead barge for the Queen's Jubilee pageant on the Thames, also in 2012.