



Novel High Performance Aluminium Alloys – Innoval Technology to lead £2m project

Innoval Technology Ltd., an independent materials technology provider based in Banbury, UK, has won funding from the Department of Trade and Industry's (DTI) Technology Programme to lead a project to produce new, high-performance aluminium alloys for demanding applications using a novel casting process called Direct Chill RheoCasting (DCRC).

Innoval Technology, which specialises in aluminium and other light metals, will lead the £2 million collaborative project, providing technical expertise in alloy development, characterisation and process economics. The other partners in the project are the Brunel Centre for Advanced Solidification Technology (BCAST) at Brunel University, Novelis, Alcan, Luxfer Gas Cylinders and Zyomax.

Welcoming the new partnership, Science and Innovation Minister, Malcolm Wicks said:

“The UK has a proud history of innovation in science and technology. We believe that we must work with industry to develop the marketable products and services of tomorrow, so that we can maintain our position as a leading global economy.

“That’s why we’re supporting this project to help produce new alloys which are stronger and cheaper. It provides a great opportunity to harness the UK’s world-class expertise and use it to boost our economy and our quality of life.

“This partnership should help establish British industry as the world leader in this area and be an attractive proposition for investors.”

The DCRC process is able to produce alloys beyond those available from conventional solidification technologies. This means that alloys with extended compositional ranges can be cast economically for the first time, to provide aluminium alloys with exceptional properties. The range of potential markets in demanding applications is enormous.

The project will focus on the scale-up and optimisation of the DCRC process, the development of novel high performance aluminium alloys and components and product innovation; the main

process innovation being a continuous supply of a conditioned melt using a twin-screw processing system.

DCRC technology, developed by Professor Fan at Brunel University, represents a step-change in manufacturing technology for the production of aluminium billets or slabs. The high shear melt conditioner produces a liquid metal with uniform temperature, chemical composition and well-dispersed nucleation agents throughout its entire volume. The result is a cast slab or billet with a significantly finer and more uniform microstructure with a much greater propensity to accommodate alloying elements that requires the minimum level of processing after casting.

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Notes to editors:

Innoval Technology, formed in 2003, employs 28 people and provides technical expertise, contract research, analytical and testing services in light metals. It holds ISO9001: 2000 certification and ISO17025 accreditation.

Further details and images can be obtained from:

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