

What's New in the World of Superconductivity (January)

Power

American Superconductor Corporation (January 5, 2005)

American Superconductor Corporation has sold a D-VAR® voltage regulation system to the prime contractor of the Ainsworth Wind Turbine Project, a Nebraska-based wind farm owned by the Nebraska Public Power District (NPPD). The D-VAR system will be used to reliably and safely interconnect 36 wind turbines with an installed capacity of 60 MW to the NPPD power grid. The D-VAR system, which should be commissioned this summer, represents the seventh sale of a D-VAR system to a major wind-generated power facility. Overall, the seven wind farms utilizing D-VAR systems will provide 550 MW of zero-emission energy – enough to meet the energy needs of a quarter million homes.

Source:

“American Superconductor Books Additional Order for Wind Farm Voltage Regulation System”
American Superconductor Corporation press release (January 5, 2005)

http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=659069&highlight

SuperPower, Inc. (January 28, 2005)

SuperPower Inc., a subsidiary of Intermagnetics General Corporation, has broken its July 2004 performance record by achieving a critical current (I_c) of 103.6 A/cm-width in a nearly 100-m second-generation HTS wire. This performance corresponds to 10,050 A·m. The achievement was announced at the Department of Energy (DOE)'s Wire Development Workshop on January 19, 2005. Glenn H. Epstein, chairman and chief executive officer of Intermagnetics, commented, “Achieving better than 10,000 amp-meter performance propels SuperPower past an important threshold as we approach our fundamental objective of consistent production of commercially viable HTS technology. The 100-meter piece length is considered a key parameter to enable utilizing HTS wire in device applications. We continue to be on track for commercial viability before the end of 2005 and for full-scale production in 2006.” Over shorter lengths, an I_c of over 400 A/cm-width has been achieved in short samples, an I_c of 265 A/cm-width has been achieved in lengths of over one meter, and an I_c of 200 A/cm-width has been achieved in lengths of over 8 m.

The recent results were obtained using SuperPower's proprietary metal organic vapor deposition (MOCVD) process, a method that has a high throughput rate. At present, SuperPower has achieved critical currents above 100 amperes even at linear tape speeds of 20 m/h.

Source:

“INTERMAGNETICS SUBSIDIARY APPROACHES COMMERCIAL VIABILITY FOR SECOND-GENERATION HTS WIRE WITH NEW PERFORMANCE MILESTONE”

SuperPower, Inc. press release (January 28, 2005)

<http://www.igc.com/superpower/news/2GMOCVDRecordFinal012705.pdf>

Medical

CardioMag Imaging, Inc. (January 5, 2005)

CardioMag Imaging Inc. has signed a multiyear exclusive distribution agreement with a Chinese medical equipment company, Shenzhen Ziheng Advanced Electrical Technology Co., for the delivery of increasing and specific numbers of magnetocardiography (MCG) units, beginning immediately. The Chinese distributor expects to introduce CardioMag's MCG devices to approximately 20,000 hospitals across China. The agreement follows the successful operation of a 9-channel MCG at the TEDA International Cardiovascular Hospital in Tianjin, China, which has been serving as a operator-training center and has been involved in clinical R&D efforts to promote broader applications of MCG in China. CardioMag expects to negotiate similar distribution agreements with medical equipment distributors in other countries around the world.

Source:

"CARDIOMAG SIGNS MULTIYEAR SALES AGREEMENT WITH CHINESE DISTRIBUTOR"

CardioMag Imaging, Inc. press release (January 5, 2005)

http://www.cardiomag.com/about/news/CHINESE_DISTRIBUTOR_01-05-05.pdf

Cryocooler

HYPRES, Inc. (January 5, 2005)

HYPRES, Inc. has selected Lockheed Martin, Raytheon and Sunpower to develop competing designs for a rugged, compact cryocooler for an all-digital RF transceiver being developed as part of the US Department of Defense (DOD)'s Joint Tactical Radio Systems (JTRS) Cluster 1 program. Lockheed Martin and Raytheon have provided reliable cryocooler systems for a variety of DOD contracts, while Sunpower is well known for its innovative cryocoolers and heat engines for commercial and scientific markets. HYPRES will award a contract to one of the companies to continue development of the prototype cryocooler at the end of the design phase. The contract, valued at US \$1.493 million, should be completed within two years. When the prototype is successfully demonstrated, manufacturing at a low initial rate, followed by full-scale production, will occur.

Source:

"Lockheed, Raytheon And Sunpower Compete To Design HYPRES' Compact Tactical Cryocooler For Joint Tactical Radio System"

HYPRES, Inc. press release (January 5, 2005)

http://www.hypres.com/pages/new/bnew_files/CompactCryocooler2.pdf

Communication

Superconductor Technologies Inc. (January 5, 2005)

Superconductor Technologies Inc. (STI) has announced their preliminary revenue results for the fourth quarter and year ending December 31, 2004. STI expects net revenues of US \$4.1

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million for the fourth quarter, compared to \$7.3 million for the same quarter in the previous fiscal year. The company had expected revenues of between \$8.0 and \$10 million; the lower results reflect delays in a few large government and commercial purchase orders, which should occur in 2005. In view of these delays, STI expects net revenues of approximately \$23.1 million for 2004. The final year-end results should be announced in early March 2005.

Source:

“Superconductor Technologies Inc. Announces Preliminary Fourth Quarter and Full Year 2004 Revenues”

Superconductor Technologies Inc. press release (January 5, 2005)

<http://phx.corporate-ir.net/staging/phoenix.zhtml?c=70847&p=irol-newsArticle&ID=659056&highlight>

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