



Luvata signs supply contract for ITER TF conductors

ITER, the world largest experimental nuclear fusion reactor brings power of the Sun a step closer to earth.

(7 April 2009). At a formal signing ceremony in Barcelona, Spain, global metals, manufacturing and technology company Luvata has been awarded the very first hardware supply contract by Fusion for Energy (F4E) – the European Union’s organisation for Europe’s contribution to ITER and the development of fusion power – to supply chromium-plated copper strand used to construct the world’s largest-ever fusion experiment in the south of France.

Fusion is the process that powers the Sun and other stars in the universe. The harnessing of this process on Earth has the potential to meet our global energy needs. The ITER project is a significant step forward towards ‘clean’ nuclear power, which is virtually unlimited in supply and does not produce greenhouse gasses that cause climate change.

The project is building on years of initial research to construct the world’s largest experimental fusion reactor as a precursor to the development of commercial nuclear fusion power plants. The partners in the project – the ITER Parties – are: the European Union (represented by EURATOM), Japan, the People’s Republic of China, India, the Republic of Korea, the Russian Federation and the USA. The reactor will be constructed in Europe, at Cadarache, France.

Luvata has been awarded the very first hardware supply contract by Fusion for Energy. The scope of the contract is to supply the Chromium-plated Copper strand used for the ITER Toroidal Field coils. Due to the specific application, oxygen-free Copper (Cu-OFE) with a high residual resistivity ratio (“RRR”) is required. A chromium layer is applied in order to



avoid contamination during heat treatment of the conductor. The contract with Fusion for Energy will see Luvata providing 13,000 km of Cu strand required for the high-performance superconducting cables, which can withstand heat treatment of at least 100 hours at 650 degrees centigrade. The extremely powerful superconducting coils drive a plasma of ions and electrons around the reactor core enabling them to fuse together and, in the process, release vast amounts of energy and heat that can be used to generate carbon-free electricity.

Luvata has an unrivalled track record of delivering flawless superconductor and copper wire used in producing high-power superconductive conductors. Luvata superconductor strands were used at the heart of the Large Hadron Collider at CERN, in Switzerland, the world's largest highest-energy particle accelerator where scientists are trying to recreate the conditions that occurred immediately after the Big Bang. Luvata also produces superconductor wire for more than one third of the World's MRI scanners.

"We are proud to have been awarded the first hardware supply contract by Fusion for Energy and are looking forward to being a part of this massively significant and prestigious project," stated Antti Kilpinen, Vice-President and General Manager of Luvata's Superconductors Business Unit.

"The ITER reactor at Cadarache has the potential to revolutionise power generation and enable vast amounts of clean energy to be produced using the same processes that drive the Sun and the stars. The critical role played by our products is quite humbling when compared with the implications this project has in meeting our future energy needs."

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About Luvata

Luvata is the leading international metals supplier of solutions, services, components and materials for manufacturing and construction. Luvata's solutions are used in industries such as renewable energy, power generation, architecture, automotive, transport, medicine, air-conditioning, industrial refrigeration, consumer products and construction. The company's continued success is attributed to



its longevity, technological excellence and strategy of building partnerships beyond metals. Employing over 8,000 staff in 18 countries, Luvata works in partnership with customers such as Siemens, Toyota, CERN, Shaaz, and DWD International.

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