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

Power

American Superconductor Corporation (January 3, 2006)

American Superconductor Corporation (AMSC) has received a US $5.35 million follow-on contract from the U.S. Department of Defense Title III program for accelerating the scale-up of its manufacturing capability for 2G HTS wire. The Title III program was established by the Department of Defense and is being co-funded by the U.S. Department of Energy; its aim is to develop domestic 2G HTS wire manufacturing capability that can provide sufficient quantities of wire to meet near-term military and commercial applications. AMSC expects its expenses under this 2G HTS wire manufacturing scale-up program, which will run until June 30, 2008, to be approximately $13.6 million, of which $5.35 million will be covered by Title III cost-sharing funds. Under this program, AMSC expects to extend its current 2G HTS wire manufacturing operation to a full production facility capable of producing wire lengths of up to 1,000 meters and with a capacity of 300,000 meters per year by December 2007. The program also includes the establishment of essential manufacturing infrastructure, including standard operating procedures, quality control, preventive maintenance, failure analysis and statistical control.

Source:
"American Superconductor Awarded $5.35 Million Department of Defense Follow-on Contract for Acceleration of Manufacturing of Second Generation High Temperature Superconductor Wire"
American Superconductor Corporation (January 3, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=799635&highlight

Intermagnetics General Corporation (January 3, 2006)

Intermagnetics General Corporation has reported that its second-quarter normalized net income for the period ending November 27, 2005, increased by 25% to US $8.5 million, compared with $6.8 million for the same period in the previous fiscal year. The company's reported net income increased to $6.8 million, compared with $4.1 million for the same period in the previous fiscal year. Revenues increased by about 18% to $78.1 million, compared with $66.2 million for the same period in the previous fiscal year. Glenn H. Epstein, chairman and chief executive officer of Intermagnetics, commented that the company, "…remain(s) on target to meet our previously forecasted sales growth of greater than 15%, with earnings increasing more than 20% compared with normalized continuing operations last fiscal year."

Source:
"Intermagnetics Reports Solid Increases in Q2 Revenue, Net Income"
Intermagnetics General Corporation press release (January 3, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=88261&p=irol-newsArticle&ID=799977&highlight

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Intermagnetics General Corporation (January 4, 2006)

SuperPower has been awarded a US $10.7 million follow-on contract from the U.S. Department of Defense Title III program to partially cover R&D costs for 2G HTS wire development. The Title III program was established by the Department of Defense and is being co-funded by the U.S. Department of Energy; its aim is to develop domestic 2G HTS wire manufacturing capability that can provide sufficient quantities of wire to meet near-term military and commercial applications. SuperPower expects its R&D expenses in Phase 3 of the Title II program (which will continue until June 2008) to be approximately $10.7 million, of which $5.35 million will be covered by the Title III cost-share funds. As part of the Title III program, SuperPower expects to supply nearly 10,000 meters of 2G wire to Sumitomo Electric Industries in 2006; this wire will be used to fabricate a 2G HTS cable to be installed in the Albany cable project. Additional goals of Phase 3 include increasing the wire length to greater than 1,000 meters and improving the critical current to more than 500 A/cm-w.

Source:
“Intermagnetics’ SuperPower subsidiary awarded $10.7 million contract”
Intermagnetics General Corporation press release (January 4, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=88261&p=irol-newsArticle&ID=800133&highlight

American Superconductor Corporation (January 5, 2006)

American Superconductor Corporation (AMSC) has announced that its HTS SuperVAR® synchronous condenser has been selected by the editors of the IEEE Spectrum as one of the “Best Technology Projects of 2006.” The SuperVAR system is designed to stabilize grid voltages, increase service reliability, and help maximize transmission capacity by managing reactive power. As reported in the IEEE Spectrum, “… reactive-power-supply problems are among the chief culprits in an overall power-anomaly and -disturbance problem that costs the United States alone between US $119 billion and $188 billion a year in lost economic activity… Such staggering losses add up to 1.2% to 1.9% a year of the country's gross domestic product…” The SuperVAR system has several advantages over conventional synchronous condensers; the system experiences virtually no thermal stresses or losses in the field coils, and the device is capable of providing large amounts of reactive power. The SuperVAR is also cost effective and has a much smaller footprint than equally rated conventional machines.

The IEEE Spectrum is a prestigious and influential technology publication produced by the IEEE, the world’s largest professional association. The feature story on the SuperVAR system can be found online at http://www.spectrum.ieee.org/jan06/2604.

Source:
“IEEE Spectrum Selects American Superconductor's SuperVAR Synchronous Condenser as a Winning Product for 2006”
American Superconductor Corporation (January 5, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=800727&highlight

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American Superconductor Corporation (January 9, 2006)

American Superconductor Corporation (AMSC) has finalized a contract amendment with the United States Navy's Office of Naval Research (ONR). Under the terms of the amendment, the ONR has approved a US $10 million increase to AMSC's contract to design and build a 36.5 MW HTS propulsion motor for electric warships. AMSC expects a further contract modification for an additional $7 million – $10 million to be completed within a few months. The 36.5-MW motor is scheduled for delivery to the Navy's test facility in Philadelphia in September 2006. AMSC is developing the motor in partnership with Northrop Grumman Marine Systems and Northrop Grumman Ship Systems.

Source:

"American Superconductor Awarded $10 Million Contract Amendment by United States Navy Office of Naval Research"

American Superconductor Corporation (January 9, 2006)

http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=801777&highlight

American Superconductor Corporation (January 13, 2006)

American Superconductor Corporation (AMSC) and Northrop Grumman Corporation have been selected by the Naval Sea Systems Command (NAVASEA) to design a 40-MW HTS generator as a smaller, lighter, and quieter main power source for future surface combatants. Under the initial nine-month contract, a team led by Northrop Grumman will complete a concept design and explore different configurations for the HTS generator. The Navy has an option to exercise an additional 3-year contract (worth US $3.9 million) to continue trade studies that will help to evaluate differences from conventional generator designs in addition to validating the various characteristics of the 40-MW HTS generator. Carol Armstrong, deputy vice president for Northrop Grumman's Marine Systems business unit, commented, "As the U.S. Navy transitions to an all-electric surface ship, superconductivity will be a key enabling technology for achieving … power density goals."

Source:

"Northrop Grumman Team Receives Contract to Design Lighter, Quieter Power Generators for U.S. Navy Ships"

American Superconductor Corporation (January 13, 2006)

http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=803893&highlight

American Superconductor Corporation (January 17, 2006)

American Superconductor Corporation (AMSC) has received an order for two D-VAR ® voltage regulation systems from the Lake Bonney Wind Power Pty Ltd. for the Lake Bonney II wind project in South Australia. The two D-VAR systems will be installed in two phases and will provide the dynamic and steady state voltage support required to meet Australian grid interconnection requirements. Phase One of the wind project, to be energized in November – December 2006, will consist of 45 MW of wind generation and an associated 12 MVAR D-VAR solution. Phase Two, to be energized in April – May 2007, will add an additional 114 MW of wind

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generation and another 12 MVAR D-VAR solution. AMSC expects to ship the two D-VAR systems in June and December of 2006. Overall, this is the 12th wind farm worldwide to incorporate AMSC's advanced D-VAR dynamic voltage control technologies, bringing the total wind-generated electric power served by AMSC's D-VAR systems to more than 1000 MW.

BTM Consult Aps has predicted that the global wind energy growth rate for the next five years will be around 15-20%. Australia is presently a world leader in wind energy generation, with a forecasted growth rate of approximately 35%.

Source:
"Grid Interconnection Requirements to be Solved for Australian Wind Farm Utilizing American Superconductor's D-VAR(R) System"
American Superconductor Corporation (January 17, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=804583&highlight

American Superconductor Corporation (January 24, 2006)

American Superconductor Corporation (AMSC) has booked orders for the first 2,500 meters of 2G HTS wire from 18 customers in seven countries (U.S., China, Germany, Japan, Korea, New Zealand, and Switzerland). The first 1,000 meters were shipped to customers by December 31, 2005, at an average selling price of US $100/meter. The wire will be used by the various customers to make prototype power devices, including fault current limiters, cables, motors, and electromagnets. The remaining 1,500 meters of wire will be shipped during the present quarter. Furthermore, demand for over 14,000 meters of 2G wire over the next 12 months already exceeds AMSC's planned shipment of 10,000 meters during this period. Consequently, the company is attempting to accelerate the specification, purchase, commissioning, and qualification of additional full-scale manufacturing equipment to meet the anticipated growing demand. The company remains on track to be able to ship 2G wire at a rate of 300,000 meters per year by December 2007.

Source:
"American Superconductor Announces First Sales of Second Generation (2G) High Temperature Superconductor Wire"
American Superconductor Corporation (January 24, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=807519&highlight

Intermagnetics General Corporation (January 26, 2006)

Intermagnetics General Corporation has announced a three-for-two split of its common stock, to be payable on February 21, 2006. The split will be completed in the form of a 50% stock dividend; shareholders will receive one additional share of Intermagnetics' common stock for every two shares held as of February 6, 2006. As of December 27, 2005, Intermagnetics had approximately 28 million shares outstanding.

Source:
"Intermagnetics Declares 3-for-2 Stock Split"
Intermagnetics General Corporation press release (January 26, 2006)
http://phx.corporate-ir.net/phoenix.zhtml?c=88261&p=irol-newsArticle&ID=809229&highlight

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American Superconductor Corporation (January 30, 2006)

American Superconductor Corporation (AMSC) and the Tennessee Valley Authority (TVA) have announced that production has begun on two SuperVAR® dynamic synchronous condensers. The SuperVAR dynamic synchronous condensers will be used to stabilize grid voltages, increase service reliability, and maximize transmission capacity and are expected to be the world's first commercial HTS product to be utilized in an electric power grid. Each of the devices will be rated at 12 MVAR, which is 4 MVAR higher than the previous advanced prototype that was tested by TVA. This power rating was selected to provide a more powerful and broadly applicable grid solution. The first of the two devices will be shipped in late 2006, and the second will follow in early 2007. TVA also has an option to purchase three additional SuperVAR machines.

Source:

"World's First Commercial High Temperature Superconductor Power Grid Product Enters Manufacturing Phase at American Superconductor"

American Superconductor Corporation (January 30, 2006)

http://phx.corporate-ir.net/phoenix.zhtml?c=86422&p=irol-newsArticle_Print&ID=809798&highlight

(Akihiko Tsutai, Director, International Affairs Department, ISTEC)

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