

# Press Release

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ZENERGY POWER

Zenergy Power plc  
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Zenergy Power plc ('Zenergy' or the 'Group')

## Successful Operation of World's First Commercial Full Scale HTS Induction Heater

Zenergy Power plc (AIM:ZEN.L), the specialist manufacturer and developer of commercial applications for high-temperature superconductive ('HTS') materials, is pleased to announce that it has completed the successful installation and operation of the world's first commercial full scale HTS induction heater for Weseralu GmbH & Co. KG ('Weseralu') at its manufacturing facility in Minden, Germany.

The HTS induction heater is based on Zenergy's proprietary technology and is specifically designed for heating large aluminium billets that can be manipulated when softened and shaped for innumerable products in the automotive, aerospace and machine building industries. Weseralu, which currently produces 14,000 tonnes of extruded aluminium per annum, using two conventional induction heaters, ordered the unit in late September 2007, a mere four months after the completion of its development and industrial testing, as previously announced on 22 May 2007.

The newly installed HTS induction heater is now fully operational at Weseralu and substantiates manifest and compelling economic advantages over competitor technologies. Three characteristics relating to energy and efficiency, operational simplicity, and carbon emissions are particularly noteworthy. First, conventional induction heater technologies require over 1MW of power to operate at full capacity, while Zenergy's HTS induction heater consumes a mere 450 kW of power when functioning at full volume. This alone generates a substantial 55 per cent energy saving. Secondly, the Zenergy HTS induction heater requires less maintenance than traditional induction heaters as it does not employ copper coils that must be completely replaced several times during the lifetime of a unit. Finally, the operation of a Zenergy HTS induction heater diminishes CO<sub>2</sub> emissions by 300 tonnes each year – the equivalent of the emissions of 150 households.

The adaptable manufacturing processes employed in Zenergy's HTS induction heater at an operational level also present other considerable direct cost saving benefits over conventional induction heater technologies. In particular, dramatically reduced heating times and the ability of the unit to heat entire billets at a uniform temperature evince both increased output and lower rejection levels.

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Zenergy has additionally received a second order for an HTS induction heater for copper processing and the majority of interested customers have commenced testing of their materials in the unit and are observing the deployment of the unit in an industrial environment prior to placing firm orders for units. With the first unit now on site, and with Weseralu's permission, Zenergy can arrange for additional prospective customers to see the Group's HTS induction heater operating at a commercial level. Zenergy is confident it is convincing metals producers to progressively implement its highly innovative HTS technology, which will enhance their production procedures both economically and ecologically.

Mr. Hagemann, owner and managing director of Weseralu, commented:

"Zenergy's HTS technology represents a quantum leap for our industry and I am delighted to be the first in the world to utilise this technology. I am confident that it will prove advantageous on an economic and ecologic basis in comparison to any existing billet heating equipment. Additionally, the HTS induction heater offers Weseralu unprecedented temperature homogeneity in our aluminium billets during the heating process in contrast to conventional technology, which will afford the company even more meaningful financial benefits through the increased productivity it generates from the considerable electricity savings we expect to enjoy from the unit."

Dr. Jens Müller, chief executive officer of Zenergy, commented:

"The successful continuous operation of the world's first full scale commercial HTS induction heater for Weseralu represents a landmark achievement for Zenergy that we are convinced will enhance Weseralu's reputation of delivering outstanding and high quality products to its customers. We are delighted by the implicit industrial acceptance that our technology has obtained, which has thus far been amply demonstrated by the two initial orders for our HTS induction heater, and remain determined to convert the tremendous interest we have received into firm sales of our HTS induction heater in the non-ferrous metals industry."

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## About Zenergy Power plc

Zenergy Power plc is a global specialist manufacturer and developer of commercial applications for superconductive materials. Comprising three operating subsidiaries located in Germany, USA and Australia, Zenergy is highly focussed on the commercialisation of a number of energy efficient applications to be adopted in the metals industry, renewable energy power generation, energy distribution and large scale, energy intensive industrial processes and has achieved the world's first commercial sales of an industrial scale HTS devices..

## About superconductivity

Superconductive materials are capable of conducting electricity without any resistance and were first discovered in 1911 in what was to prove to be one of the most significant scientific breakthroughs of the 20th century.

The global HTS market is substantial and growing, with a number of market studies projecting multi-billion dollar markets for the application of HTS materials and products. The proliferation of the use of superconductor materials is largely being driven by the following key factors:

- (a) HTS materials are highly complementary to energy efficient technologies as a substitute for copper
- (b) HTS wires have power densities of over 100x that of copper
- (c) Current developments are leading to substantially reduced costs in the production of HTS wires and are targeting to be cheaper than copper over the next few years.
- (d) HTS applications deliver exceptional energy efficiencies and thus reduced power consumption and running costs
- (e) HTS technology is set to play a significant role in reducing CO2 emissions in line with international targets
- (f) HTS applications are capable of delivering vastly increased levels of power with increased reliability and reduced material usage.

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