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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**FORM 8-K**

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**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of  
The Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported):  
June 5, 2012**

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**American Superconductor Corporation**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction  
of incorporation)

**0-19672**  
(Commission  
File Number)

**04-2959321**  
(IRS Employer  
Identification No.)

**64 Jackson Road**  
**Devens, Massachusetts**  
(Address of principal executive offices)

**01434**  
(Zip Code)

**Registrant's telephone number, including area code (978) 842-3000**

**Not Applicable**  
(Former name or former address, if changed since last report.)

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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**Item 1.01. Entry into a Material Definitive Agreement**

On June 5, 2012 (the “Effective Date”), American Superconductor Corporation (the “Company”) and Hercules Technology Growth Capital, Inc. (the “Lender”) entered into a Loan and Security Agreement (the “Agreement”), providing the Company with a term loan in an aggregate principal amount of \$10,000,000, which was fully drawn on the Effective Date (the “Term Loan”). The Term Loan is to be used for general corporate purposes.

The principal balance of the Term Loan bears interest at a floating per annum rate equal to 11% plus the percentage, if any, by which the prime rate exceeds 3.75%. The Company will make interest-only payments on the Term Loan beginning July 1, 2012 and continuing through November 1, 2012, after which the Company will repay the aggregate principal outstanding balance of the Term Loan in 26 equal monthly installments of principal, plus accrued interest at the applicable rate. The Term Loan matures on December 1, 2014.

Amounts outstanding under the Agreement are secured by substantially all of the Company’s existing and future assets (excluding certain customary items, but including the Company’s intellectual property). In order to further secure all of the Company’s obligations to Lender under the Agreement, the Company’s wholly-owned subsidiary, ASC Devens LLC (“ASC”), will also be entering into a mortgage with respect to the property it has rights to located at 64 Jackson Road, Devens, Massachusetts 01434-4020. The Agreement requires the Company to maintain a balance of unrestricted cash or cash equivalents equal to the principal amount of the Term Loan outstanding at such time in accounts that are subject to a control agreement with Lender.

The Agreement also contains covenants that restrict the Company’s ability to, among other things, incur or assume certain debt, merge or consolidate, materially change the nature of its business, make certain investments, acquire or dispose of certain assets, make guaranties or grant liens on its assets, make certain loans, advances or investments, declare dividends or make distributions or enter into transactions with affiliates. The events of default under the Agreement include, but are not limited to, failure to pay amounts due, breaches of covenants, bankruptcy events, cross defaults under other material indebtedness and the occurrence of a material adverse effect and/or change in control. In the case of a continuing event of default, the Lender may, among other remedies, declare due all unpaid principal amounts outstanding and any accrued but unpaid interest and foreclose on all collateral granted to the Lender as security under the Agreement. Two of the Company’s subsidiaries, ASC and Superconductivity, Inc., signed joinder agreements to the Agreement, whereby they agreed to be bound by certain terms and conditions as borrowers under the Agreement.

In connection with the Agreement, the Company issued a warrant (the “Warrant”) to the Lender to purchase 139,276 shares of the Company’s common stock with an exercise price of \$3.59 per share, subject to price-based anti-dilution and other adjustments as set forth in the Warrant. The Warrant is immediately exercisable and expires on December 5, 2017. The Company issued the Warrant in reliance on the exemption from registration provided by Section 4(2) of the Securities Act of 1933.

**Item 2.02. Results of Operations and Financial Condition.**

On June 6, 2012, the Company announced its financial results for the fourth quarter and fiscal year ended March 31, 2012 (“fiscal 2011”). The full text of the press release issued in connection with the announcement is attached as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Item 2.02 of this Current Report on Form 8-K (including Exhibit 99.1) shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.

**Item 2.03. Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.**

The information set forth in Item 1.01 in connection with the Agreement is incorporated in this Item 2.03 by reference.

**Item 3.02. Unregistered Sales of Equity Securities.**

The information set forth in Item 1.01 in connection with the Warrant is incorporated in this Item 3.02 by reference.

**Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.**

On June 5, 2012, the Compensation Committee of the Company (or, in the case of the Chief Executive Officer, the Board of Directors), based on the established goals under the Company's executive incentive plan for fiscal 2011, approved the award of cash bonuses for Daniel P. McGahn, David A. Henry, Timothy D. Poor and Susan J. DiCecco (the "Executive Officers") as set forth in the table below under the heading "Non-Equity Incentive Plan Compensation." Other compensation for fiscal 2011 was previously reported by the Company in the Summary Compensation Table beginning on page 14 of the Company's Form S-1 filed with the Securities and Exchange Commission on April 13, 2012 (the "Form S-1"). As of the filing of the Form S-1, the fiscal 2011 cash bonuses for the Executive Officers had not been determined and, therefore, were omitted from the Summary Compensation Table included in the Form S-1. The total fiscal 2011 compensation for each Executive Officer reported in the Summary Compensation Table on page 14 of the Form S-1 has been recalculated to include the fiscal 2011 bonuses as follows:

**Summary Compensation Table**

The following table contains information with respect to the compensation for fiscal 2011 of our principal executive officer, our former principal executive officer, our principal financial officer, our other remaining two executive officers who were serving as executive officers on March 31, 2012 and two additional individuals who served as executive officers during part of fiscal 2011 for whom disclosure is required pursuant to SEC rules.

Name and Principal Position	Fiscal Year(1)	Salary		Stock Awards(2)	Option Awards(2)	Non-Equity Incentive Plan Compensation(3)	All Other Compensation(4)	Total
			Bonus					
Daniel P. McGahn <i>President and Chief Executive Officer</i>	2011	\$457,039	\$100,000(6)	\$ 615,000	\$ 563,706	\$ 590,208	\$ 9,234	\$2,335,187
	2010	\$330,000	—	—	—	\$ 4,976	\$ 9,304	\$ 344,280
	2009	\$281,288	—	\$1,118,990	\$2,545,559	\$ 161,520	\$ 8,955	\$4,116,312
Gregory J. Yurek <i>Former Chairman and Chief Executive Officer(5)</i>	2011	\$ 99,231	—	—	—	\$ 0	\$ 832,002	\$ 931,233
	2010	\$600,000	—	\$ 614,040	\$ 657,713	—	\$ 14,106	\$1,885,859
	2009	\$600,000	—	\$ 303,480	\$ 768,070	\$ 561,600	\$ 9,704	\$2,242,854
David A. Henry <i>Senior Vice President, Chief Financial Officer and Treasurer</i>	2011	\$306,288	—	\$ 116,500	\$ 130,616	\$ 190,332	\$ 7,552	\$ 751,288
	2010	\$295,000	—	\$ 263,160	\$ 274,047	—	\$ 7,039	\$ 839,246
	2009	\$280,000	—	\$ 128,979	\$ 322,589	\$ 208,992	\$ 6,741	\$ 947,301
Timothy D. Poor <i>Executive Vice President, Sales, Business Development Wind Segment</i>	2011	\$287,077	—	\$ 116,500	\$ 139,946	\$ 264,480	\$ 9,203	\$ 817,206
	2010	\$240,000	—	\$ 146,200	\$ 146,158	\$ 7,488	\$ 8,933	\$ 548,779
	2009	\$220,000	—	\$ 189,675	\$ 460,842	\$ 145,640	\$ 8,277	\$1,024,434
Susan J. DiCecco <i>Senior Vice President, Corporate Administration</i>	2011	\$241,558	—	\$ 83,880	\$ 93,297	\$ 154,880	\$ 8,908	\$ 582,523
	2010	\$225,000	—	\$ 157,896	\$ 164,428	\$ 44,190	\$ 8,149	\$ 599,663
	2009	\$192,333	—	\$ 250,600	\$ 185,868	\$ 99,521	\$ 7,284	\$ 735,606
Charles W. Stankiewicz <i>Former Executive Vice President, Operations and Grid Segment(7)</i>	2011	\$134,735	—	—	\$ 202,435	\$ 0	\$ 274,934	\$ 612,104
	2010	\$321,000	—	\$ 175,440	\$ 182,698	—	\$ 9,366	\$ 688,504
	2009	\$312,000	—	\$ 278,190	\$ 322,589	\$ 243,360	\$ 11,308	\$1,167,448
Angelo R. Santamaria <i>Former Senior Vice President, Global Manufacturing(8)</i>	2011	\$ 96,308	—	\$ 0	\$ 261,834	\$ 0	\$ 217,709	\$ 575,851
	2010	\$240,000	—	\$ 146,200	\$ 146,158	\$ 20,268	\$ 8,089	\$ 560,715
	2009	\$228,000	—	\$ 189,675	\$ 460,842	\$ 143,914	\$ 8,021	\$1,030,452

(1) Refers to the fiscal years ended March 31, 2012 (fiscal 2011), March 31, 2011 (fiscal 2010) and March 31, 2010 (fiscal 2009).

- (2) The amounts shown reflect the grant date or incremental fair value of awards granted or modified during the applicable fiscal year computed under the Black-Scholes valuation model in accordance with FASB ASC Topic 718. The weighted average assumptions used in the Black-Scholes valuation model for stock options granted during the years ended March 31, 2012, 2011, and 2010 are as follows:

	For the years ended March 31,		
	2012	2011	2010
Dividend yield	None	None	None
Expected volatility	70.0%	64.2%	68.9%
Risk-free interest rate	1.8%	2.2%	2.6%
Expected life (years)	5.9	5.8	5.6

- (3) The included amounts in this column reflect cash bonuses paid under our executive incentive plans for fiscal 2011, fiscal 2010 and fiscal 2009.  
(4) All Other Compensation is comprised of the following amounts:

Name	Fiscal Year	Life Insurance Premiums (1)	Defined Contributions for 401(k) Stock Match	Severance Payments	Other
Daniel P. McGahn	2011	\$ 1,942	\$ 7,292	\$ —	\$ —
	2010	1,954	7,350	—	—
	2009	1,958	6,997	—	—
Gregory J. Yurek (1)	2011	2,951	—	829,051(2)	—
	2010	8,106	6,000	—	—
	2009	6,935	2,769	—	—
David A. Henry	2011	1,941	5,611	—	—
	2010	1,945	5,094	—	—
	2009	1,905	4,836	—	—
Timothy D. Poor	2011	1,747	7,456	—	—
Susan J. DiCecco	2011	1,707	7,201	—	—
	2010	1,683	6,466	—	—
	2009	1,545	5,735	—	—
Charles W. Stankiewicz	2011	809	5,473	266,652(3)	2,000(5)
	2010	1,954	7,412	—	—
	2009	1,958	9,350	—	—
Angelo R. Santamaria	2011	732	3,196	213,781(4)	—

- (1) The life insurance premium amounts in the table above reflect premiums paid by us for life insurance for which the named executive is the named beneficiary. The amounts disclosed with respect to Dr. Yurek include \$2,466 of premiums paid by us for a term life insurance policy for which his wife is the beneficiary.  
(2) Represents the aggregate severance payments and benefits received by Dr. Yurek in the fiscal 2011, consisting of \$818,001 in cash, and \$11,050 in continued health care benefits.  
(3) Represents the aggregate severance payments and benefits received by Mr. Stankiewicz in the fiscal 2011, consisting of \$257,564 in cash, and \$9,088 in continued health care benefits.  
(4) Represents the aggregate severance payments and benefits received by Mr. Santamaria in the fiscal 2011, consisting of \$201,154 in cash and \$5,277 in continued health care benefits and \$7,350 in outplacement services.  
(5) Represents payments made to Mr. Stankiewicz for serving as a member of the board of directors of one of our Company's minority investments subsequent to August 23, 2011.  
(6) Dr. Yurek resigned his employment with the Company effective June 1, 2011.  
(7) Represents a cash promotion bonus received by Mr. McGahn in connection with Mr. McGahn's promotion to chief executive officer, effective June 1, 2011.  
(8) Mr. Stankiewicz mutually agreed to end his employment with the Company, effective August 23, 2011.  
(9) Mr. Santamaria mutually agreed to end his employment with the Company, effective August 12, 2011.

**Item 9.01. Financial Statements and Exhibits**

d) Exhibits:

<u>Exhibit No.</u>	<u>Description</u>
10.1	Loan and Security Agreement, by and between American Superconductor Corporation and Hercules Technology Growth Capital, Inc., dated as of June 5, 2012.
10.2	Warrant Agreement, dated as of June 5, 2012, between American Superconductor Corporation and Hercules Technology Growth Capital, Inc.
99.1	Press release issued by AMSC on June 6, 2012 (deemed “furnished,” not “filed”).

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

AMERICAN SUPERCONDUCTOR CORPORATION

Date: June 6, 2012

By: /s/ David A. Henry  
David A. Henry  
*Senior Vice President and Chief Financial Officer*

EXHIBIT INDEX

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## LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of June 5, 2012 and is entered into by and between AMERICAN SUPERCONDUCTOR CORPORATION, a Delaware corporation (“Borrower”), and HERCULES TECHNOLOGY GROWTH CAPITAL, INC., a Maryland corporation (“Lender”).

## RECITALS

- A. Borrower has requested Lender to make available to Borrower a loan in an aggregate principal amount of \$10,000,000 (the “Term Loan”);
- B. Lender is willing to make the Term Loan on the terms and conditions set forth in this Agreement.

## AGREEMENT

NOW, THEREFORE, Borrower and Lender agree as follows:

**SECTION 1. DEFINITIONS AND RULES OF CONSTRUCTION**

1.1 Unless otherwise defined herein, the following capitalized terms shall have the following meanings:

“Account Control Agreement(s)” means any agreement entered into by and among the Lender, Borrower and a third party bank or other institution (including a securities intermediary) in which Borrower maintains a Deposit Account or an account holding Investment Property and which grants Lender a perfected first priority security interest in the subject account or accounts.

“ACH Authorization” means the ACH Debit Authorization Agreement in substantially the form of Exhibit H.

“Advance” means the Term Advance.

“Advance Date” means the funding date of the Advance.

“Advance Request” means a request for the Advance in substantially the form of Exhibit A.

“Agreement” means this Loan and Security Agreement, as amended from time to time.

“Assignee” has the meaning given to it in Section 10.13.

“Borrower Products” means all products, software, service offerings, technical data or technology currently being designed, manufactured or sold by Borrower or which Borrower intends to sell, license, or distribute in the future including any products or service offerings under development, collectively, together with all products, software, service offerings, technical data or technology that have been sold, licensed or distributed by Borrower since its incorporation.

“Business Day” means any day other than Saturday, Sunday and any other day on which banking institutions in the States of California and Massachusetts are closed for business.

“Cash” means all cash and liquid funds including any customary cash equivalents.

“Change in Control” means any reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Borrower, sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower in which the holders of Borrower’s outstanding shares immediately before consummation of such transaction or series of related transactions do not, immediately after



consummation of such transaction or series of related transactions, retain shares representing more than fifty percent (50%) of the voting power of the surviving entity of such transaction or series of related transactions (or the parent of such surviving entity if such surviving entity is wholly owned by such parent), in each case without regard to whether Borrower or Subsidiary is the surviving entity.

“Claims” has the meaning given to it in Section 10.10.

“Closing Date” means the date of this Agreement.

“Code” means the Internal Revenue Code of 1986, as amended.

“Collateral” means the property described in Section 3.

“Commitment Fee” means \$50,000, which fee Borrower paid to Lender prior to the Closing Date, and which is fully earned on the Closing Date.

“Confidential Information” has the meaning given to it in Section 10.12.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term “Contingent Obligation” shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

“Copyright License” means any written agreement granting any right to use any Copyright or Copyright registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Copyrights” means all copyrights, whether registered or unregistered, held pursuant to the laws of the United States, any State thereof, or of any other country.

“Deposit Accounts” means any “deposit accounts,” as such term is defined in the UCC, and includes any checking account, savings account, or certificate of deposit.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

“Event of Default” has the meaning given to it in Section 8.

“Facility Charge” means one percent (1.0%) of the sum of the Maximum Term Loan Amount.

“Financial Statements” has the meaning given to it in Section 6.1.

“GAAP” means generally accepted accounting principles in the United States of America, as in effect from time to time.

“Heights Notes” shall have the meaning assigned to such term in Section 6.11.

“Indebtedness” means indebtedness of any kind, including (a) all indebtedness for borrowed money or the deferred purchase price of property or services (excluding trade credit entered into in the ordinary course of business), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

“Insolvency Proceeding” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other similar relief.

“Intellectual Property” means all of Borrower’s Copyrights; Trademarks; Patents; Licenses; trade secrets and inventions; mask works; Borrower’s applications therefor and reissues, extensions, or renewals thereof; and Borrower’s goodwill associated with any of the foregoing, together with Borrower’s rights to sue for past, present and future infringement of Intellectual Property and the goodwill associated therewith.

“Interest-Only Period” begins on the date of this Agreement and ends on October 31, 2012.

“Investment” means any beneficial ownership (including stock, partnership or limited liability company interests) of or in any Person, or any loan, advance or capital contribution to any Person or the acquisition of all, or substantially all, of the assets of another Person.

“Investment Policy” means that certain Investment Policy of Borrower, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Lender.

“Joinder Agreements” means for each domestic Subsidiary as required hereunder, a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit G.

“Lender” has the meaning given to it in the preamble to this Agreement.

“License” means any Copyright License, Patent License, Trademark License or other license of rights or interests.

“Lien” means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, and any lease in the nature of a security interest.

“Loan” means the Advance made under this Agreement.

“Loan Documents” means this Agreement, the Note, the ACH Authorization, the Account Control Agreements, the Joinder Agreements, all UCC Financing Statements, the Warrant and any other documents executed in connection with the Secured Obligations or the transactions contemplated hereby, as the same may from time to time be amended, modified, supplemented or restated.

“Material Adverse Effect” means a material adverse effect upon: (i) the business, operations, properties, assets or condition (financial or otherwise) of Borrower; or (ii) the ability of Borrower to perform the Secured Obligations in accordance with the terms of the Loan Documents, or the ability of Lender to enforce any of its rights or remedies with respect to the Secured Obligations; or (iii) the Collateral or Lender’s Liens on the Collateral or the priority of such Liens.

“Maximum Rate” shall have the meaning assigned to such term in Section 2.2.

“Maximum Term Loan Amount” means \$10,000,000.

“Note” means the Term Note.

“Other Accounts” shall have the meaning assigned to such term in Section 6.19(b).

“Patent License” means any written agreement granting any right with respect to any invention on which a Patent is in existence or a Patent application is pending, in which agreement Borrower now holds or hereafter acquires any interest.

“Patents” means all letters patent of, or rights corresponding thereto, in the United States or in any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto, in the United States or any other country.

“Permitted Indebtedness” means: (i) Indebtedness of Borrower in favor of Lender arising under this Agreement or any other Loan Document; (ii) Indebtedness existing on the Closing Date which is disclosed in Schedule 1A; (iii) Indebtedness of up to \$1,000,000 outstanding at any time secured by a lien described in clause (vii) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed the cost of the Equipment financed with such Indebtedness; (iv) Indebtedness to trade creditors incurred in the ordinary course of business, including Indebtedness incurred in the ordinary course of business with corporate credit cards and through adverse purchase agreements; (v) Indebtedness consisting of the financing of insurance premiums or take-or-pay obligations contained in supply arrangements in each case, incurred in the ordinary course of business, (vi) customer deposits and advance payments received in the ordinary course of business from customers for goods purchased in the ordinary course of business; (vii) Indebtedness that also constitutes a Permitted Investment; (viii) Subordinated Indebtedness; (ix) reimbursement obligations in connection with letters of credit or surety bonds that are secured by cash or cash equivalents (in an aggregate amount not to exceed \$50,000,000 at any time) and issued on behalf of Borrower in the ordinary course of its business, (x) Indebtedness incurred in the ordinary course of business in connection with foreign exchange, interest rate, and currency hedging arrangements, (xi) other Indebtedness in an amount not to exceed \$1,000,000 at any time outstanding, (xii) extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose materially more burdensome terms upon Borrower or its Subsidiary, as the case may be; (xiii) Indebtedness secured by Permitted Liens, and (xiv) intercompany Indebtedness as long as the Subsidiary obligor under such Indebtedness has executed a Joinder Agreement.

“Permitted Investment” means: (i) Investments existing on the Closing Date which are disclosed in Schedule 1B; (ii) (a) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof, (b) Investments, including investments in commercial paper, made pursuant to Borrower’s Investment Policy, (c) certificates of deposit issued by any bank with assets of at least \$500,000,000 maturing no more than one year from the date of investment therein, and (d) money market accounts; (iii) repurchases of stock from former employees, directors, or consultants of Borrower under the terms of applicable repurchase agreements at the original issuance price of such securities in an aggregate amount not to exceed \$500,000 in any fiscal year, provided that no Event of Default has occurred, is continuing or would exist after giving effect to the repurchases; (iv) Investments accepted in connection with Permitted Transfers; (v) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower’s business; (vi) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not affiliates, in the ordinary course of business, provided that this subparagraph (vi) shall not apply to Investments of Borrower in any Subsidiary; (vii) Investments consisting of loans not involving the net transfer on a substantially contemporaneous basis of cash proceeds to employees, officers or directors relating to the purchase of capital stock of Borrower pursuant to employee stock purchase plans or other similar agreements approved by Borrower’s Board of Directors; (viii) Investments consisting of travel advances in the ordinary course of business; (ix) Investments in newly-formed Subsidiaries organized in the United States, provided that such Subsidiaries enter into a Joinder Agreement promptly after their formation by Borrower and execute such other documents as shall be reasonably requested by Lender; (x) Investments consisting of capital expenditures; (xi) Investments in subsidiaries organized outside of the United States, provided that such Investments in cash do not exceed \$15,000,000 in any fiscal year, (xii) (a) Investments in joint ventures or strategic alliances as

may be approved by Borrower's Board of Directors, including the licensing of technology, the development of technology or the providing of technical support permitted hereunder, and (b) additional Investments in cash provided that aggregate Investments under this clause (xii) do not exceed in the aggregate in any fiscal year exceed \$15,000,000.

"Permitted Liens" means any and all of the following: (i) Liens in favor of Lender; (ii) Liens existing on the Closing Date which are disclosed in Schedule 1C; (iii) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP; (iv) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of Borrower's business and imposed without action of such parties; provided, that the payment thereof is not yet required; (v) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder; (vi) the following deposits, to the extent made in the ordinary course of business: deposits under worker's compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than liens imposed pursuant to Section 430(k) of the Code or Section 303(k) of ERISA or a violation of Section 436 of the Code or Section 206(g) of ERISA or environmental liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds; (vii) Liens on Equipment or software or other intellectual property constituting purchase money liens and liens in connection with capital leases securing Indebtedness permitted in clause (iii) of "Permitted Indebtedness"; (viii) Liens incurred in connection with Subordinated Indebtedness; (ix) leasehold interests in leases or subleases and licenses granted in the ordinary course of business and not interfering in any material respect with the business of the licensor; (x) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (xi) Liens on insurance proceeds securing the payment of financed insurance premiums that are promptly paid on or before the date they become due (provided that such Liens extend only to such insurance proceeds and not to any other property or assets); (xii) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xiii) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or marketability of the related property; (xiv) Liens on cash or cash equivalents (that do not exceed \$50,000,000 in the aggregate at any time) securing obligations permitted under clause (ix) of the definition of Permitted Indebtedness; (xv) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (i) through (xi) above; provided, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase; and (xvi) licenses permitted hereunder.

"Permitted Transfers" means (i) sales of Inventory in the normal course of business, (ii) non-exclusive licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and exclusive licenses approved by Borrower's board of directors, or (iii) dispositions of worn-out, obsolete or surplus Equipment at fair market value in the ordinary course of business, and (iv) other Transfers of assets having a fair market value of not more than \$25,000,000 in the aggregate in any fiscal year, provided that the Borrower shall receive the proceeds of any such Transfer and the Borrower's board of directors shall have determined that such Transfer is in Borrower's best interests and is for good and valuable consideration.

"Person" means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, other entity or government.

"Prepayment Charge" shall have the meaning assigned to such term in Section 2.4.

"Receivables" means (i) all of Borrower's Accounts, Instruments, Documents, Chattel Paper, Supporting Obligations, letters of credit, proceeds of any letter of credit, and Letter of Credit Rights, and (ii) all customer lists, software, and business records related thereto.

“Secured Obligations” means Borrower’s obligations under this Agreement and any Loan Document (excluding the Warrant, any other warrant, or any investment by Lender in connection with a subsequent financing or any other equity investment by Lender in Borrower), including any obligation to pay any amount now owing or later arising.

“Securities Purchase Agreement” has the meaning given to such term in Section 6.11.

“Subordinated Indebtedness” means Indebtedness subordinated to the Secured Obligations in amounts and on terms and conditions satisfactory to Lender in its reasonable discretion.

“Subsidiary” means an entity, whether corporate, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls more than 50% of the outstanding voting securities, including each entity listed on Schedule 1 hereto.

“Term Advance” means the term loan made under this Agreement.

“Term Loan Interest Rate” means for any day a per annum rate of interest equal to 11% plus the percentage, if any, by which the “prime rate” as reported in The Wall Street Journal for such day of calculation exceeds 3.75%.

“Term Loan Maturity Date” means December 1, 2014.

“Term Note” means a Promissory Note in substantially the form of Exhibit B.

“Trademark License” means any written agreement granting any right to use any Trademark or Trademark registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Trademarks” means all trademarks (registered, common law or otherwise) and any applications in connection therewith, including registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof.

“UCC” means the Uniform Commercial Code as the same is, from time to time, in effect in the State of California; provided, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection or priority of, or remedies with respect to, Lender’s Lien on any Collateral is governed by the Uniform Commercial Code as the same is, from time to time, in effect in a jurisdiction other than the State of California, then the term “UCC” shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority or remedies and for purposes of definitions related to such provisions.

“Warrant” means the warrant entered into in connection with the Loan, dated as of the date hereof, as may be amended, restated or modified from time to time.

Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “Subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, Subsection, Exhibit, Annex, or Schedule in or to this Agreement. Unless otherwise specifically provided herein, any accounting term used in this Agreement or the other Loan Documents shall have the meaning customarily given such term in accordance with GAAP, and all financial computations hereunder shall be computed in accordance with GAAP, consistently applied; provided, that, if at any time any change in GAAP would affect the computation of any financial ratio or requirement set forth in the Loan Documents, and either Borrower or Lender shall so request, the Borrower and Lender shall negotiate in good faith to amend such requirement to preserve the original intent thereof in light of such change in GAAP. Unless otherwise defined herein or in the other Loan Documents, terms that are used herein or in the other Loan Documents and defined in the UCC shall have the meanings given to them in the UCC.

## SECTION 2. THE LOAN

### 2.1 Term Loan.

(a) Advances. Subject to the terms and conditions of this Agreement, Lender will make, and Borrower agrees to draw, a Term Advance of \$10,000,000 on the Closing Date.

(b) Advance Request. To obtain the Term Advance, Borrower shall complete, sign and deliver an Advance Request and Term Note to Lender on the Closing Date. Lender shall fund the Term Advance in the manner requested by the Advance Request provided that each of the conditions precedent to such Term Advance is satisfied as of the requested Advance Date.

(c) Interest. The principal balance of the Term Advance shall bear interest thereon from such Advance Date at the Term Loan Interest Rate based on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed. The Term Loan Interest Rate will change on the date the Prime Rate changes from time to time, to the extent applicable.

(d) Payment. Borrower will make interest-only payments on the Term Advance, beginning July 1, 2012, and continuing through the expiration of the Interest-Only Period. Borrower shall repay the aggregate principal balance that is outstanding upon expiration of the Interest-Only Period in 26 equal monthly installments of principal, plus accrued interest (subject to any changes in the Term Loan Interest Rate pursuant to the terms hereof), beginning the first Business Day of the month after expiration of the Interest-Only Period, and continuing on the first Business Day of each month thereafter. The entire Term Loan principal balance and all accrued but unpaid interest hereunder, shall be due and payable on Term Loan Maturity Date. Borrower shall make all payments under this Agreement without setoff, recoupment or deduction and regardless of any counterclaim or defense. Lender will initiate debit entries to Borrower's account as authorized on the ACH Authorization on each payment date of all periodic obligations payable to Lender in respect of the Term Advance. Any interest not paid when due shall be added to principal and thereafter bear interest at the Term Loan Interest Rate, subject to increase, if applicable, pursuant to Section 2.3.

2.2 Maximum Interest. Notwithstanding any provision in this Agreement, the Notes, or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (which under the laws of the State of California shall be deemed to be the laws relating to permissible rates of interest on commercial loans) (the "Maximum Rate"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to Lender an amount of interest in excess of the amount that would have been payable if all of the Secured Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be applied as follows: first, to the payment of principal outstanding on the Notes; second, after all principal is repaid, to the payment of Lender's accrued interest, costs, expenses, professional fees and any other Secured Obligations; and third, after all Secured Obligations are repaid, the excess (if any) shall be refunded to Borrower.

2.3 Default Interest. In the event any payment is not paid on the scheduled payment date at no fault of the Lender, an amount equal to five percent (5%) of the past due amount shall be payable on demand. In addition, upon the occurrence and during the continuation of an Event of Default hereunder, all Secured Obligations, including principal, interest, compounded interest, and professional fees, shall, at Lender's election, bear interest at a rate per annum equal to the the Term Loan Interest Rate plus five percent (5%) per annum.

2.4 Prepayment. At its option upon at least 2 Business Days prior notice to Lender, Borrower may prepay all or any part of the outstanding Advance by paying the principal amount of the proposed prepayment, all accrued and unpaid interest thereon, together with a prepayment charge equal to 3.0% of the amount being prepaid if such Advance amounts are prepaid in any of the first twelve (12) months following the Closing Date, (each, a "Prepayment Charge"). Borrower agrees that the Prepayment Charge is a

reasonable calculation of Lender's lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Advance. Borrower shall prepay the outstanding amount of all principal and accrued but unpaid interest through the prepayment date and the Prepayment Charge upon a Change in Control.

2.5 End of Term Charge. On the earliest to occur of (i) the Term Loan Maturity Date, (ii) the date that Borrower prepays the outstanding Secured Obligations, or (iii) the date that the Secured Obligations become due and payable, Borrower shall pay Lender a charge of \$500,000. Notwithstanding the required payment date of such charge, it shall be deemed earned by Lender as of the Closing Date.

### **SECTION 3. SECURITY INTEREST**

3.1 As security for the prompt, full and complete payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower grants to Lender a security interest in all of Borrower's right, title, and interest in and to the following personal property whether now owned or hereafter acquired, including the following (collectively, the "Collateral"): (a) Accounts and Receivables; (b) Equipment; (c) Fixtures; (d) General Intangibles; (e) Inventory; (f) Investment Property; (g) Deposit Accounts; (h) Cash; (i) Goods; and other tangible and intangible personal property of Borrower whether now or hereafter owned or existing, leased, consigned by or to, or acquired by, Borrower and wherever located; and, to the extent not otherwise included, all Proceeds of each of the foregoing and all accessions to, substitutions and replacements for, and rents, profits and products of each of the foregoing. Notwithstanding the foregoing, the Collateral does not include (i) more than 65% of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower of any foreign Subsidiary which shares entitle the holder thereof to vote for directors or any other matter, and (ii) nonassignable licenses or contracts, which by their terms require the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, Sections 9406 and 9408 of the UCC).

3.2 Upon payment in full in cash of the Secured Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement), Lender's liens on any of the Collateral shall be automatically released and all rights in the Collateral shall revert to Borrower and Lender shall, at Borrower's sole cost and expense, promptly take such actions to evidence such release as may be reasonably requested by Borrower or its designee.

### **SECTION 4. CONDITIONS PRECEDENT TO LOAN**

The obligations of Lender to make the Loan hereunder are subject to the satisfaction by Borrower of the following conditions:

4.1 Initial Advance. On or prior to the Closing Date, Borrower shall have delivered to Lender the following:

(a) executed originals of the Loan Documents, Account Control Agreements, a legal opinion of Borrower's counsel, and all other documents and instruments reasonably required by Lender to effectuate the transactions contemplated hereby or to create and perfect the Liens of Lender with respect to all Collateral, in all cases in form and substance reasonably acceptable to Lender;

(b) certified copy of resolutions of Borrower's board of directors evidencing approval of (i) the Loan and other transactions evidenced by the Loan Documents; and (ii) the Warrant and transactions evidenced thereby;

(c) certified copies of the Certificate of Incorporation and the Bylaws, as amended through the Closing Date, of Borrower;

(d) a certificate of good standing for Borrower from its state of incorporation and similar certificates from all other jurisdictions in which it does business and where the failure to be qualified would have a Material Adverse Effect;

(e) payment of the Commitment Fee (which was already paid prior to the Closing Date), the Facility Charge and reimbursement of Lender's current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance; and

(f) such other documents as Lender may reasonably request.

4.2 Advance Date. On the Advance Date:

(a) Lender shall have received (i) an Advance Request and a Note for the relevant Advance, each duly executed by Borrower's Chief Executive Officer or Chief Financial Officer, and (ii) any other documents Lender may reasonably request.

(b) The representations and warranties set forth in this Agreement shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date.

(c) Borrower shall be in compliance with all the terms and provisions set forth herein and in each other Loan Document on its part to be observed or performed, and at the time of and immediately after such Advance no Event of Default shall have occurred and be continuing.

(d) Each Advance Request shall be deemed to constitute a representation and warranty by Borrower on the relevant Advance Date as to the matters specified in paragraphs (b) and (c) of this Section 4.2 and as to the matters set forth in the Advance Request.

4.3 No Default. As of the Closing Date and each Advance Date, (i) no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default and (ii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing.

## **SECTION 5. REPRESENTATIONS AND WARRANTIES OF BORROWER**

Borrower represents and warrants that:

5.1 Corporate Status. Borrower is a corporation duly organized, legally existing and in good standing under the laws of the State of Delaware, and is duly qualified as a foreign corporation in all jurisdictions in which the nature of its business or location of its properties require such qualifications except where the failure to be qualified would not reasonably be expected to have a Material Adverse Effect. Borrower's present name, former names (if any), locations, place of formation, tax identification number, organizational identification number and other information are correctly set forth in Exhibit C, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Lender after the Closing Date.

5.2 Collateral. Borrower owns its property, free of all Liens, except for Permitted Liens. Borrower has the power and authority to grant to Lender a Lien in the Collateral as security for the Secured Obligations.

5.3 Consents. Borrower's execution, delivery and performance of the Note, this Agreement and all other Loan Documents, and Borrower's execution of the Warrant, (i) have been duly authorized by all necessary corporate action of Borrower, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens and the Liens created by this Agreement and the other Loan



Documents, (iii) do not violate any provisions of Borrower's Certificate of Incorporation (as applicable), bylaws, or any material law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject and (iv) except as described on Schedule 5.3, do not violate any contract or agreement or require the consent or approval of any other Person which has not already been obtained. The individual or individuals executing the Loan Documents and the Warrant are duly authorized to do so.

5.4 Material Adverse Effect. As of the Closing Date, no event (other than any event disclosed in the Schedules hereto) that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing, and Borrower is not aware of any event (other than any event disclosed in the Schedules hereto) likely to occur that is reasonably expected to result in a Material Adverse Effect.

5.5 Actions Before Governmental Authorities. Except as described on Schedule 5.5, there are no actions, suits or proceedings at law or in equity or by or before any governmental authority now pending or, to the knowledge of Borrower, threatened against or affecting Borrower or its property.

5.6 Laws. As of the Closing Date, Borrower is not in violation of any law, rule or regulation, or in default with respect to any judgment, writ, injunction or decree of any governmental authority, where such violation or default is reasonably expected to result in a Material Adverse Effect. Other than as disclosed in the Schedules hereto, Borrower is not in default in any manner under any provision of any agreement or instrument evidencing indebtedness, or any other material agreement to which it is a party or by which it is bound, where such default is reasonably expected to result in a Material Adverse Effect.

5.7 Information Correct and Current. No information, report, Advance Request, financial statement, exhibit or schedule furnished, by or on behalf of Borrower to Lender in connection with any Loan Document or included therein or delivered pursuant thereto contained, when taken as a whole, contains or will contain any material misstatement of fact or omitted, omits or will omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were, are or will be made, not misleading at the time such statement was made or deemed made. Additionally, any and all financial or business projections provided by Borrower to Lender shall be (i) provided in good faith and based on the most current data and information available to Borrower, and (ii) the most current of such projections provided to Borrower's Board of Directors; provided, however, that Lender recognizes that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results.

5.8 Tax Matters. Except as described on Schedule 5.8, (a) Borrower has filed all material federal, state and local tax returns that it is required to file, (b) Borrower has duly paid or fully reserved for all taxes (other than de minimis amounts) or installments thereof (including any interest or penalties) as and when due, which have or may become due pursuant to such returns, and (c) Borrower has paid or fully reserved for any tax assessment received by Borrower for the three (3) years preceding the Closing Date, if any (including any taxes being contested in good faith and by appropriate proceedings).

5.9 Intellectual Property Claims. Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property. Except as described on Schedule 5.9, (i) each of the material Copyrights, Trademarks and Patents (excluding any applications thereof) is valid and enforceable, (ii) no material part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and (iii) no claim has been made to Borrower that any material part of the Intellectual Property violates the rights of any third party. Exhibit D is a true, correct and complete list of each of Borrower's Patents, registered Trademarks, registered Copyrights, and material agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap or "off the shelf" software licenses), together with application or registration numbers, as applicable, owned by Borrower or any Subsidiary, in each case as of the Closing Date. Borrower is not in material breach of, nor has Borrower failed to perform any material obligations under, any of the material contracts, licenses or agreements described in the immediately preceding sentence and, to Borrower's knowledge, no third party to any such contract, license or agreement is in material breach thereof or has failed to perform any material obligations thereunder.

5.10 Intellectual Property. Except as described on Schedule 5.10, Borrower has, or in the case of any proposed business, will have, all material rights with respect to Intellectual Property necessary in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower. Without limiting the generality of the foregoing, and in the case of Licenses, except for restrictions that are unenforceable under Division 9 of the UCC and for "off the shelf" software licenses, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property without condition, restriction or payment of any kind (other than license payments in the ordinary course of business) to any third party, and Borrower owns or has the right to use, pursuant to valid licenses, all software development tools, library functions, compilers and all other third-party software and other items that are used in the design, development, promotion, sale, license, manufacture, import, export, use or distribution of Borrower Products.

5.11 Borrower Products. Except as described on Schedule 5.11, no Intellectual Property owned by Borrower or Borrower Product has been or is subject to any actual or, to the knowledge of Borrower, threatened litigation, proceeding (including any proceeding in the United States Patent and Trademark Office or any corresponding foreign office or agency) or outstanding decree, order, judgment, settlement agreement or stipulation that restricts Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof in a way that could reasonably be expected to have a material adverse effect on Borrower's business. There is no decree, order, judgment, agreement, stipulation, arbitral award or other provision entered into in connection with any litigation or proceeding that obligates Borrower to grant licenses or ownership interest in any future Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. Borrower has not received any written notice or claim, or, to the knowledge of Borrower, oral notice or claim, challenging or questioning Borrower's ownership in any Intellectual Property (or written notice of any claim challenging or questioning the ownership in any licensed Intellectual Property of the owner thereof) or suggesting that any third party has any claim of legal or beneficial ownership with respect thereto that could reasonably be expected to have a material adverse effect on Borrower's business nor, to Borrower's knowledge, is there a reasonable basis for any such claim. To Borrower's knowledge, neither Borrower's use of its Intellectual Property nor the production and sale of Borrower Products materially infringes the Intellectual Property or other rights of others.

5.12 Financial Accounts. Exhibit E, as may be updated by Borrower in a written notice provided to Lender after the Closing Date, is a true, correct and complete list of (a) all banks and other financial institutions at which Borrower or any domestic Subsidiary maintains Deposit Accounts and (b) all institutions at which Borrower or any domestic Subsidiary maintains an account holding Investment Property, and such exhibit correctly identifies the name, address and telephone number of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor.

5.13 Employee Loans. Borrower has no outstanding loans to any employee, officer or director of Borrower nor has Borrower guaranteed the payment of any loan made to an employee, officer or director of Borrower by a third party.

5.14 Subsidiaries. Borrower does not own any stock, partnership interest or other securities of any Person, except for Permitted Investments. The value of the assets held by any single domestic Subsidiary of Borrower (other than Superconductivity, Inc. and ASC Devens LLC) does not exceed Fifty Thousand Dollars (\$50,000).

## **SECTION 6. COVENANTS OF BORROWER**

Borrower agrees as follows:

6.1 Financial Reports. Borrower shall furnish to Lender the financial statements and reports listed hereinafter (the "Financial Statements"):

(a) as soon as practicable (and in any event within 30 days) after the end of each month, unaudited interim and year-to-date financial statements as of the end of such month (prepared on a

consolidated basis, if applicable), including balance sheet and related statement of income, all certified by Borrower's Chief Executive Officer or Chief Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, (ii) that they are subject to normal year end adjustments, and (iii) they do not contain certain non-cash items that are customarily included in quarterly and annual financial statements;

(b) as soon as practicable (and in any event within 45 days) after the end of each calendar quarter, unaudited interim and year-to-date financial statements as of the end of such calendar quarter (prepared on a consolidated basis, if applicable), including balance sheet and related statements of income and cash flows certified by Borrower's Chief Executive Officer or Chief Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, and (ii) that they are subject to normal year end adjustments; as soon as practicable (and in any event within one hundred fifty (150) days) after the end of each fiscal year, unqualified (other than with respect to internal controls) audited financial statements as of the end of such year (prepared on a consolidated basis, if applicable), including balance sheet and related statements of income and cash flows, and setting forth in comparative form the corresponding figures for the preceding fiscal year, certified by a firm of independent certified public accountants selected by Borrower and reasonably acceptable to Lender, accompanied by any management report from such accountants;

(c) as soon as practicable (and in any event within 30 days) after the end of each month, a Compliance Certificate in the form of Exhibit F;

(d) [Reserved];

(e) promptly after the filing thereof, copies of any material regular, periodic and special reports or registration statements that Borrower files with the Securities and Exchange Commission or any governmental authority that may be substituted therefor, or any national securities exchange; it being understood that posting of a link on Borrower's website on the Internet to such annual, regular, periodic and special reports and registration statements shall satisfy the delivery requirements under this Section 6, other than Section 6.1(a); and

(f) financial and business projections promptly following their approval by Borrower's Board of Directors, as well as budgets, operating plans and other financial information reasonably requested by Lender.

Borrower shall not make any material change in its (a) accounting policies or reporting practices, except as required by GAAP or (b) fiscal years or fiscal quarters. The fiscal year of Borrower shall end on March 31.

The executed Compliance Certificate may be sent via facsimile to Lender at (650) 473-9194 or via e-mail to [bpritchard@herculestech.com](mailto:bpritchard@herculestech.com). All Financial Statements required to be delivered pursuant to clauses (a), (b) and (c) shall be sent via e-mail to [financialstatements@herculestech.com](mailto:financialstatements@herculestech.com) with a copy to [bpritchard@herculestech.com](mailto:bpritchard@herculestech.com) provided, that if e-mail is not available or sending such Financial Statements via e-mail is not possible, they shall be sent via facsimile to Lender at: (866) 468-8916, attention Chief Credit Officer.

6.2 Management Rights. Borrower shall permit any representative that Lender authorizes, including its attorneys and accountants, to inspect the Collateral and examine and make copies and abstracts of the books of account and records of Borrower at reasonable times and upon reasonable notice during normal business hours; provided that such inspections shall be conducted no more often than 2 times per year unless an Event of Default has occurred and is continuing. In addition, any such representative shall have the right to meet with management and officers of Borrower to discuss such books of account and records. In addition, Lender shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrower concerning significant business issues affecting Borrower. Such consultations shall not unreasonably interfere with Borrower's business operations. The parties intend that the rights granted Lender shall constitute "management rights" within the meaning of 29 C.F.R Section 2510.3-101(d)(3) (ii), but that any advice, recommendations or participation by Lender with respect to any business issues shall not be deemed to give Lender, nor be deemed an exercise by Lender of, control over Borrower's management or policies.

6.3 Further Assurances. Borrower shall from time to time, upon the reasonable request of Lender, execute, deliver and file, alone or with Lender, any financing statements, security agreements, collateral assignments, notices, control agreements, or other documents to perfect or give the highest priority to Lender's Lien on the Collateral. Borrower shall from time to time procure any instruments or documents as may be reasonably requested by Lender, and take all further action that may be necessary or desirable, or that Lender may reasonably request, to perfect and protect the Liens granted hereby and thereby. In addition, and for such purposes only, Borrower hereby authorizes Lender to execute and deliver on behalf of Borrower and to file such financing statements, collateral assignments, notices, control agreements, security agreements and other similar documents without the signature of Borrower either in Lender's name or in the name of Lender as agent and attorney-in-fact for Borrower. Borrower shall protect and defend Borrower's title to the Collateral and Lender's Lien thereon against all Persons claiming any interest adverse to Borrower or Lender other than Permitted Liens.

6.4 Insurance. Borrower shall cause to be carried and maintained commercial general liability insurance, on an occurrence form, against risks customarily insured against in Borrower's line of business. Such risks shall include the risks of bodily injury, including death, property damage, personal injury, advertising injury, and contractual liability per the terms of the indemnification agreement found in Section 6.3. Borrower must maintain a minimum of \$2,000,000 of commercial general liability insurance for each occurrence. Borrower has and agrees to maintain a minimum of \$2,000,000 of directors and officers' insurance for each occurrence and \$3,000,000 in the aggregate. So long as there are any Secured Obligations outstanding, Borrower shall also cause to be carried and maintained insurance upon the Collateral as is customary for similarly situated entities, insuring against all risks of physical loss or damage howsoever caused, in an amount not less than the full replacement cost of the Collateral, provided that such insurance may be subject to standard exceptions and deductibles. Borrower shall also carry and maintain a fidelity insurance policy in an amount not less than \$100,000. Borrower shall deliver to Lender certificates of insurance that evidence Borrower's compliance with these insurance obligations. Borrower's insurance certificate shall state Lender is an additional insured for commercial general liability, an additional insured and a loss payee for all risk property damage insurance, subject to the insurer's approval, a loss payee for fidelity insurance, and a loss payee for property insurance and additional insured for liability insurance for any future insurance that Borrower may acquire from such insurer. Attached to the certificates of insurance will be additional insured endorsements for liability and lender's loss payable endorsements for all risk property damage insurance and fidelity. All certificates of insurance will provide for a minimum of thirty (30) days advance written notice to Borrower of cancellation. Any failure of Lender to scrutinize such insurance certificates for compliance is not a waiver of any of Lender's rights, all of which are reserved.

6.5 Indemnity. Borrower shall indemnify and hold Lender and its officers, directors, employees, agents, in-house attorneys, representatives and shareholders (each such person, an "Indemnified Party") harmless from and against any and all claims, costs, expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including reasonable attorneys' fees and disbursements and other costs of investigation or defense (including those incurred upon any appeal), that may be instituted or asserted against or incurred by Lender or any such Person as the result of credit having been extended, suspended or terminated under this Agreement and the other Loan Documents or the administration of such credit, or in connection with or arising out of the transactions contemplated hereunder and thereunder, or any actions or failures to act in connection therewith, or arising out of the disposition or utilization of the Collateral, excluding in all cases claims resulting solely from such Indemnified Party's gross negligence or willful misconduct. Borrower agrees to pay, and to save Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement.

6.6 Indebtedness. Borrower shall not create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, other than Permitted Indebtedness pursuant to terms therein, except for the conversion of Indebtedness into equity securities, payment of cash in lieu of fractional shares in connection with such conversion, and as otherwise agreed in writing by Lender (including pursuant to any subordination, intercreditor or similar agreement), other than Permitted Indebtedness pursuant to terms therein.

6.7 Encumbrances. Borrower shall keep its property free and clear of all Liens, other than Permitted Liens. Borrower shall cause each of its Subsidiaries to keep such Subsidiary's property free and clear of all Liens, other than Permitted Liens. Borrower shall not agree with any Person other than Lender not to encumber its property other than under the Heights Notes or pursuant to any documents entered into in connection with other Permitted Indebtedness.

6.8 Litigation. Borrower shall give Lender prompt written notice of any complaints, litigation or judgments affecting Borrower or any Subsidiary.

6.9 Investments. Borrower shall not directly or indirectly acquire or own, or make any Investment in or to any Person, other than Permitted Investments.

6.10 Distributions. Borrower shall not, and shall not allow any Subsidiary to, (a) repurchase or redeem any class of stock or other equity interest other than pursuant to employee, director or consultant repurchase plans or other similar agreements, provided, however, in each case the repurchase or redemption price does not exceed the original consideration paid for such stock or equity interest, or (b) declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest, except that a Subsidiary may pay dividends or make distributions to Borrower, or (c) lend money to any employees, officers or directors or guarantee the payment of any such loans granted by a third party in excess of \$100,000 in the aggregate or (d) waive, release or forgive any indebtedness owed by any employees, officers or directors in excess of \$100,000 in the aggregate.

6.11 Heights Notes. Notwithstanding anything in Section 6.10 or otherwise in this Agreement, Borrower may make any payment required under that certain Senior Convertible Note, dated April 4, 2012, issued by Borrower to Capital Ventures International and any other such Senior Convertible Notes issued pursuant to the Securities Purchase Agreement (the "Securities Purchase Agreement"), dated as of April 4, 2012, by and among Borrower and the initial holders of the notes (collectively, the "Heights Notes") as long as an Event of Default is not continuing. Without Lender's prior written consent, (a) Borrower shall not agree to amend any of the Heights Notes, or enter into any agreement that has the effect of amending the Heights Notes or any obligation of Borrower to pay any amount owing in connection with the Heights Notes or the Securities, as defined in the Securities Purchase Agreement and (b) except as required by the terms of the Securities Purchase Agreement or the Heights Notes, Borrower shall not pay any amount owing under the Heights Notes, whether by redemption or prepayment.

6.12 Transfers. Except for Permitted Transfers, Borrower shall not voluntarily or involuntarily transfer, sell, lease, license, lend or in any other manner convey any equitable, beneficial or legal interest in any material portion of its assets.

6.13 Mergers or Acquisitions. Borrower shall not merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of a Subsidiary into another Subsidiary or into Borrower), or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person; not including (i) any merger of Borrower or any of its, direct or indirect, wholly-owned Subsidiaries with or into any Subsidiary that is a party to this Agreement, (ii) any reorganization, recapitalization or reclassification of the shares of Borrower's common stock in which holders of Borrower's voting power immediately prior to such reorganization, recapitalization or reclassification continue after such reorganization, recapitalization or reclassification to hold publicly traded securities and, directly or indirectly, are, in all material respects, the holders of the voting power of the surviving entity (or entities

with the authority or voting power to elect the members of the board of directors (or their equivalent if other than a corporation) of such entity or entities) after such reorganization, recapitalization or reclassification, (iii) pursuant to a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of any of Borrower's Subsidiaries, or (iv) pursuant to any acquisition or merger the consideration for which is solely common stock of Borrower (which for avoidance of doubt shall exclude any assumption of Indebtedness).

6.14 Taxes. Borrower and its Subsidiaries shall pay when due all material taxes, fees or other charges (together with any related interest or penalties) now or hereafter imposed or assessed against Borrower, Lender or the Collateral or upon Borrower's ownership, possession, use, operation or disposition thereof or upon Borrower's rents, receipts or earnings arising therefrom. Borrower shall file on or before the due date therefor all personal property tax returns in respect of the Collateral. Notwithstanding the foregoing, Borrower may contest, in good faith and by appropriate proceedings, taxes for which Borrower maintains adequate reserves therefor in accordance with GAAP.

6.15 Corporate Changes. Neither Borrower nor any domestic Subsidiary shall change its corporate name, legal form or jurisdiction of formation without twenty (20) days' prior written notice to Lender. Borrower shall not suffer a Change in Control. Borrower shall not relocate its chief executive office or its principal place of business unless: (i) it has provided prior written notice to Lender; and (ii) such relocation shall be within the continental United States. Neither Borrower nor any domestic Subsidiary shall relocate any item of Collateral (other than (w) sales of Inventory in the ordinary course of business, (x) relocations of Equipment having an aggregate value of up to \$2,000,000 in any fiscal year, (y) relocations of Equipment among Subsidiaries and (z) relocations of Collateral from a location described on Exhibit C to another location described on Exhibit C) unless (i) it has provided prompt written notice to Lender, (ii) such relocation is within the continental United States and, (iii) if such relocation is to a third party bailee, it has taken commercially reasonable efforts to deliver a bailee agreement in form and substance reasonably acceptable to Lender.

#### 6.16 Deposit Accounts.

(a) Subject to Section 6.19, neither Borrower nor any domestic Subsidiary shall maintain any Deposit Accounts, or accounts holding Investment Property, except with respect to which Lender has an Account Control Agreement, other than (i) accounts held with HSBC with an aggregate amount not to exceed the lesser of (A) \$3,700,000 or (B) the amount necessary to cash collateralize or support letters of credit outstanding as of the Closing Date; and (ii) an account of AMSC Wisconsin Wind LLC maintained at Bank of America in which no more than \$3,500 is maintained at any given time.

(b) The amounts in the Other Accounts shall not, at any time, exceed \$5,000,000 in the aggregate, until such time as the Other Accounts (as defined in Section 6.19 below) are subject to Account Control Agreement(s) in form and substance satisfactory to Lender.

6.17 Subsidiaries. Borrower shall notify Lender of each Subsidiary formed subsequent to the Closing Date and, within 15 days of formation, shall cause any such Subsidiary organized under the laws of any State within the United States to execute and deliver to Lender a Joinder Agreement. Borrower shall not permit the value of the assets held by any domestic Subsidiary that has not executed a Joinder Agreement to exceed Fifty Thousand Dollars (\$50,000), unless such Subsidiary executes and delivers to Lender a Joinder Agreement prior to the value of such assets held by such Subsidiary exceeding Fifty Thousand Dollars (\$50,000).

6.18 Unrestricted Cash. Borrower shall (a) maintain a balance of unrestricted cash or cash equivalents (including, for the avoidance of doubt, any marketable securities invested under the Borrower's Investment Policy) equal to the principal amount of the Term Loan outstanding at any given time in accounts that are subject to an Account Control Agreement, and (b) provide Lender at least three Business Days' prior written notice of any requirement to make payment to any other party which would cause Borrower to be in violation of clause (a) of this Section 6.18 upon the making of such payment.

6.19 Post Closing Covenants. Within sixty (60) days of the Closing Date, Borrower shall deliver to Lender, in form and substance reasonably satisfactory to Lender: (a) a duly executed and recorded mortgage and security agreement, an environmental indemnity agreement, a lender's title policy with such endorsements as may be required by Lender, and such other documents and instruments as may be reasonably requested by Lender in connection therewith, with respect to the real property located at 64 Jackson Road, Devens, Massachusetts; and (b) Account Control Agreement(s) with respect to all other Deposit Accounts (or accounts holding Investment Property) of Borrower or any other Subsidiary of Borrower maintained in the United States of America that are not subject to an Account Control Agreement as of the Closing Date, except for those listed in clause (i) and clause (ii) of Section 6.16(a) (collectively, the "Other Accounts"), along with an updated executed ACH Debit Authorization Agreement if the Other Account listed in such agreement delivered on the Closing Date is closed.

**SECTION 7. [RESERVED].**

**SECTION 8. EVENTS OF DEFAULT**

The occurrence of any one or more of the following events shall be an Event of Default:

8.1 Payments. Borrower fails to pay any amount due under this Agreement, the Notes or any of the other Loan Documents on the due date, provided, however, that an Event of Default shall not occur on account of a failure to pay due solely to an administrative or operational error of Lender if Borrower had the funds to make the payment when due and makes the payment the Business Day following Borrower's knowledge of such failure to pay; or

8.2 Covenants. Borrower breaches or defaults in the performance of any covenant or Secured Obligation under this Agreement and (a) with respect to a default under any covenant under this Agreement (other than under Sections 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16, 6.18 or 6.19) such default continues for more than 30 days after the earlier of the date on which (i) Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default; (b) with respect to a default under Section 6.16(b), such default continues for more than three Business Days after the earlier of the date on which (i) Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default, provided however no such cure period shall apply if the amount in the Other Accounts exceeds \$6,000,000; (c) with respect to a default under Section 6.18(b), such default continues for more than three Business Days after the earlier of the date on which (i) Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default; or (d) with respect to a default under any of Sections 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.16(a), 6.18(a) or 6.19 the occurrence of such default; or

8.3 Material Adverse Effect. A circumstance has occurred that would reasonably be expected to have a Material Adverse Effect.

8.4 Other Loan Documents. The occurrence of any default under any other Loan Document or any other agreement between Borrower and Lender (other than this Agreement and the Warrant) and such default continues for more than 30 days after the earlier of (a) Lender has given notice of such default to Borrower, or (b) Borrower has actual knowledge of such default; or

8.5 Representations. Any representation or warranty made by Borrower in any Loan Document when taken as a whole shall have been false or misleading in any material respect; or

8.6 Insolvency. Borrower (A) (i) shall make an assignment for the benefit of creditors; or (ii) shall be unable to pay its debts as they become due, or be unable to pay or perform under the Loan Documents, or shall become insolvent; or (iii) shall file a voluntary petition in bankruptcy (including any Insolvency Proceeding; or (iv) shall file any petition, answer, or document seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation pertinent to such circumstances; or (v) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of Borrower or of all or any substantial

part (i.e., 33-1/3% or more) of the assets or property of Borrower; or (vi) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its employees; or (vii) Borrower or its directors or majority shareholders shall take any action initiating any of the foregoing actions described in clauses (i) through (vi); or (B) either (i) forty-five (45) days shall have expired after the commencement of an involuntary action against Borrower seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, without such action being dismissed or all orders or proceedings thereunder affecting the operations or the business of Borrower being stayed; or (ii) a stay of any such order or proceedings shall thereafter be set aside and the action setting it aside shall not be timely appealed; or (iii) Borrower shall file any answer admitting or not contesting the material allegations of a petition filed against Borrower in any such proceedings; or (iv) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (v) forty-five (45) shall have expired after the appointment, without the consent or acquiescence of Borrower, of any trustee, receiver or liquidator of Borrower or of all or any substantial part of the properties of Borrower without such appointment being vacated; or

8.7 Attachments; Judgments. Other than in connection with any litigation disclosed in the Schedules, any portion of Borrower's assets is attached or seized, or a levy is filed against any such assets, or a judgment or judgments (which is not insured or bonded) is/are entered for the payment of money, individually or in the aggregate, of at least \$2,000,000, or Borrower is enjoined or in any way prevented by court order from conducting any part of its business. For the sake of clarity, a judgment awarded against Borrower on the litigation matter disclosed on the Schedules shall not constitute an Event of Default under this Section 8.7, but does not otherwise qualify or limit any other Event of Default from occurring under any other provision in this Section 8; or

8.8 Other Obligations. The occurrence of any default under any agreement or obligation of Borrower involving any Indebtedness in excess of \$2,000,000, or the occurrence of any default under any agreement or obligation of Borrower that could reasonably be expected to have a Material Adverse Effect

8.9 Control Agreements. Other than as permitted under Section 6.16, if any Deposit Account of Borrower or any domestic Subsidiary ceases to be subject to an Account Control Agreement, or if, without Lender's prior written consent, Borrower delivers a notice to any bank or financial intermediary terminating or purporting to terminate any Account Control Agreement required under this Agreement.

## **SECTION 9. REMEDIES**

9.1 General. Upon and during the continuance of any one or more Events of Default, (i) Lender may, at its option, accelerate and demand payment of all or any part of the Secured Obligations together with a Prepayment Charge and declare them to be immediately due and payable (provided, that upon the occurrence of an Event of Default of the type described in Section 8.6, the Notes and all of the Secured Obligations shall automatically be accelerated and made due and payable, in each case without any further notice or act), and (ii) Lender may notify any of Borrower's account debtors to make payment directly to Lender, compromise the amount of any such account on Borrower's behalf and endorse Lender's name without recourse on any such payment for deposit directly to Lender's account. Lender may exercise all rights and remedies with respect to the Collateral under the Loan Documents or otherwise available to it under the UCC and other applicable law, including the right to release, hold, sell, lease, liquidate, collect, realize upon, or otherwise dispose of all or any part of the Collateral and the right to occupy, utilize, process and commingle the Collateral. All Lender's rights and remedies shall be cumulative and not exclusive.

9.2 Collection; Foreclosure. Upon the occurrence and during the continuance of any Event of Default, Lender may, at any time or from time to time, apply, collect, liquidate, sell in one or more sales, lease or otherwise dispose of, any or all of the Collateral, in its then condition or following any commercially reasonable preparation or processing, in such order as Lender may elect. Any such sale may be made either at public or private sale at its place of business or elsewhere. Borrower agrees that any such public or private sale may occur upon ten (10) calendar days' prior written notice to Borrower. Lender may



require Borrower to assemble the Collateral and make it available to Lender at a place designated by Lender that is reasonably convenient to Lender and Borrower. The proceeds of any sale, disposition or other realization upon all or any part of the Collateral shall be applied by Lender in the following order of priorities:

First, to Lender in an amount sufficient to pay in full Lender's costs and reasonably professionals' and advisors' fees and expenses as described in Section 10.10;

Second, to Lender in an amount equal to the then unpaid amount of the Secured Obligations (including principal, interest, and the Default Rate interest), in such order and priority as Lender may choose in its sole discretion; and

Finally, after the full, final, and indefeasible payment in Cash of all of the Secured Obligations, to any creditor holding a junior Lien on the Collateral, or to Borrower or its representatives or as a court of competent jurisdiction may direct.

Lender shall be deemed to have acted reasonably in the custody, preservation and disposition of any of the Collateral if it complies with the obligations of a secured party under the UCC.

9.3 No Waiver. Lender shall be under no obligation to marshal any of the Collateral for the benefit of Borrower or any other Person, and Borrower expressly waives all rights, if any, to require Lender to marshal any Collateral.

9.4 Cumulative Remedies. The rights, powers and remedies of Lender hereunder shall be in addition to all rights, powers and remedies given by statute or rule of law and are cumulative. The exercise of any one or more of the rights, powers and remedies provided herein shall not be construed as a waiver of or election of remedies with respect to any other rights, powers and remedies of Lender.

#### **SECTION 10. MISCELLANEOUS**

10.1 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under such law, such provision shall be ineffective only to the extent and duration of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

10.2 Notice. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication (including the delivery of Financial Statements) that is required, contemplated, or permitted under the Loan Documents or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by facsimile or hand delivery or delivery by an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid, in each case addressed to the party to be notified as follows:

(a) If to Lender:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.  
Legal Department  
Attention: Chief Legal Officer and Brad Pritchard  
400 Hamilton Avenue, Suite 310  
Palo Alto, CA 94301  
Facsimile: 650-473-9194  
Telephone: 650-289-3060

(b) If to Borrower:

AMERICAN SUPERCONDUCTOR CORPORATION

64 Jackson Road

Devens, MA 01434

Attention: General Counsel

Facsimile: (978) 842-3530

Telephone: (978) 842-3539

With copies to:

Latham & Watkins LLP

John Hancock Tower, 20th Floor

200 Clarendon Street

Boston, MA 02116

Attention: Peter N. Handrinis, Esq.

Facsimile: (617) 948-6001

Telephone: (617) 948-6060

Latham & Watkins LLP

505 Montgomery Street, Suite 2000

San Francisco, CA 94111

Attention: Haim Zaltzman, Esq.

Facsimile: (415) 395-8095

Telephone: (415) 395-8870

or to such other address as each party may designate for itself by like notice. Any notice delivered to a party to this Agreement in accordance with this Section shall be effective despite the failure to deliver a copy of such notice to any other Person.

10.3 Entire Agreement; Amendments. This Agreement, the Note, and the other Loan Documents constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and thereof, and supersede and replace in their entirety any prior proposals, term sheets, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof or thereof. None of the terms of this Agreement, the Note or any of the other Loan Documents may be amended except by an instrument executed by each of the parties hereto.

10.4 No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

10.5 No Waiver. The powers conferred upon Lender by this Agreement are solely to protect its rights hereunder and under the other Loan Documents and its interest in the Collateral and shall not impose any duty upon Lender to exercise any such powers. No omission or delay by Lender at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by Borrower at any time designated, shall be a waiver of any such right or remedy to which Lender is entitled, nor shall it in any way affect the right of Lender to enforce such provisions thereafter.

10.6 [Reserved]

10.7 Successors and Assigns. The provisions of this Agreement and the other Loan Documents shall inure to the benefit of and be binding on Borrower and its permitted assigns (if any). Borrower shall not assign its obligations under this Agreement, the Note or any of the other Loan Documents without Lender's express prior written consent, and any such attempted assignment shall be void and of no effect. Lender may assign, transfer, or endorse its rights hereunder and under the other Loan Documents with prior notice to Borrower, and all of such rights shall inure to the benefit of and be binding on Lender's

successors and assigns; provided that as long as no Event of Default exists or is continuing, Lender may not assign, transfer or endorse its rights hereunder or under the Loan Documents to any party that is a direct competitor of Borrower, a distressed debt or vulture fund (each such term as reasonably defined by Lender), any holder of convertible notes or equity securities of Borrower or any party in material litigation with Borrower and so disclosed to Lender. Lender shall not engage in any short sales of the Borrower's common stock.

10.8 Governing Law. This Agreement, the Note and the other Loan Documents have been negotiated and delivered to Lender in the State of California, and shall have been accepted by Lender in the State of California. Payment to Lender by Borrower of the Secured Obligations is due in the State of California. This Agreement, the Note and the other Loan Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

10.9 Consent to Jurisdiction and Venue. All judicial proceedings (to the extent that the reference requirement of Section 10.10 is not applicable) arising in or under or related to this Agreement, the Note or any of the other Loan Documents may be brought in any state or federal court located in the State of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) consents to nonexclusive personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; and (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts. Service of process on any party hereto in any action arising out of or relating to this Agreement shall be effective if given in accordance with the requirements for notice set forth in Section 10.2, and shall be deemed effective and received as set forth in Section 10.2. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

10.10 Mutual Waiver of Jury Trial / Judicial Reference.

(a) Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF BORROWER AND LENDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY BORROWER AGAINST LENDER OR ITS ASSIGNEE OR BY LENDER OR ITS ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Borrower and Lender; Claims that arise out of or are in any way connected to the relationship between Borrower and Lender; and any Claims for damages, breach of contract, tort, specific performance, or any equitable or legal relief of any kind, arising out of this Agreement, any other Loan Document.

(b) If the waiver of jury trial set forth in Section 10.10(a) is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.

(c) In the event Claims are to be resolved by judicial reference, either party may seek from a court identified in Section 10.9, any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by judicial reference.

10.11 Professional Fees. Borrower promises to pay Lender's fees and expenses necessary to finalize the loan documentation, including but not limited to reasonable attorneys fees, UCC searches,

filing costs, and other miscellaneous expenses. In addition, Borrower promises to pay any and all reasonable attorneys' and other professionals' fees and expenses (including fees and expenses of in-house counsel) incurred by Lender after the Closing Date in connection with or related to: (a) the Loan; (b) the administration, collection, or enforcement of the Loan; (c) the amendment or modification of the Loan Documents; (d) any waiver, consent, release, or termination under the Loan Documents; (e) the protection, preservation, sale, lease, liquidation, or disposition of Collateral or the exercise of remedies with respect to the Collateral; (f) any legal, litigation, administrative, arbitration, or out of court proceeding in connection with or related to Borrower or the Collateral, and any appeal or review thereof; and (g) any bankruptcy, restructuring, reorganization, assignment for the benefit of creditors, workout, foreclosure, or other action related to Borrower, the Collateral, the Loan Documents, including representing Lender in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof.

10.12 Confidentiality. Lender acknowledges that certain items of Collateral and information provided to Lender by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (x) is marked as confidential by Borrower at the time of disclosure, or (y) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Lender agrees that any Confidential Information it may obtain from the transactions contemplated hereunder or in the course of acquiring, administering, or perfecting Lender's security interest in the Collateral shall not be disclosed to any other person or entity in any manner whatsoever, in whole or in part, without the prior written consent of Borrower, except that Lender may disclose any such information: (a) to its own directors, officers, employees, accountants, counsel and other professional advisors and to its affiliates if Lender in its reasonable discretion determines that any such party should have access to such information in connection with such party's responsibilities in connection with the Loan or this Agreement and, provided that such recipient of such Confidential Information either (i) agrees to be bound by the confidentiality provisions of this paragraph or (ii) is otherwise subject to confidentiality restrictions that reasonably protect against the disclosure of Confidential Information pursuant to similar terms; (b) if such information is generally available to the public; (c) if required or appropriate in any report, statement or testimony submitted to any governmental authority having or claiming to have jurisdiction over Lender; (d) if required or appropriate in response to any summons or subpoena or in connection with any litigation, to the extent deemed necessary by Lender's counsel; (e) to comply with any legal requirement or law applicable to Lender; (f) to the extent reasonably necessary in connection with the exercise of any right or remedy under any Loan Document, including Lender's sale, lease, or other disposition of Collateral after default; (g) to any participant or assignee of Lender or any prospective participant or assignee; provided, that such participant or assignee or prospective participant or assignee agrees in writing to be bound by this Section prior to disclosure; or (h) otherwise with the prior consent of Borrower; provided that any disclosure made in violation of this Agreement shall not affect the obligation of Borrower under any of the Loan Documents.

10.13 Assignment of Rights. Borrower acknowledges and understands that Lender may, subject to Section 10.7, sell and assign all or part of its interest hereunder and under the Note(s) and Loan Documents to any person or entity (an "Assignee"). After such assignment the term "Lender" as used in the Loan Documents shall mean and include such Assignee, and such Assignee shall be vested with all rights, powers and remedies of Lender hereunder with respect to the interest so assigned; but with respect to any such interest not so transferred, Lender shall retain all rights, powers and remedies hereby given. No such assignment by Lender shall relieve Borrower of any of its obligations hereunder. Lender agrees that in the event of any transfer by it of the Note(s), it will endorse thereon a notation as to the portion of the principal of the Note(s), which shall have been paid at the time of such transfer and as to the date to which interest shall have been last paid thereon.

10.14 Termination; Revival of Secured Obligations. This Agreement and the Loan Documents (other than the Warrant) shall terminate on the payment in full in cash of the Secured Obligations (other than inchoate indemnity obligations). Notwithstanding the preceding sentence, this Agreement and the Loan Documents shall remain in full force and effect and continue to be effective if any petition is filed by or against Borrower for liquidation or reorganization, if Borrower becomes insolvent or makes an assignment for the benefit of creditors, if a receiver or trustee is appointed for all or any significant part of

Borrower's assets, or if any payment or transfer of Collateral is recovered from Lender. The Loan Documents and the Secured Obligations and Collateral security shall continue to be effective, or shall be revived or reinstated, as the case may be, if at any time payment and performance of the Secured Obligations or any transfer of Collateral to Lender, or any part thereof is rescinded, avoided or avoidable, reduced in amount, or must otherwise be restored or returned by, or is recovered from, Lender or by any obligee of the Secured Obligations, whether as a "voidable preference," "fraudulent conveyance," or otherwise, all as though such payment, performance, or transfer of Collateral had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, avoided, avoidable, restored, returned, or recovered, the Loan Documents and the Secured Obligations shall be deemed, without any further action or documentation, to have been revived and reinstated except to the extent of the full, final, and indefeasible payment to Lender in Cash.

10.15 Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

10.16 No Third Party Beneficiaries. No provisions of the Loan Documents are intended, nor will be interpreted, to provide or create any third-party beneficiary rights or any other rights of any kind in any person other than Lender and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents will be personal and solely between the Lender and Borrower.

10.17 Publicity. Lender may use Borrower's name and logo, and include a brief description of the relationship between Borrower and Lender, in Lender's marketing materials.

10.18 Termination. This Agreement, the Loan Documents (other than the Warrant) and the security interests granted hereunder shall terminate upon the payment in full of the Obligations (other than inchoate indemnity obligations).

(SIGNATURES TO FOLLOW)

IN WITNESS WHEREOF, Borrower and Lender have duly executed and delivered this Loan and Security Agreement as of the day and year first above written.

BORROWER:

AMERICAN SUPERCONDUCTOR CORPORATION

Signature: /s/ David A. Henry  
Print Name: David A. Henry  
Title: Senior Vice President, Chief Financial  
Officer and Treasurer

Accepted in Palo Alto, California:

LENDER:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

Signature: /s/ K. Nicholas Martitsch  
Print Name: K. Nicholas Martitsch  
Title: Associate General Counsel

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ADVANCE REQUEST

To: Lender:

Date: June , 2012

Hercules Technology Growth Capital, Inc.  
400 Hamilton Avenue, Suite 310  
Palo Alto, CA 94301  
Facsimile: 650-473-9194  
Attn:

AMERICAN SUPERCONDUCTOR CORPORATION requests from Hercules Technology Growth Capital, Inc. ("Lender") an Advance in the amount of Ten Million Dollars (\$10,000,000) on June , 2012 (the "Advance Date") pursuant to the Loan and Security Agreement between Borrower and Lender (the "Agreement"). Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

(a) Issue a check payable to Borrower \_\_\_\_\_

or

(b) Wire Funds to Borrower's account \_\_\_\_\_

Bank: \_\_\_\_\_

Address: \_\_\_\_\_

ABA Number: \_\_\_\_\_

Account Number: \_\_\_\_\_

Account Name: \_\_\_\_\_

Borrower represents that the conditions precedent to the Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Advance, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing; (ii) that the representations and warranties set forth in the Agreement and in the Warrant are and shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date; (iii) that Borrower is in compliance with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Advance Date, no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default under the Loan Documents. Borrower understands and acknowledges that Lender has the right to review the financial information supporting this representation and, based upon such review in its sole discretion, Lender may decline to fund the requested Advance.

Borrower hereby represents that Borrower's corporate status and locations have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Lender promptly before the funding of the Loan if any of the matters that have been represented above shall not be true and correct on the Borrowing Date and if Lender has received no such notice before the Advance Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct as of the Advance Date.



AMERICAN SUPERCONDUCTOR CORPORATION

SIGNATURE: \_\_\_\_\_

TITLE:

PRINT NAME:

**ATTACHMENT TO ADVANCE REQUEST**

Dated: June , 2012

Borrower hereby represents and warrants to Lender that Borrower's current name and organizational status is as follows:

Name:	AMERICAN SUPERCONDUCTOR CORPORATION
Type of organization:	Corporation
State of organization:	Delaware
Organization file number:	2123041

Borrower hereby represents and warrants to Lender that the street addresses, cities, states and postal codes of its current locations are as follows:

**EXHIBIT B**

**SECURED TERM PROMISSORY NOTE**

\$10,000,000

Advance Date: June , 2012

Maturity Date: December , 2014

FOR VALUE RECEIVED, AMERICAN SUPERCONDUCTOR CORPORATION, a Delaware corporation, (the "Borrower") hereby promises to pay to the order of Hercules Technology Growth Capital, Inc., a Maryland corporation or the holder of this Note (the "Lender") at 400 Hamilton Avenue, Suite 310, Palo Alto, CA 94301 or such other place of payment as the holder of this Secured Term Promissory Note (this "Promissory Note") may specify from time to time in writing, in lawful money of the United States of America, the principal amount of Ten Million Dollars (\$10,000,000) or such other principal amount as Lender has advanced to Borrower, together with interest at floating rate equal to 11.0% plus the amount by which the prime rate reported in The Wall Street Journal exceeds 3.75%, based upon a year consisting of 360 days, with interest computed daily based on the actual number of days in each month.

This Promissory Note is the Note referred to in, and is executed and delivered in connection with, that certain Loan and Security Agreement dated June , 2012, by and between Borrower and Lender (as the same may from time to time be amended, modified or supplemented in accordance with its terms, the "Loan Agreement"), and is entitled to the benefit and security of the Loan Agreement and the other Loan Documents (as defined in the Loan Agreement), to which reference is made for a statement of all of the terms and conditions thereof. All payments shall be made in accordance with the Loan Agreement. All terms defined in the Loan Agreement shall have the same definitions when used herein, unless otherwise defined herein. An Event of Default under the Loan Agreement shall constitute a default under this Promissory Note.

Borrower waives presentment and demand for payment, notice of dishonor, protest and notice of protest under the UCC or any applicable law. Borrower agrees to make all payments under this Promissory Note without setoff, recoupment or deduction and regardless of any counterclaim or defense. This Promissory Note has been negotiated and delivered to Lender and is payable in the State of California. This Promissory Note shall be governed by and construed and enforced in accordance with, the laws of the State of California, excluding any conflicts of law rules or principles that would cause the application of the laws of any other jurisdiction.

AMERICAN SUPERCONDUCTOR CORPORATION

By: \_\_\_\_\_  
Title: \_\_\_\_\_

**EXHIBIT C**

**NAME, LOCATIONS, AND OTHER INFORMATION FOR BORROWER**

1. Borrower represents and warrants to Lender that Borrower's current name and organizational status as of the Closing Date is as follows:

Name: AMERICAN SUPERCONDUCTOR CORPORATION  
Type of organization: Corporation  
State of organization: Delaware  
Organization file number: 2123041

2. Borrower represents and warrants to Lender that for five (5) years prior to the Closing Date, Borrower did not do business under any other name or organization or form except the following:

Name: Superconductivity, Inc. and AMSC  
Used during dates of: 2007-2012  
Type of Organization: corporation  
State of organization: Delaware  
Organization file number: 2123041

3. Borrower represents and warrants to Lender that its chief executive office is located at the address specified in the Notices section of the Agreement.

**EXHIBIT D****BORROWER'S PATENTS, TRADEMARKS, COPYRIGHTS AND LICENSES****PATENTS**

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Preparation Of Superconducting Oxides And Oxide-Metal Composites	Canada	562311	24-Mar-1988	Granted	1340849	14-Dec-1999
Superconducting Rotor	France	94931746.5	14-Sep-1994	Granted	719471	13-May-1998
Superconducting Rotor	Germany	94931746.5	14-Sep-1994	Granted	69410281.4	13-May-1998
Superconducting Rotor	Italy	94931746.5	14-Sep-1994	Granted	24443BE/98	13-May-1998
Superconducting Rotor	United Kingdom	94931746.5	14-Sep-1994	Granted	719471	13-May-1998
Superconducting Rotor	USA	08/122007	13-Sep-1993	Granted	5482919	09-Jan-1996
Metal Oxide Materials	USA	07/335819	10-Apr-1989	Granted	6686319	03-Feb-2004
Superconducting Magnet Coil	Australia	95220/98	09-Jan-1995	Granted	739105	17-Jan-2002
Superconducting Magnet Coil	France	95907349.5	09-Jan-1995	Granted	741905	16-May-2001
Superconducting Magnet Coil	Germany	95907349.5	09-Jan-1995	Granted	69520939.6	16-May-2001
Superconducting Magnet Coil	Italy	95907349.5	09-Jan-1995	Granted	741905	16-May-2001
Superconducting Magnet Coil	New Zealand	279091	09-Jan-1995	Granted	279091	12-Jun-1997
Superconducting Magnet Coil	United Kingdom	95907349.5	09-Jan-1995	Granted	741905	16-May-2001

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Superconducting Magnet Coil	USA	08/192724	07-Feb-1994	Granted	5525583	11-Jun-1996
Superconducting Magnet Coil	USA	08/615532	12-Mar-1996	Granted	5914647	22-Jun-1999
Superconducting Magnetic Coil	USA	08/302358	07-Sep-1994	Granted	5659277	19-Aug-1997
Shaped Superconducting Magnetic Coil	Australia	41314/96	13-Oct-1995	Granted	694296	08-Nov-1998
Shaped Superconducting Magnetic Coil	China (PRC)	95195573.X	13-Oct-1995	Granted	95195573.X	24-Jul-2002
Shaped Superconducting Magnetic Coil	France	95939529.4	13-Oct-1995	Granted	786141	03-Sep-2003
Shaped Superconducting Magnetic Coil	Germany	95939529.4	13-Oct-1995	Granted	69531693.1	03-Sep-2003
Shaped Superconducting Magnetic Coil	Italy	95939529.4	13-Oct-1995	Granted	786141	03-Sep-2003
Shaped Superconducting Magnetic Coil	United Kingdom	95939529.4	13-Oct-1995	Granted	786141	03-Sep-2003
Shaped Superconducting Magnetic Coil	USA	08/323494	13-Oct-1994	Granted	5604473	18-Feb-1997
Superconducting Magnets And Power Supplies For Superconducting Devices	USA	09/328677	09-Jun-1999	Granted	6157094	05-Dec-2000
Laminated Superconducting Ceramic Composite Conductors	France	97938157.1	09-Aug-1997	Granted	979519	28-Mar-2007
Laminated Superconducting Ceramic Composite Conductors	Germany	97938157.1	09-Aug-1997	Granted	69737533	28-Mar-2007
Laminated Superconducting Ceramic Composite Conductors	Italy	97938157.1	09-Aug-1997	Granted	979519	28-Mar-2007

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Laminated Superconducting Ceramic Composite Conductors	United Kingdom	97938157.1	09-Aug-1997	Granted	979519	28-Mar-2007
Laminated Superconducting Ceramic Composite Conductors	USA	08/701333	30-Aug-1996	Granted	5801124	01-Sep-1998
Laminated Superconducting Ceramic Tape	France	97937022.8	06-Aug-1997	Granted	979518	07-Feb-2007
Laminated Superconducting Ceramic Tape	Germany	97937022.8	06-Aug-1997	Granted	69737330	07-Feb-2007
Laminated Superconducting Ceramic Tape	Italy	97937022.8	06-Aug-1997	Granted	979518	07-Feb-2007
Laminated Superconducting Ceramic Tape	United Kingdom	97937022.8	06-Aug-1997	Granted	979518	07-Feb-2007
Laminated Superconducting Ceramic Tape	USA	08/705811	30-Aug-1996	Granted	5987342	16-Nov-1999
Laminated Superconducting Ceramic Tape	USA	09/401764	23-Sep-1999	Granted	6230033	08-May-2001
High-Temperature Superconductor Lead	USA	08/730870	18-Oct-1996	Granted	5880068	09-Mar-1999
Cryogenic Electronics Power Supply	USA	08/384780	06-Feb-1995	Granted	5612615	18-Mar-1997
Variable Profile Superconducting Magnetic Coil	USA	08/541639	10-Oct-95	Granted	5581220	3-Dec-96
Performance For Oxide Dispersion Strengthened Superconductor Composites	USA	08/731302	15-Oct-96	Granted	6305070	23-Oct-01
Superconducting Synchronous Motor Construction	France	97933177.4	26-Jun-97	Granted	913023	15-Apr-09
Superconducting Synchronous Motor Construction	Germany	97933177.4	26-Jun-97	Granted	69739358.5-08	15-Apr-09

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Superconducting Synchronous Motor Construction	Italy	97933177.4	26-Jun-97	Granted	913023	15-Jul-09
Superconducting Synchronous Motor Construction	United Kingdom	97933177.4	26-Jun-97	Granted	913023	15-Apr-09
Superconducting Synchronous Motor Construction	USA	08/682923	16-Jul-96	Granted	5777420	7-Jul-98
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	China (PRC)	98808231.4	17-Jun-98	Granted	187130	29-Dec-04
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	Japan	11-504767	17-Jun-98	Granted	4223076	12-Feb-09
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	Japan	2006-170836	17-Jun-98	Published		
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	New Zealand	502030	17-Jun-98	Granted	502030	31-Mar-03
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	Russian Federation	2000101289	17-Jun-98	Granted	2232448	17-Jun-04
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	USA	09/470926	22-Dec-99	Granted	6172009	9-Jan-01
Controlled Conversion Of Metal Oxyfluorides Into Superconducting Oxides	USA	10/159870	30-May-02	Granted	6610428	26-Aug-03
Resistive Fault Current Limiter	France	99300920.8	9-Feb-99	Granted	935261	27-Apr-05



<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Resistive Fault Current Limiter	Germany	69924898.1-08	9-Feb-99	Granted	935261	27-Apr-05
Resistive Fault Current Limiter	Italy	99300920.8	9-Feb-99	Granted	935261	27-Apr-05
Resistive Fault Current Limiter	United Kingdom	99300920.8	9-Feb-99	Granted	935261	27-Apr-05
Resistive Fault Current Limiter	USA	09/020431	9-Feb-98	Granted	6275365	14-Aug-01
Cryogen Protected Superconducting Ceramic Tape	France	97938039.1	6-Aug-97	Granted	951588	4-May-05
Cryogen Protected Superconducting Ceramic Tape	Germany	97938039.1	6-Aug-97	Granted	69733212	4-May-05
Cryogen Protected Superconducting Ceramic Tape	Italy	97938039.1	6-Aug-97	Granted	951588	4-May-05
Cryogen Protected Superconducting Ceramic Tape	United Kingdom	97938039.1	6-Aug-97	Granted	951588	4-May-05
Cryogen Protected Superconducting Ceramic Tape	USA	08/701375	30-Aug-96	Granted	6110606	29-Aug-00
Cryogen Protected Superconducting Ceramic Tape	USA	09/498551	4-Feb-00	Granted	6649280	18-Nov-03
Fault Current Limiting Superconducting Coil	Australia	20022318900	19-Dec-02	Granted	2002318900	9-Sep-04
Fault Current Limiting Superconducting Coil	China (PRC)	98810282.X	3-Sep-98	Granted	98810282.X	20-Oct-04

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Fault Current Limiting Superconducting Coil	European Patent Convention	6075543.6	3-Sep-98	Granted	1691381	2-Nov-11
Fault Current Limiting Superconducting Coil	France	98943530	3-Sep-98	Granted		8-Aug-07
Fault Current Limiting Superconducting Coil	Germany	69838221.8-08	3-Sep-98	Granted	DE69838221	8-Aug-07
Fault Current Limiting Superconducting Coil	Italy	98943530	3-Sep-98	Granted	32419BE2007	8-Aug-07
Fault Current Limiting Superconducting Coil	Italy	6075543.6	3-Sep-98	Granted	67403 BE/2012	2-Nov-11
Fault Current Limiting Superconducting Coil	Japan	512218/2000	3-Sep-98	Granted	3215697	27-Jul-01
Fault Current Limiting Superconducting Coil	United Kingdom	98943530	3-Sep-98	Granted		8-Aug-07
Fault Current Limiting Superconducting Coil	USA	08/928901	12-Sep-97	Granted	5912607	15-Jun-99
Methods For Joining High Temperature Superconducting Components With Negligible Critical Current Degradation And Articles Of Manufacture In Accordance Therewith	Japan	500348/2001	2-Jun-00	Pending		
Methods For Joining High Temperature Superconducting Components With Negligible Critical Current Degradation And Articles Of Manufacture In Accordance Therewith	Korea (ROK)	2001/7015524	2-Jun-00	Granted	641714	26-Oct-06
Methods For Joining High Temperature Superconducting Components With Negligible Critical Current Degradation And Articles Of Manufacture In Accordance Therewith	USA	09/324229	2-Jun-99	Granted	6159905	12-Dec-00

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Substrates For Superconductors (Binary I)	USA	08/942038	1-Oct-97	Granted	6428635	6-Aug-02
Rotating Machine Having Superconducting Windings	USA	09/251311	17-Feb-99	Granted	6066906	23-May-00
Shunt Connected Superconducting Energy Stabilizing System	Germany	92110933.6	27-Jun-92	Granted	6920788.5	27-Dec-95
Shunt Connected Superconducting Energy Stabilizing System	Japan	4-174307	1-Jul-92	Granted	2796471	26-Jun-98
Superconductor Rotor Cooling System	Australia	57695/99	26-Apr-99	Granted	768209	18-Mar-04
Superconductor Rotor Cooling System	Canada	2341472	26-Apr-99	Granted	2341472	14-Oct-08
Superconductor Rotor Cooling System	France	4005951.1	26-Apr-99	Granted	1437821	21-Jun-06
Superconductor Rotor Cooling System	Germany	4005951.1	26-Apr-99	Granted	1437821	21-Jun-06
Superconductor Rotor Cooling System	Italy	4005951.1	26-Apr-99	Granted	1437821	21-Jun-06
Superconductor Rotor Cooling System	Japan	2000/568168	26-Apr-99	Granted	4099314	21-Mar-08
Superconductor Rotor Cooling System	United Kingdom	4005951.1	26-Apr-99	Granted	1437821	21-Jun-06
Superconductor Rotor Cooling System	USA	09/140154	26-Aug-98	Granted	6376943	23-Apr-02
Superconductor Rotor Cooling System	USA	10/128535	23-Apr-02	Granted	6812601	2-Nov-04
Methods And Compositions For Making A Multi-Layer Article	France	948695.2	14-Jul-00	Granted	1198847	1-Oct-08

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Methods And Compositions For Making A Multi-Layer Article	Germany	948695.2	14-Jul-00	Granted	1198847	1-Oct-08
Methods And Compositions For Making A Multi-Layer Article	Italy	948695.2	14-Jul-00	Granted	74656/BE/2008	1-Oct-08
Methods And Compositions For Making A Multi-Layer Article	Japan	2001-512647	14-Jul-00	Granted	4891505	22-Dec-11
Methods And Compositions For Making A Multi-Layer Article	United Kingdom	948695.2	14-Jul-00	Granted	1198847	1-Oct-08
Methods And Compositions For Making A Multi-Layer Article	USA	09/615991	14-Jul-00	Granted	6669774	30-Dec-03
Enhanced High Temperature Coated Superconductors	China (PRC)	00810767.X	14-Jul-00	Granted	00810767.X	29-Jun-05
Enhanced High Temperature Coated Superconductors	Germany	975162.9	14-Jul-00	Granted	1198846	8-Nov-06
Enhanced High Temperature Coated Superconductors	Japan	512645/2001	14-Jul-00	Granted	4041672	16-Nov-07
Enhanced High Temperature Coated Superconductors	USA	09/617518	14-Jul-00	Granted	6828507	7-Dec-04
Enhanced High Temperature Coated Superconductors	USA	10/154566	24-May-02	Granted	6765151	20-Jul-04
Alloy Materials (Ternary II)	Australia	41659/00	31-Jan-00	Granted	764082	20-Nov-03

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Alloy Materials (Ternary II)	USA	09/283777	31-Mar-99	Granted	6458223	1-Oct-02
Alloy Materials (Binary II)	Australia	52665/00	31-Mar-00	Granted	758847	24-Jul-03
Alloy Materials (Binary II)	Japan	608807/2000	31-Mar-00	Published		
Alloy Materials (Binary II)	USA	09/283775	31-Mar-99	Granted	6475311	5-Nov-02
Detachable Cryogenic Refrigerator Expander	USA	09/168201	6-Oct-98	Granted	6202421	20-Mar-01
Pulse Tube Refrigerator And Current Lead	USA	09/243142	2-Feb-99	Granted	6286318	11-Sep-01
Multi-Layer Articles And Methods Of Making Same	USA	09/616810	14-Jul-00	Granted	6893732	17-May-05
Rotor Assembly Including Superconducting Magnetic Coil	Australia	74692/00	23-May-00	Granted	763545	6-Nov-03
Rotor Assembly Including Superconducting Magnetic Coil	China (PRC)	812272.5	23-May-00	Granted	ZL0812272.5	23-May-07
Rotor Assembly Including Superconducting Magnetic Coil	France	963251.4	23-May-00	Granted	1212760	15-Jul-09
Rotor Assembly Including Superconducting Magnetic Coil	Germany	963251.4	23-May-00	Granted	60042554.1	15-Jul-09
Rotor Assembly Including Superconducting Magnetic Coil	Italy			Granted	71786/BE/2009	15-Jul-09
Rotor Assembly Including Superconducting Magnetic Coil	Japan	512596/2001	23-May-00	Granted	3953813	11-May-07

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Rotor Assembly Including Superconducting Magnetic Coil	Korea (ROK)	2002/7000951	23-May-00	Granted	10-0635170	10-Oct-06
Rotor Assembly Including Superconducting Magnetic Coil	United Kingdom	963251.4	23-May-00	Granted	1212760	15-Jul-09
Rotor Assembly Including Superconducting Magnetic Coil	USA	09/359497	23-Jul-99	Granted	6509819	21-Jan-03
High Temperature Superconducting Rotor For A Synchronous Machine	USA	09/251310	17-Feb-99	Granted	6140719	31-Oct-00
Exciter With Axial Gap	USA	09/349433	7-Jul-99	Granted	6278212	21-Aug-01
Devices And Systems Based On Novel Superconducting Material	USA	07/021229	3-Mar-87	Granted	6635603	21-Oct-03
Oxide Superconductor Comprising Cu, Bi, Ca And Sr	USA	07/976294	13-Nov-92	Granted	5340796	23-Aug-94
Method Of Producing A Superconductive Body, And Apparatus And Systems Comprising The Body	Canada	564724	21-Apr-88	Granted	1338615	1-Oct-96
Method Of Producing A Layer Of Superconductive Oxide	USA	07/126448	30-Nov-87	Granted	5416063	16-May-95
Fabrication Of Oxide Superconductors By Melt Growth Method	USA	07/890303	27-May-92	Granted	5972846	26-Oct-99
Article Comprising A Superconductor/Insulator Layer Structure, And Method Of Making The Article	USA	07/028738	8-Mar-93	Granted	5364836	15-Nov-94
Conductivity In Carbonaceous Compounds And Devices Using Such Compounds	USA	08/156664	22-Nov-93	Granted	5391323	21-Feb-95
Article Comprising An Intermetallic Superconducting Material	USA	08/143419	26-Oct-93	Granted	5413755	9-May-95
Article Comprising An Intermetallic Superconductor Material	USA	08/177837	5-Jan-94	Granted	5470530	28-Nov-95

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Superconducting Conductors And Their Method Of Manufacture (Fcl)	European Patent Convention	99956481.8	10-Aug-99	Granted	1105885	10-Jan-07
Superconducting Conductors And Their Method Of Manufacture (Fcl)	Japan	2000-565545	10-Aug-99	Granted	4638983	3-Dec-10
Superconducting Conductors And Their Method Of Manufacture (Fcl)	USA	09/200411	25-Nov-98	Granted	6657533	2-Dec-03
Superconducting Electric Motor	France	989180.5	10-Aug-00	Granted	1203437	10-Mar-05
Superconducting Electric Motor	Germany	989180.5	10-Aug-00	Granted	1203437	10-Mar-05
Superconducting Electric Motor	Japan	2008169063	10-Aug-00	Granted	4308308	15-May-09
Superconducting Electric Motor	United Kingdom	989180.5	10-Aug-00	Granted	1203437	10-Mar-05
Superconducting Electric Motor	USA	09/371692	10-Aug-99	Granted	7453174	18-Nov-08
Encapsulated Ceramic Superconductors	Australia	14298/01	20-Jul-00	Granted	770990	24-Jun-04
Encapsulated Ceramic Superconductors	China (PRC)	810754.8	20-Jul-00	Granted	ZL00810754.	28-Mar-07
Encapsulated Ceramic Superconductors	European Patent Convention	976538.9	20-Jul-00	Granted	1203415	15-Feb-12
Encapsulated Ceramic Superconductors	Japan	512646/2001	20-Jul-00	Granted	3949960	27-Apr-07

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Encapsulated Ceramic Superconductors	Korea (ROK)	2002-7000991	20-Jul-00	Granted	10-0682582	7-Feb-07
Encapsulated Ceramic Superconductors	USA	09/360318	23-Jul-99	Granted	6444917	3-Sep-02
Thin Films Having Rock-Salt-Like Structure Deposited On Amorphous Surfaces	USA	09/191449	12-Nov-98	Granted	6190752	20-Feb-01
Water Cooled Stator Winding Of An Electric Motor	European Patent Convention	955543.4	15-Aug-00	Published		
Water Cooled Stator Winding Of An Electric Motor	Japan	2001-517484	15-Aug-00	Granted	4188597	19-Sep-08
Critical Doping In High-Tc Superconductors For Maximal Flux Pinning And Critical Currents	European Patent Convention	99931620.2	18-Jun-99	Published		
Critical Doping In High-Tc Superconductors For Maximal Flux Pinning And Critical Currents	Japan	555283-2000	18-Jun-99	Pending		
Critical Doping In High-Tc Superconductors For Maximal Flux Pinning And Critical Currents	USA	10/327408	20-Dec-02	Granted	6784138	31-Aug-04
Exciter And Electronic Regulator For Superconducting Rotating Machinery	France	987982.6	9-Nov-00	Granted	1247324	24-Mar-04
Exciter And Electronic Regulator For Superconducting Rotating Machinery	Germany	987982.6	9-Nov-00	Granted	60009349.2	24-Mar-04
Exciter And Electronic Regulator For Superconducting Rotating Machinery	Italy	987982.6	9-Nov-00	Granted	1247324	24-Mar-04



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Exciter And Electronic Regulator For Superconducting Rotating Machinery	Japan	552503/2001	9-Nov-00	Granted	3836370	25-Oct-06
Exciter And Electronic Regulator For Superconducting Rotating Machinery	United Kingdom	987982.6	9-Nov-00	Granted	1247324	24-Mar-04
Exciter And Electronic Regulator For Superconducting Rotating Machinery	USA	09/480430	11-Jan-00	Granted	6420842	16-Jul-02
Method And Apparatus For Discharging A Superconducting Magnet	USA	09/449505	24-Nov-1999	Granted	6445555	03-Sep-02
Method And Apparatus For Controlling A Phase Angle Of Ac Power To Keep Dc Voltage From An Energy Source Constant	USA	09/449436	24-Nov-99	Granted	6414853	2-Jul-02
Capacitor Bank Switching	Australia	775672	21-Nov-00	Granted	775672	25-Nov-04
Capacitor Bank Switching	Canada	2392255	21-Nov-00	Granted	2392255	18-Aug-09
Capacitor Bank Switching	Canada	2,666,061	19-May-09	Granted	2666061	19-Jan-10
Capacitor Bank Switching	European Patent Convention	992463	21-Nov-00	Granted	1236212	4-Jan-12
Capacitor Bank Switching	France	992463	21-Nov-00	Granted	1236212	4-Jan-12
Capacitor Bank Switching	Germany	992463	21-Nov-00	Granted	60046 818.6	4-Jan-12
Capacitor Bank Switching	Ireland	992463	21-Nov-00	Granted	1236212	4-Jan-12
Capacitor Bank Switching	Italy	992463	21-Nov-00	Granted	1236212	4-Jan-12

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Capacitor Bank Switching	United Kingdom	992463	21-Nov-00	Granted	1236212	4-Jan-12
Capacitor Bank Switching	USA	09/449378	24-Nov-99	Granted	6900619	31-May-05
Capacitor Bank Switching	USA	11/136333	24-May-05	Granted	7265521	4-Sep-07
Method And Apparatus For Providing Power To A Utility Network	USA	09/449375	24-Nov-99	Granted	6600973	29-Jul-03
Voltage Regulation Of A Utility Power Network	Canada	2392409	22-Nov-00	Granted	2392409	17-Nov-09
Voltage Regulation Of A Utility Power Network	European Patent Convention	6075796	22-Nov-00	Published		
Voltage Regulation Of A Utility Power Network	France	979222.7	22-Nov-00	Granted		4-Oct-06
Voltage Regulation Of A Utility Power Network	Germany	979222.7	22-Nov-00	Granted	60031158	4-Oct-06
Voltage Regulation Of A Utility Power Network	Ireland	979222.7	22-Nov-00	Granted		4-Oct-06
Voltage Regulation Of A Utility Power Network	Italy	979222.7	1236261	Granted	4-Oct-06	22-Nov-20
Voltage Regulation Of A Utility Power Network	Mexico	2002/005243	22-Nov-00	Granted	239780	28-Aug-06
Voltage Regulation Of A Utility Power Network	Mexico	2006/009615	22-Nov-00	Granted	266129	13-Apr-09
Voltage Regulation Of A Utility Power Network	Spain	979222.7	22-Nov-00	Granted	2276704	4-Oct-06
Voltage Regulation Of A Utility Power Network	Sweden	979222.7	22-Nov-00	Granted		4-Oct-06

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Voltage Regulation Of A Utility Power Network	Switzerland	979222.7	22-Nov-00	Granted		4-Oct-06
Voltage Regulation Of A Utility Power Network	United Kingdom	979222.7	22-Nov-00	Granted		4-Oct-06
Voltage Regulation Of A Utility Power Network	USA	11/655817	19-Jan-07	Granted	RE41170(E1)	30-Mar-10
Voltage Regulation Of A Utility Power Network	USA	12/502048	13-Jul-09	Pending		
Multi-Layer Articles And Methods Of Making Same	China (PRC)	810756.4	14-Jul-00	Granted	ZL008107556.4	2-Jun-10
Multi-Layer Articles And Methods Of Making Same	Japan	512644/2001	14-Jul-00	Published		
Multi-Layer Articles And Methods Of Making Same	Korea (ROK)	2002/7000994	14-Jul-00	Granted	10-0683186	8-Feb-07
Multi-Layer Articles And Methods Of Making Same	USA	09/615999	14-Jul-00	Granted	6974501	13-Dec-05
Surface Control Alloy Substrates And Methods Of Manufacture Therefor	USA	09/616570	14-Jul-00	Granted	6730410	4-May-04
Superconducting Rotating Machines	USA	09/415626	12-Oct-99	Granted	6489701	3-Dec-02
Electric Utility System With Superconducting Magnetic Energy Storage	Australia	77509	26-Jan-00	Granted	777509	17-Feb-05
Electric Utility System With Superconducting Magnetic Energy Storage	Australia	2005200223	19-Jan-05	Granted	2005200223	25-Oct-07

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Electric Utility System With Superconducting Magnetic Energy Storage	Canada	2359322	26-Jan-00	Granted	2359322	18-Sep-07
Electric Utility System With Superconducting Magnetic Energy Storage	China (PRC)	200510062525.9	26-Jan-00	Granted	ZL200510062525.9	24-Jun-09
Electric Utility System With Superconducting Magnetic Energy Storage	European Patent Convention	923064	26-Jan-00	Published		
Electric Utility System With Superconducting Magnetic Energy Storage	Japan	599113/2000	26-Jan-00	Granted	3597473	17-Sep-04
Electric Utility System With Superconducting Magnetic Energy Storage	Korea (ROK)	10-2001-7009545	26-Jan-00	Granted	10-0879481	13-Jan-09
Electric Utility System With Superconducting Magnetic Energy Storage	USA	09/449435	24-Nov-99	Granted	6906434	14-Jun-05
Cryogenic Refrigerator	USA	09/716598	20-Nov-00	Granted	6532748	18-Mar-03
Internal Support For Superconducting Windings	USA	09/481480	11-Jan-00	Granted	6693504	17-Feb-04
HTS Superconducting Rotating Machine	France	990909.4	9-Nov-00	Granted	1247325	5-Oct-05
HTS Superconducting Rotating Machine	Germany	60023038.4-08	9-Nov-00	Granted	1247325	5-Oct-05
HTS Superconducting Rotating Machine	Italy	990909.4	9-Nov-00	Granted	1247325	5-Oct-05
HTS Superconducting Rotating Machine	Japan	552505/2001	9-Nov-00	Granted	3892299	15-Dec-06

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HTS Superconducting Rotating Machine	United Kingdom	990909.4	9-Nov-00	Granted	1247325	5-Oct-05
HTS Superconducting Rotating Machine	USA	09/632776	4-Aug-00	Granted	6597082	22-Jul-03
Current Limiting Composite Material	European Patent Convention	931914.6	22-Mar-00	Granted	1166370	29-Jun-11
Current Limiting Composite Material	Japan	607284/2000	22-Mar-00	Pending		
Current Limiting Composite Material	Japan	2010-260404	22-Nov-10	Published		
Current Limiting Composite Material	USA	09/488742	20-Jan-00	Granted	6762673	13-Jul-04
Cooling Systems For High Temperature Superconducting Machines	France	1942409.2	10-Jan-01	Granted	1248933	25-Oct-06
Cooling Systems For High Temperature Superconducting Machines	Germany	1942409.2	10-Jan-01	Granted	1248933	25-Oct-06
Cooling Systems For High Temperature Superconducting Machines	Italy	1942409.2	10-Jan-01	Granted	1248933	25-Oct-06
Cooling Systems For High Temperature Superconducting Machines	Japan	552034/2001	10-Jan-01	Published		
Cooling Systems For High Temperature Superconducting Machines	United Kingdom	1942409.2	10-Jan-01	Granted	1248933	25-Oct-06
Cooling Systems For High Temperature Superconducting Machines	USA	09/480396	11-Jan-00	Granted	6347522	19-Feb-02

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Cooling Systems For High Temperature Superconducting Machines	USA	10/059873	29-Jan-02	Granted	6625992	30-Sep-03
Superconducting Synchronous Machine Field Winding Protection	France	1962339.6	31-Jul-01	Granted	1305871	12-Sep-07
Superconducting Synchronous Machine Field Winding Protection	Germany	60130467.5	31-Jul-01	Granted	60130467.5-08	14-Jan-08
Superconducting Synchronous Machine Field Winding Protection	Italy	1962339.6	31-Jul-01	Granted	1305871	12-Sep-07
Superconducting Synchronous Machine Field Winding Protection	Korea (ROK)	2003/7001546	31-Jul-01	Granted	10-0635171	10-Oct-06
Superconducting Synchronous Machine Field Winding Protection	United Kingdom	1962339.6	31-Jul-01	Granted	1305871	12-Sep-07
Superconducting Synchronous Machine Field Winding Protection	USA	09/632599	4-Aug-00	Granted	6359365	19-Mar-02
Control Of Oxide Layer Reaction Rates	USA	09/616566	14-Jul-00	Granted	6673387	6-Jan-04
Mounting Structure For Superconducting Windings	USA	10/085471	28-Feb-02	Granted	7119644	10-Oct-06
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	China (PRC)	1808025.1	23-Apr-01	Granted	1808025.1	24-Jan-07
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	China (PRC)	05-10116160.3	23-Apr-01	Granted	ZL200510116160.3	23-Jul-08

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Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	European Patent Convention	1928730.9	23-Apr-01	Granted	1281225	12-Aug-09
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	European Patent Convention	5001833.2	23-Apr-01	Published		
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	France	1928730.9	23-Apr-01	Granted	1281225	12-Aug-09
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	Germany	1928730.9	23-Apr-01	Granted	60139552	12-Aug-09
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	Italy	1928730.9	23-Apr-01	Granted	1281225	12-Aug-09
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	Korea (ROK)	2002-7014196	23-Apr-01	Granted	10-0683192	8-Feb-07
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	Singapore	200205946-7	23-Apr-01	Granted	92141	30-Jun-05
Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	United Kingdom	1928730.9	23-Apr-01	Granted	1281225	12-Aug-09

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Method And System For Providing Voltage Support To A Load Connected To A Utility Power Network	USA	09/556226	24-Apr-00	Granted	6392856	21-May-02
Exciter And Electronic Regulator For Superconducting Rotating Machinery	USA	10/287412	4-Nov-02	Granted	6791216	14-Sep-04
Stator Coil Assembly For Superconducting Rotating Machines	USA	09/632601	4-Aug-00	Granted	6879081	12-Apr-05
Stator Coil Assembly For Superconducting Rotating Machines	USA	10/061103	1-Feb-02	Granted	6888286	3-May-05
Stator Coil Assembly For Superconducting Rotating Machines	USA	10/320321	16-Dec-02	Granted	6911759	28-Jun-05
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Australia	55398/96	10-Apr-96	Granted	713892	20-Mar-00
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Canada	2217822	10-Apr-96	Granted	2217822	23-Nov-04
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	France	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Germany	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Italy	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Japan	11-504612	10-Apr-96	Granted	3601830	1-Oct-04



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Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Korea (ROK)	97-707198	10-Apr-96	Granted	418279	30-Jan-04
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Spain	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Sweden	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	Switzerland	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	United Kingdom	96912663	10-Apr-96	Granted	830218	24-May-06
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	USA	08/419583	10-Apr-95	Granted	5741377	21-Apr-98
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	USA	08/651291	22-May-96	Granted	5739086	14-Apr-98
Structures Having Enhanced Biaxial Texture And Method Of Fabricating Same	USA	08/650249	22-May-96	Granted	5898020	27-Apr-99
Structures Having Enhanced Biaxial Texture	USA	09/005381	9-Jun-98	Granted	5958599	28-Sep-99
Method Of Deforming A Biaxially Textured Buffer Layer On A Textured Metallic Substrate And Articles	USA	09/163994	30-Sep-98	Granted	6114287	2-Sep-00
Method Of Forming Biaxially Textured Alloy Substrates And Devices Thereon	USA	08/934328	19-Sep-97	Granted	5964966	12-Oct-99
Method Of Forming Biaxially Textured Alloy Substrates And Devices Thereon	USA	09/250,683	16-Feb-99	Granted	6106615	22-Aug-00

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High TC YBCO Superconductor Deposited On Biaxially Textured Ni Substrate	USA	08/670871	26-Jun-96	Granted	5968877	19-Oct-99
Method Of Depositing An Electrically Conductive Oxide Film On A Textured Metallic Substrate And Articles Formed Therefrom	USA	09/163888	30-Sep-98	Granted	6296701	2-Oct-01
Method For Making Buffer Layers On Rolled Nickel Or Copper As Superconductor Substrates	USA	09/096559	12-Jun-98	Granted	6150034	21-Nov-00
Buffer Layers On Metal Surfaces Having Biaxial Texture As Superconductor Substrates	USA	09/399684	21-Sep-99	Granted	6156376	5-Dec-00
Method For Making Buffer Layers On Rolled Nickel Or Copper As Superconductor Substrates	USA	09/096559	12-Jun-98	Granted	6150034	21-Nov-00
Buffer Layers On Metal Surfaces Having Biaxial Texture As Superconductor Substrates	USA	09/399684	21-Sep-99	Granted	6156376	5-Dec-00
Buffer Layers On Metal Surfaces Having Biaxial Texture As Superconductor Substrates	USA	09/399684	21-Sep-99	Granted	6156376	5-Dec-00
High Thermal Conductivity Connector Having High Electrical Isolation	USA	08/090425	12-Jun-93	Granted	5386870	7-Feb-1995
Integrated Multi-Level Inverter Assembly	Japan	540289/2002	1-Nov-01	Published		
Integrated Multi-Level Inverter Assembly	USA	09/704899	2-Nov-00	Granted	6700804	2-Mar-04
Low-Inductance Connector For Printed-Circuit Board	USA	09/677097	29-Sep-00	Granted	6472613	29-Oct-02
A Dual Mode Controller For Switching Circuitry	USA	09/676840	29-Sep-00	Granted	6366064	2-Apr-02
Low Inductance Transistor Module With Distributed Bus	USA	09/637619	11-Aug-00	Granted	6459605	1-Oct-02
Tangential Torque Support	USA	10/083025	26-Feb-02	Granted	6674206	6-Jan-04
Tangential Torque Support	USA	10/752075	6-Jan-04	Granted	6815856	9-Nov-04

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Tangential Torque Support	USA	10/954591	30-Sep-04	Granted	6873079	29-Mar-05
Polymer Encapsulated Ceramic Superconductor	USA	09/658838	8-Sep-00	Granted	6784362	31-Aug-04
Voltage Recovery Device For Use With A Utility Power Network	USA	09/944791	31-Aug-01	Granted	6987331	17-Jan-06
Exciter Assembly Telemetry	USA	09/713349	13-Nov-00	Granted	6828919	7-Dec-04
High Temperature Superconductor Rotor For A Synchronous Machine	USA	09/696363	25-Oct-00	Granted	6768232	27-Jul-04
Torque Transmission Assembly For Use In Superconducting Rotating Machines	France	2756440	11-Jul-02	Granted	1407529	
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Germany	2756440	11-Jul-02	Granted	1407529	20-Apr-11
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Italy	2756440	11-Jul-02	Granted	1407529	20-Apr-11
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Korea (ROK)	10-03-7003864	11-Jul-02	Granted	10-0727773	7-Jun-07
Torque Transmission Assembly For Use In Superconducting Rotating Machines	United Kingdom	2756440	11-Jul-02	Granted	1407529	20-Apr-11
Torque Transmission Assembly For Use In Superconducting Rotating Machines	USA	09/909412	19-Jul-01	Granted	6700274	2-Mar-04
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	France	2746976.6	11-Jul-02	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	Germany	2746976.6	11-Jul-02	Pending		
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	Italy	2746976.6	11-Jul-02	Granted	1415385	5-Nov-08
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	Japan	2003-513114	11-Jul-02	Granted	3833656	28-Jul-06
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	Korea (ROK)	2003-7003628	11-Jul-02	Granted	10-0562513	13-Mar-06
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	United Kingdom	2746976.6	11-Jul-02	Pending		
Superconducting Rotating Machine With A Subtransient Reactance Determined By Construction	USA	09/905611	13-Jul-01	Granted	6664672	16-Dec-03
Thermally-Conductive Stator Support Structure	Japan	2003-572153	30-Jul-04	Pending		
Thermally-Conductive Stator Support Structure	USA	10/083927	27-Feb-02	Granted	7211919	1-May-07
Thermally-Conductive Stator Support Structure	USA	11/742083	30-Apr-07	Granted	7423356	9-Sep-08
Thermally-Conductive Stator Support Structure	USA	12/035213	21-Feb-08	Granted	7589441	15-Sep-09

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Multi-Layer Superconductor Having Buffer Layer With Oriented Termination Plane	USA	09/995420	26-Nov-01	Granted	6537689	25-Mar-03
Precursor Solutions And Methods Of Using Same	Australia	2002216631	17-Oct-01	Granted	2002216631	12-Oct-06
Precursor Solutions And Methods Of Using Same	China (PRC)	1817849.9	17-Oct-01	Granted	ZL01817849.9	17-Jun-09
Precursor Solutions And Methods Of Using Same	France	1988951.8	17-Oct-01	Granted	1334525	2-May-07
Precursor Solutions And Methods Of Using Same	Germany	1988951.8	17-Oct-01	Granted	1334525	2-May-07
Precursor Solutions And Methods Of Using Same	Italy	1988951.8	17-Oct-01	Granted	1334525	2-May-07
Precursor Solutions And Methods Of Using Same	Japan	2002-538490	17-Oct-01	Granted	4234424	19-Dec-08
Precursor Solutions And Methods Of Using Same	Korea (ROK)	2003-7005637	17-Oct-01	Granted	10-0585417	24-May-06
Precursor Solutions And Methods Of Using Same	United Kingdom	1988951.8	17-Oct-01	Granted	1334525	2-May-07
Precursor Solutions And Methods Of Using Same	USA	10/673307	29-Sep-03	Granted	7326434	5-Feb-08
Precursor Solutions And Methods Of Using Same	USA	12/025982	5-Feb-08	Granted	7939126	10-May-11
Multi-Level Quasi-Resonant Power Inverter	USA	09/870401	30-May-01	Granted	6449179	10-Sep-02
Process Of Magnesium-Boride Superconductors	USA	10/094076	8-Mar-02	Granted	7018954	28-Mar-06
Buffer Layers On Biaxially Textured Metal Substrates	USA	08/922173	2-Sep-97	Granted	6077344	20-Jun-00

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Buffer Layers On Biaxially Textured Metal Substrates	USA	09/248300	11-Feb-99	Granted	6235402	22-May-01
Buffer Layers On Biaxially Textured Metal Substrates	USA	09/408235	29-Sep-99	Granted	6270908	7-Aug-01
Buffer Layers On Biaxially Textured Metal Substrates	USA	09/563665	17-Sep-02	Granted	6451450	17-Sep-02
Superconductor Methods And Reactors	China (PRC)	2815187.9	30-Jul-02	Granted	ZL02815187.9	6-Feb-08
Superconductor Methods And Reactors	France	2805695	30-Jul-02	Granted	1419538	7-Mar-07
Superconductor Methods And Reactors	Germany	2805695	30-Jul-02	Granted	60218697	7-Mar-07
Superconductor Methods And Reactors	Italy	2805695	30-Jul-02	Granted	1419538	7-Mar-07
Superconductor Methods And Reactors	Japan	566911/2003	30-Jul-02	Published		
Superconductor Methods And Reactors	Japan	2006/138050	17-May-06	Pending		
Superconductor Methods And Reactors	Korea (ROK)	10-04-7001533	30-Jul-02	Granted	719612	11-May-07
Superconductor Methods And Reactors	USA	10/208134	30-Jul-02	Granted	6797313	28-Sep-04
Superconductor Cables And Magnetic Devices	Canada	2,467,693	18-Oct-02	Granted	2467693	30-Sep-08
Superconductor Cables And Magnetic Devices	China (PRC)	2823558.4	18-Oct-02	Granted	ZL02823558.4	17-Sep-08
Superconductor Cables And Magnetic Devices	France	2789225.6	18-Oct-02	Granted	1449265	3-Jan-07

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Superconductor Cables And Magnetic Devices	Germany	2789225.6	18-Oct-02	Granted	60217395.7	3-Jan-07
Superconductor Cables And Magnetic Devices	Italy	2789225.6	18-Oct-02	Granted	1449265	3-Jan-07
Superconductor Cables And Magnetic Devices	Japan	2003-548322	18-Oct-02	Granted	4141957	20-Jun-08
Superconductor Cables And Magnetic Devices	Japan	2006-198166	18-Oct-02	Published		
Superconductor Cables And Magnetic Devices	Korea (ROK)	2004-7007858	24-May-04	Granted	669214	9-Jan-07
Superconductor Cables And Magnetic Devices	United Kingdom	2789225.6	18-Oct-02	Granted	1449265	3-Jan-07
Superconductor Cables And Magnetic Devices	USA	09/995442	28-Nov-01	Granted	6745059	1-Jun-04
Superconductor Cables And Magnetic Devices	USA	10/853547	25-May-04	Granted	6943656	13-Sep-05
Superconductor Cables And Magnetic Devices	USA	11/104194	12-Apr-05	Granted	7106156	12-Sep-06
Electronic Module Interconnect System	USA	09/966330	27-Sep-01	Granted	6787939	7-Sep-04
Stator Coil Assembly	USA	11/344585	30-Jan-06	Granted	7619345	17-Nov-09
Axially-Expandable EM Shield	USA	09/956328	19-Sep-01	Granted	7282832	16-Oct-07
Buffer Layers On Metal Surfaces Having Biaxial Texture As Superconductor Substrates	USA	09/174188	16-Oct-98	Granted	6159610	12-Dec-00
Method Of Making High-Critical-Current Density YBa2Cu3O7 Superconducting Layers On Metallic Substrates	USA	09/014481	28-Jan-98	Granted	5972847	26-Oct-99
Conductive And Robust Nitride Buffer Layers On Biaxially Textured Substrates	USA	10/919630	17-Aug-04	Granted	7510997	31-Mar-09

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A Rotor Assembly	China (PRC)	04-80006628.7	10-Feb-04	Granted	ZL200480006628.7	23-Dec-09
A Rotor Assembly	European Patent Convention	4709900.7	10-Feb-04	Published		
A Rotor Assembly	Japan	2005-518579	10-Feb-04	Granted	4376869	18-Sep-09
A Rotor Assembly	Korea (ROK)	10-05-7014816	10-Feb-04	Granted	761432	18-Sep-07
A Rotor Assembly	USA	10/367125	14-Feb-03	Granted	6759781	6-Jul-04
Parting Agents For Metal-Clad High-Temperature Superconductor Wires And Tapes	European Patent Convention	2798056.4	10-Sep-02	Published		
Parting Agents For Metal-Clad High-Temperature Superconductor Wires And Tapes	USA	10/489015	10-Sep-02	Published		
Processing Of Magnesium-Boride Superconductor Wires	USA	11/030817	7-Jan-05	Published		
Superconducting Wire And Method Of Manufacturing The Same	USA	08/463777	5-Jun-95	Granted	5935911	10-Aug-99
Superconducting Wire And Method Of Manufacturing The Same	USA	08/463738	5-Jun-95	Granted	6170147	9-Jul-01
Low Impedance Transmission Line With A Power Flow Controller	Canada	2496622	9-Sep-03	Published		
Low Impedance Transmission Line With A Power Flow Controller	China (PRC)	3821150.5	9-Sep-03	Published		



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Low Impedance Transmission Line With A Power Flow Controller	China (PRC)	200910149694.4	9-Sep-03	Published		
Low Impedance Transmission Line With A Power Flow Controller	European Patent Convention	3794662.1	9-Sep-03	Published		
Low Impedance Transmission Line With A Power Flow Controller	Japan	2004-534735	9-Sep-03	Granted	4087383	29-Feb-08
Method And Apparatus For Cooling A Superconducting Cable	USA	11/154344	16-Jun-05	Granted	7453041	18-Nov-08
Deposition Of Buffer Layers On Textured Metal Surfaces	USA	10/812676	30-Mar-04	Granted	7261776	28-Aug-07
Superconductor Methods And Reactors	Japan	2006-515358	2-Jun-04	Published		
Power System Having A Phase Locked Loop With A Notch Filter	USA	10/805723	22-Mar-04	Granted	6977827	20-Dec-05
Oxide Films With Nanodot Flux Pinning Centers	China (PRC)	200480040541.1	15-Nov-04	Granted	ZL200480040541.1	23-Sep-09
Oxide Films With Nanodot Flux Pinning Centers	European Patent Convention	4821574.3	15-Nov-04	Published		
Oxide Films With Nanodot Flux Pinning Centers	Japan	2006-549250	15-Nov-04	Published		
Oxide Films With Nanodot Flux Pinning Centers	Korea (ROK)	10-06-7016281	15-Nov-04	Granted	815000	12-Mar-08
Oxide Films With Nanodot Flux Pinning Centers	USA	10/758710	16-Jan-04	Published		
Oxide Films With Nanodot Flux Pinning Centers	USA	12/346421	30-Dec-08	Published		

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Dropwise Deposition Of A Patterned Oxide Superconductor	USA	10/955866	29-Sep-04	Granted	7582328	1-Sep-09
Method Of Manufacturing Oxide Superconducting Wire	USA	07/960307	13-Oct-92	Granted	5288699	22-Feb-94
Method Of Preparing Bismuth Oxide Superconducting Wire	Australia	23459/92	22-Jul-92	Granted	646971	23-Jun-94
Method Of Preparing Bismuth Oxide Superconducting Wire	Canada	2092180	22-Jul-92	Granted	2092180	3-Dec-96
Method Of Preparing Bismuth Oxide Superconducting Wire	France	92916222	22-Jul-92	Granted	551523	6-Mar-96
Method Of Preparing Bismuth Oxide Superconducting Wire	Germany	92916222	22-Jul-92	Granted	551523	6-Mar-96
Method Of Preparing Bismuth Oxide Superconducting Wire	Italy	92916222	22-Jul-92	Granted	551523	6-Mar-96
Method Of Preparing Bismuth Oxide Superconducting Wire	Liechtenstein	92916222	22-Jul-92	Granted	551523	6-Mar-96
Method Of Preparing Bismuth Oxide Superconducting Wire	Netherlands	92916222	22-Jul-92	Granted	551523	6-Mar-96
Method Of Preparing Bismuth Oxide Superconducting Wire	Switzerland	92916222	22-Jul-92	Granted	551523	6-Mar-96
Method Of Preparing Bismuth Oxide Superconducting Wire	United Kingdom	92916222	22-Jul-92	Granted	551523	6-Mar-96

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Method Of Preparing Bismuth Oxide Superconducting Wire	USA	08/345920	28-Nov-94	Granted	5552376	3-Sep-96
Method Of Preparing High-Temperature Superconducting Wire	European Patent Convention	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	France	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	Germany	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	Italy	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	Sweden	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	Switzerland	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	United Kingdom	941068991	3-May-94	Granted	631331	11-Mar-98
Method Of Preparing High-Temperature Superconducting Wire	USA	08/955322	20-Oct-97	Granted	5902774	11-May-99
Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	European Patent Convention	941120388	2-Aug-94	Granted	638942	13-Jun-01

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Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	France	941120388	2-Aug-94	Granted	638942	13-Jun-01
Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	Germany	941120388	2-Aug-94	Granted	638942	13-Jun-01
Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	Italy	941120388	2-Aug-94	Granted	638942	13-Jun-01
Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	United Kingdom	941120388	2-Aug-94	Granted	638942	13-Jun-01
Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	USA	08/739908	30-Oct-96	Granted	6158106	12-Dec-00
Oxide Superconducting Wire, Manufacturing Method Thereof, Oxide Superconducting Coil And Cable	USA	09/640527	17-Aug-00	Granted	6272732	14-Aug-01
Multifilamentary Oxide Superconducting Wire And Coil Formed By The Same	European Patent Convention	941207532	27-Dec-94	Granted	661762	19-Mar-97
Multifilamentary Oxide Superconducting Wire And Coil Formed By The Same	France	941207532	27-Dec-94	Granted	661762	19-Mar-97
Multifilamentary Oxide Superconducting Wire And Coil Formed By The Same	Germany	941207532	27-Dec-94	Granted	661762	19-Mar-97

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Multifilamentary Oxide Superconducting Wire And Coil Formed By The Same	Italy	941207532	27-Dec-94	Granted	661762	19-Mar-97
Multifilamentary Oxide Superconducting Wire And Coil Formed By The Same	United Kingdom	941207532	27-Dec-94	Granted	661762	19-Mar-97
Multifilamentary Oxide Superconducting Wire And Coil Formed By The Same	USA	08/365521	28-Dec-94	Granted	5516753	14-May-96
Method Of Preparing High-Temperature Superconducting Wire	European Patent Convention	951051937	9-Apr-95	Granted	676817	9-Sep-98
Method Of Preparing High-Temperature Superconducting Wire	France	951051937	9-Apr-95	Granted	676817	9-Sep-98
Method Of Preparing High-Temperature Superconducting Wire	Germany	951051937	9-Apr-95	Granted	676817	9-Sep-98
Method Of Preparing High-Temperature Superconducting Wire	Italy	951051937	9-Apr-95	Granted	676817	9-Sep-98
Method Of Preparing High-Temperature Superconducting Wire	Sweden	951051937	9-Apr-95	Granted	676817	9-Sep-98
Method Of Preparing High-Temperature Superconducting Wire	Switzerland	951051937	9-Apr-95	Granted	676817	9-Sep-98
Method Of Preparing High-Temperature Superconducting Wire	United Kingdom	951051937	9-Apr-95	Granted	676817	9-Sep-98

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Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	France	961059649	16-Apr-96	Granted	769819	28-Dec-05
Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	Germany	961059649	16-Apr-96	Granted	769819	28-Dec-05
Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	Italy	961059649	16-Apr-96	Granted	769819	28-Dec-05
Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	Sweden	961059649	16-Apr-96	Granted	769819	28-Dec-05
Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	Switzerland	961059649	16-Apr-96	Granted	769819	28-Dec-05
Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	United Kingdom	961059649	16-Apr-96	Granted	769819	28-Dec-05
Oxide Superconducting Wire With Stabilizing Metal Having None Noble Component	USA	08/632229	15-Apr-96	Granted	6469253	22-Oct-02
High-Temperature Oxide Superconductor	Canada	588648	19-Jan-89	Granted	CA1341616	31-May-11
High-Temperature Oxide Superconductor	USA	07/293465	4-Jan-89	Granted	7132388	7-Nov-06
Method For Producing An Elongated Sintered Article	USA	07/883368	16-Jun-92	Granted	5252288	12-Oct-93
Method For Producing An Elongated Sintered Article	USA	08/355814	14-Dec-94	Granted	5480601	2-Jan-96

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Process For Manufacturing A Superconducting Wire Of Compound Oxide-Type Ceramic	USA	07/624536	7-Dec-90	Pending		
Process For Manufacturing A Superconducting Wire Of Compound Oxide-Type Ceramic	USA	08/851312	5-May-97	Granted	5981444	9-Nov-99
Process For Manufacturing A Compound Oxide-Type Superconducting Wire	USA	08/056615	4-May-93	Granted	5786305	28-Jul-98
Process For Manufacturing A Superconducting Composite	USA	07/884137	18-May-92	Granted	5338721	16-Aug-94
Process For Manufacturing A Superconducting Composite	USA	08/906855	9-Aug-97	Granted	6301774	16-Oct-01
Process For Manufacturing A Superconducting Composite	USA	08/200540	22-Feb-94	Granted	5424282	13-Jun-95
Process For Producing An Elongated Sintered Article	USA	08/122178	17-Sep-93	Granted	5409890	26-Apr-95
Dynamic Reactive Compensation System And Method	Australia	2005223211	4-Mar-05	Granted	2005223211	19-Jun-08
Dynamic Reactive Compensation System And Method	Canada	2558253	4-Mar-05	Granted	2558253	15-Sep-09
Dynamic Reactive Compensation System And Method	China (PRC)	200580011413.9	4-Mar-05	Granted	ZL200580011413.9	29-Sep-10
Dynamic Reactive Compensation System And Method	European Patent Convention	5724401.4	4-Mar-05	Published		

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Dynamic Reactive Compensation System And Method	New Zealand	549655	4-Mar-05	Granted	549655	12-Jun-08
Dynamic Reactive Compensation System And Method	USA	10/794398	4-Mar-04	Granted	7091703	15-Aug-06
Method Of Producing Oxide Superconductor	USA	08/459624	2-Jun-95	Granted	5639714	17-Jun-97
Method Of Producing Oxide Superconductor	USA	08/747133	12-Nov-96	Granted	6276048	21-Aug-01
Oxide Superconducting Wire	USA	08/999675	14-Oct-97	Granted	6357105	19-Mar-02
Method Of Manufacturing Oxide Superconducting Wire	USA	08/955323	20-Oct-97	Granted	6311384	6-Nov-01
Bismuth Oxide Superconductor Of Preparing The Same	USA	08/283498	1-Aug-94	Granted	5670459	23-Sep-97
Bismuth Oxide Superconductor Of Preparing The Same	USA	08/858842	19-May-97	Granted	5910222	8-Jun-99
Method Of Preparing Bismuth Oxide Superconductor	USA	08/385240	8-Feb-95	Granted	5610123	11-Mar-97
Oxide Superconducting Wire, Method Of Preparing The Same, And Method Of Handling The Same	USA	08/747881	13-Nov-96	Granted	6205345	20-Mar-01
Oxide Superconducting Wire, Method Of Preparing The Same, And Method Of Handling The Same	USA	09/723170	27-Nov-00	Granted	6536097	25-Mar-03
Method Of Preparing Bismuth Superconductor	USA	08/376461	20-Jan-95	Granted	5877125	2-Mar-99



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Method Of Preparing Oxide High-Temperature Superconductor	USA	08/316262	29-Sep-94	Granted	5663120	2-Sep-97
Method Of Preparing A Multifilamentary Bismuth Oxide Superconducting Wire	USA	08/167581	15-Dec-93	Granted	6536096	25-Mar-03
Junction Between Wires Employing Oxide Superconductors And Joining Method Therefor	USA	08/446349	22-May-95	Granted	5949131	7-Sep-99
Junction Between Wires Employing Oxide Superconductors And Joining Method Therefor	USA	09/112970	9-Jul-98	Granted	6194226	27-Feb-01
High Temperature Superconducting Wire Using Oxide Superconductive Material	USA	08/479898	7-Jun-95	Granted	5869430	8-Feb-99
Method Of Preparing Oxide Superconducting Wire	USA	08/295297	24-Aug-94	Granted	5462920	31-Oct-95
Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	Australia	33148/93	19-Feb-93	Granted	663355	23-Jan-96
Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	European Patent Convention	931025795	18-Feb-93	Granted	556837	17-Sep-97
Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	France	931025795	18-Feb-93	Granted	556837	17-Sep-97
Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	Germany	931025795	18-Feb-93	Granted	556837	17-Sep-97
Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	Italy	931025795	18-Feb-93	Granted	556837	17-Sep-97
Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	United Kingdom	931025795	18-Feb-93	Granted	556837	17-Sep-97

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Method Of Joining Superconducting Wire Using Oxide High-Temperature Superconductor	USA	08/019976	19-Feb-93	Granted	5358929	25-Oct-94
Oxide Superconducting Wire And Method Of Preparing The Same	Denmark	961055928	9-Apr-96	Granted	736914	15-May-02
Oxide Superconducting Wire And Method Of Preparing The Same	European Patent Convention	961055928	9-Apr-96	Granted	736914	15-May-02
Oxide Superconducting Wire And Method Of Preparing The Same	France	961055928	9-Apr-96	Granted	736914	15-May-02
Oxide Superconducting Wire And Method Of Preparing The Same	Germany	961055928	9-Apr-96	Granted	736914	15-May-02
Oxide Superconducting Wire And Method Of Preparing The Same	Italy	961055928	9-Apr-96	Granted	736914	15-May-02
Oxide Superconducting Wire And Method Of Preparing The Same	United Kingdom	961055928	9-Apr-96	Granted	736914	15-May-02
Oxide Superconducting Wire And Method Of Preparing The Same	USA	08/627281	4-Apr-96	Granted	6305069	23-Oct-01
Oxide Superconducting Wire And Method Of Preparing The Same	USA	09/9544577	18-Sep-01	Granted	6566609	20-May-03
Method Of Preparing Oxide Superconducting Wire	European Patent Convention	971050315	25-Mar-97	Granted	798749	27-Nov-02

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Method Of Preparing Oxide Superconducting Wire	USA	08/823907	25-Mar-97	Granted	5929000	27-Jul-99
Method Of Preparing Oxide Superconducting Wire	USA	09/055287	6-Apr-98	Granted	6192573	27-Feb-01
Connection Structure For Superconducting Conductors	Australia	19090/87	24-Apr-97	Granted	727324	22-Mar-01
Connection Structure For Superconducting Conductors	European Patent Convention	97106381.3	17-Apr-97	Granted	807994	14-Aug-02
Connection Structure For Superconducting Conductors	USA	08/846170	28-Apr-97	Pending		
Connection Structure For Superconducting Conductors	USA	09/941104	28-Aug-01	Granted	6414244	2-Jul-02
Method And Apparatus For Measuring Critical Current Value Of Superconducting Wire	European Patent Convention	98103197.4	24-Feb-98	Granted	860705	20-Sep-06
Method And Apparatus For Measuring Critical Current Value Of Superconducting Wire	USA	09/028929	24-Feb-98	Granted	5936394	10-Aug-99
Oxide Superconducting Wire Material	European Patent Convention	989056353	25-Feb-98	Published		

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Oxide Superconducting Wire Material	Patent Cooperation Treaty	PCTJP98/00754	27-Feb-98	Published		
Oxide Superconducting Wire Material	USA	09/380272	27-Aug-99	Granted	6631280	7-Oct-03
Method Of Manufacturing A High Temperature Oxide Superconducting Wire	Australia	18496/99	1-Mar-99	Granted	756334	9-Jan-03
Method Of Manufacturing A High Temperature Oxide Superconducting Wire	European Patent Convention	994010304	28-Apr-99	Granted	964458	14-Apr-10
Method Of Manufacturing A High Temperature Oxide Superconducting Wire	USA	09/264570	8-Mar-99	Granted	6311385	6-Nov-01
Oxide Superconductor On Core Type Wire	European Patent Convention	991143009	30-Jul-99	Granted	977282	25-May-05
Oxide Superconductor On Core Type Wire	USA	09/363816	30-Jul-99	Granted	6337307	8-Jan-02
Oxide Superconductor On Core Type Wire	USA	09/789725	22-Feb-01	Published		
Oxide Superconducting Wire Having Insulating Coat And Production Method Thereof	European Patent Convention	904051	18-Feb-00	Granted	1096580	12-Dec-07
Oxide Superconducting Wire Having Insulating Coat And Production Method Thereof	Patent Cooperation Treaty	PCTJP00/00952	18-Feb-00	Published		

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Oxide Superconducting Wire Having Insulating Coat And Production Method Thereof	USA	09/673256	25-Oct-00	Granted	6555504	29-Apr-03
Manufacturing Process Of Superconducting Wire And Retainer For Heat Treatment	European Patent Convention	4012191	4-May-00	Pending		
Manufacturing Process Of Superconducting Wire And Retainer For Heat Treatment	USA	09/559377	27-Apr-00	Granted	6601289	5-Aug-03
Manufacturing Method Of Superconducting Wire	Australia	66681/00	23-Oct-00	Pending	774021	
Manufacturing Method Of Superconducting Wire	European Patent Convention	4037016	28-Dec-00	Granted	1113508	7-Feb-07
Manufacturing Method Of Superconducting Wire	USA	09/666153	19-Sep-00	Granted	6493925	17-Dec-02
Superconducting Wire	Australia	69571/00	26-Oct-00	Pending	781589	
Superconducting Wire	European Patent Convention	4037024	28-Dec-00	Granted	1113507	13-Aug-08
Superconducting Wire	USA	09/684336	10-Oct-00	Granted	6777376	17-Aug-04
Method Of Manufacturing Oxide Superconducting Wire And Oxide Superconducting Wire	Australia	10538/01	1-Nov-00	Pending	777016	
Method Of Manufacturing Oxide Superconducting Wire And Oxide Superconducting Wire	European Patent Convention	971734.9	1-Nov-00	Granted	1158543	4-Feb-09

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Method Of Manufacturing Oxide Superconducting Wire And Oxide Superconducting Wire	Hong Kong	1109218.6	1-Nov-00	Published		
Method Of Manufacturing Oxide Superconducting Wire And Oxide Superconducting Wire	Patent Cooperation Treaty	JP00/07711	1-Nov-00	Published		
Method Of Manufacturing Oxide Superconducting Wire And Oxide Superconducting Wire	USA	09/869701	3-Jul-01	Granted	6844064	18-Jan-05
Superconducting Wire And Method Of Manufacturing The Same	European Patent Convention	14010334	24-Apr-01	Granted	1150362	21-Mar-07
Superconducting Wire And Method Of Manufacturing The Same	Hong Kong	11083276	27-Nov-01	Published		
Superconducting Wire And Method Of Manufacturing The Same	USA	09/820870	30-Mar-01	Granted	6498302	24-Dec-02
Superconducting Wire And Method Of Manufacturing The Same	Australia	23152/01	21-Feb-2001	Pending	0772553	
Superconducting Wire And Method Of Manufacturing The Same	European Patent Convention	14004725	22-Feb-2001	Granted	1128447	07-Jun-2006
Superconducting Wire And Method Of Manufacturing The Same	Hong Kong	1108125.0	17-Nov-2001	Published		
Superconducting Wire And Method Of Manufacturing The Same	USA	09/788492	21-Feb-2001	Granted	6507746	14-Jan-2003
Method Of Preparing Oxide Superconducting Wire And Pressure Heat Treatment Apparatus Employed For The	Australia	54436/01	16-Jul-2001	Pending	0781080	

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Method Of Preparing Oxide Superconducting Wire And Pressure Heat Treatment Apparatus Employed For The	European Patent Convention	01401877.4	13-Jul-2001	Granted	1172868	14-Apr-2010
Method Of Preparing Oxide Superconducting Wire And Pressure Heat Treatment Apparatus Employed For The	Korea (ROK)	0042337/01	13-Jul-2001	Pending	0748008	
Method Of Preparing Oxide Superconducting Wire And Pressure Heat Treatment Apparatus Employed For The	Taiwan	90116220	03-Jul-2001	Granted	157041	27-Sep-2002
Method Of Preparing Oxide Superconducting Wire And Pressure Heat Treatment Apparatus Employed For The	USA	09/903622	13-Jul-2001	Granted	6632776	14-Oct-2003
Method Of Preparing Oxide Superconducting Wire	Australia	57802/01	03-Aug-2001	Pending	0780949	
Method Of Preparing Oxide Superconducting Wire	European Patent Convention	14022529	29-Aug-2001	Granted	1187233	10-Jan-2007
Method Of Preparing Oxide Superconducting Wire	USA	09/920947	03-Aug-2001	Granted	6546614	15-Apr-2003
Oxide High-Temperature Superconducting Wire And Method Of Producing The Same	Australia	65496/01	27-Aug-2001	Granted	0779553	27-Jan-2005
Oxide High-Temperature Superconducting Wire And Method Of Producing The Same	European Patent Convention	01402245.3	29-Aug-2001	Granted	1187232	11-Apr-2007
Oxide High-Temperature Superconducting Wire And Method Of Producing The Same	USA	09/938829	27-Aug-2001	Published		
Method For Manufacturing Oxide Superconductive Wires	Patent Cooperation Treaty	PCTJP01/11673	28-Dec-2001	Pending		
Method For Manufacturing Oxide Superconductive Wires	Taiwan	90133179	31-Dec-2001	Granted	518614	21-Jan-2003

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High-Temperature Superconductive Conductor Winding	USA	08/301923	06-Sep-1994	Granted	5506198	09-Apr-1996
High Temperature Superconducting Coil And Method Of Manufacturing Thereof	USA	08/385571	08-Feb-1995	Granted	5512867	30-Apr-1996
Superconducting Coil	European Patent Convention	971075916	07-May-1997	Granted	807939	17-Oct-2001
Superconducting Coil	France	971075916	07-May-1997	Granted	807939	17-Oct-2001
Superconducting Coil	Germany	971075916	07-May-1997	Granted	807939	17-Oct-2001
Superconducting Coil	United Kingdom	971075916	07-May-1997	Granted	807939	17-Oct-2001
Superconducting Coil	USA	08/848464	08-May-1997	Granted	5861788	19-Jan-1999
Cooling Method And Energizing Method Of Superconductor	European Patent Convention	97112288.2	17-Jul-1997	Granted	0820071	09-Jan-2002
Cooling Method And Energizing Method Of Superconductor	USA	08/897605	21-Jul-1997	Granted	5787714	04-Aug-1998
Superconducting Coil	European Patent Convention	98108366	07-May-1998	Granted	877395	20-Aug-2003
Superconducting Coil	USA	09/073953	07-May-1998	Granted	6081179	27-Jun-2000
Operation Control Method For Superconducting Coil	France	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005
Operation Control Method For Superconducting Coil	Germany	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005
Operation Control Method For Superconducting Coil	Italy	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005
Operation Control Method For Superconducting Coil	Netherlands	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005
Operation Control Method For Superconducting Coil	Sweden	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005



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Operation Control Method For Superconducting Coil	Switzerland	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005
Operation Control Method For Superconducting Coil	United Kingdom	981199524	21-Oct-1998	Granted	0911839	07-Sep-2005
Operation Control Method For Superconducting Coil	USA	09/176327	22-Oct-1998	Granted	6094333	25-Jul-2000
Superconducting Conductor	USA	07/935664	24-Aug-1992	Granted	5276281	04-Jan-1994
Mesh-Type Stabilizer For Filamentary Coated Superconductors	USA	11/394917	31-Mar-2006	Granted	7763343	27-Jul-2010
Mesh-Type Stabilizer For Filamentary Coated Superconductors	USA	12/844233	27-Jul-2010	Granted	8142881	27-Mar-2012
Superconducting Machine Stator	Australia	2007292252	07-Sep-2007	Granted	007292252	31-Mar-2011
Superconducting Machine Stator	Canada	2660731	07-Sep-2007	Published		
Superconducting Machine Stator	European Patent Convention	07814752.7	07-Sep-2007	Published		
Superconducting Machine Stator	Japan	2009-526953	27-Feb-2009	Published		
Superconducting Machine Stator	Korea (ROK)	10-2009-7006736	07-Sep-2007	Granted	10-1090944	01-Dec-2011
Superconducting Machine Stator	USA	11/516970	07-Sep-2006	Granted	7786645	31-Aug-2010
Low Ac Loss Filamentary Coated Superconductors	USA	10/955875	29-Sep-2004	Granted	7496390	24-Feb-2009
Thick Superconductor Films With Improved Performance	Australia	2005/333196	30-Sep-2005	Granted	2005333196	14-Jan-2010
Thick Superconductor Films With Improved Performance	China (PRC)	200580038907.6	30-Sep-2005	Granted	CN101258618B	30-Sep-2025
Thick Superconductor Films With Improved Performance	European Patent Convention	05858198.4	30-Sep-2005	Published		
Thick Superconductor Films With Improved Performance	France	05858198.4	30-Sep-2005	Pending		
Thick Superconductor Films With Improved Performance	Germany	05858198.4	30-Sep-2005	Pending		

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Thick Superconductor Films With Improved Performance	Italy	05858198.4	30-Sep-2005	Pending		
Thick Superconductor Films With Improved Performance	Japan	2007-534868	30-Sep-2005	Published		
Thick Superconductor Films With Improved Performance	Korea (ROK)	10-2007-7009908	30-Sep-2005	Granted	0910601	03-Aug-2009
Thick Superconductor Films With Improved Performance	United Kingdom	05858198.4	30-Sep-2005			
Thick Superconductor Films With Improved Performance	USA	11/241636	30-Sep-2005	Granted	7622424	24-Nov-2009
Thick Superconductor Films With Improved Performance	USA	12/624859	24-Nov-2009	Published		
Stacked Filamentary Coated Superconductors	USA	10/955801	29-Sep-2004	Granted	7463915	09-Dec-2008
Doped Y2O3 Buffer Layers For Laminated Conductors	USA	11/192488	29-Jul-2005	Granted	7258928	21-Aug-2007
Motor Mount For Azimuthing POD	USA	11/060849	18-Feb-2005	Granted	7371134	13-May-2008
Method Of Patterning Oxide Superconducting Films	USA	12/713503	26-Feb-2010	Published		
Fault Management Of HTS Power Cable	Australia	2006276089	21-Jul-2006	Granted	2006276089	24-Dec-2009
Fault Management Of HTS Power Cable	Canada	2616530	24-Jan-2008	Allowed		
Fault Management Of HTS Power Cable	China (PRC)	200680027495	21-Jul-2006	Granted	CN101233660	16-Jun-2010
Fault Management Of HTS Power Cable	European Patent Convention	06787946.0	21-Jun-2006	Pending		
Fault Management Of HTS Power Cable	Japan	2008-523973	28-Jan-2008	Granted	4665034	14-Jan-2011
Fault Management Of HTS Power Cable	Korea (ROK)	1020087004877	21-Jul-2006	Granted	10-0943438	12-Feb-2010
Fault Management Of HTS Power Cable	Mexico	MX/a/2008/001346	28-Jan-2006	Granted	276605	14-Jun-2010
Fault Management Of HTS Power Cable	Russian Federation	2008107717	21-Jul-2006	Granted	2359383	20-Jun-2009
Fault Management Of HTS Power Cable	USA	11/459167	21-Jul-2006	Granted	7304826	04-Dec-2007

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Architecture For High Temperature Superconductor Wire	Australia	2006275564	26-Feb-2008	Granted	2006275564	19-Jan-2012
Architecture For High Temperature Superconductor Wire	Canada	2617210	28-Jul-2006	Published		
Architecture For High Temperature Superconductor Wire	China (PRC)	200680027034.3	24-Jan-2008	Published		
Architecture For High Temperature Superconductor Wire	European Patent Convention	06800556.0	07-Feb-2008	Published		
Architecture For High Temperature Superconductor Wire	India	472/KOLNP/2008	01-Feb-2008	Pending		
Architecture For High Temperature Superconductor Wire	Japan	2008524263	25-Jan-2008	Published		
Architecture For High Temperature Superconductor Wire	Korea (ROK)	KR20087003954	19-Feb-2008	Granted	KR1062808	31-Aug-2011
Architecture For High Temperature Superconductor Wire	Russian Federation	2008107760	28-Feb-2008	Granted	2408956	10-Jan-2011
Architecture For High Temperature Superconductor Wire	USA	11/193262	29-Jul-2005	Granted	7816303	19-Oct-2010
Fabrication Of Sealed High Temperature Superconductor Wires	USA	11/490779	21-Jul-2006	Granted	7674751	09-Mar-2010
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	Austria			Published		
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	China (PRC)			Granted	CN100594635	17-Mar-2010
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	Denmark			Published		
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	France	FR200550694	17-Mar-2005	Granted	FR2883426	04-May-2007
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	Germany			Published		

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Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	Japan			Published		
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	Korea (ROK)			Published		
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	Spain			Published		
Thermal Compensation Enclosure For Superconducting Cable Terminal Structure	USA	11/373816	09-Mar-2006	Granted	7708577	04-May-2010
High Temperature Superconducting Wires And Coils	Australia	2006346993	28-Jul-2006	Granted	2006346993	10-Mar-2011
High Temperature Superconducting Wires And Coils	Canada	2622384	29-Jan-2008	Published		
High Temperature Superconducting Wires And Coils	China (PRC)	200680035136.X	20-Mar-2008	Published		
High Temperature Superconducting Wires And Coils	European Patent Convention	06851624.4	19-Feb-2008	Published		
High Temperature Superconducting Wires And Coils	India	723/KOLNP/2008	19-Feb-2008	Pending		
High Temperature Superconducting Wires And Coils	Japan	2008-535523	28-Jan-2008	Pending		
High Temperature Superconducting Wires And Coils	Korea (ROK)	10-2008-7005094	28-Jul-2006	Pending		
High Temperature Superconducting Wires And Coils	Russian Federation	2008107766	28-Feb-2008	Granted	2414769	20-Mar-2011
High Temperature Superconducting Wires And Coils	USA	11/494993	28-Jul-2006	Granted	7781376	24-Aug-2010
Power System Having A Voltage Regulator With A Notch Filter	USA	11/352946	13-Feb-2006	Granted	7778053	17-Aug-2010
Supplementary Transformer Cooling In A Reactive Power Compensation System	USA	11354562	15-Feb-2006	Granted	7567160	28-Jul-2009

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	Australia	2009228245	1-Aug-2010	Pending		
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	Brazil	PI0906250-5	24-Sep-2010	Pending		
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	Canada	2719584	23-Sep-2010	Published		
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	China (PRC)	200980000160.3	11-Sep-2009	Published		
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	European Patent Convention	09724221.8	01-Sep-2010	Published		
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	India	3352/KOLNP/2010	10-Sep-2010	Pending		
A Method Of DC Bus Voltage Harmonic Reduction For Utility Connected Three-Phase Power Converters Under Unbalanced Voltage Condition	Korea (ROK)	10-2010-7024057	27-Oct-2010	Pending		
Component Cooling System	China (PRC)	200980110802.5	26-Sep-2010	Published		
Component Cooling System	India	6143/CHENP/2010	29-Sep-2010	Published		
Component Cooling System	Japan	2011-503097	30-Sep-2010	Pending		
Component Cooling System	Korea (ROK)	10-2010-701999	07-Sep-2010	Pending		
Component Cooling System	Russian Federation	2010144560	31-Oct-2010	Granted	2448313	20-Apr-12
Component Cooling System	USA	12/059951	31-Mar-2008	Published		
High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	Australia	2007275572	10-Dec-2008	Pending		

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High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	Canada	2658009	23-Jul-2007	Published		
High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	European Patent Convention	2658009	23-Jul-2007	Published		
High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	Japan	PCT/US07/016544	23-Jul-2007	Published		
High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	Korea (ROK)	10-2009-7001426	22-Jan-2009	Allowed		
High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	Korea (ROK)	0-2012-7009298	10-Apr-2012	Pending		
High Current, Compact, Flexible Conductors Containing High Temperature Superconducting Tapes	USA	11/880567	23-Jul-2007	Granted	8044752	25-Oct-2011
Low Resistance Splice For High Temperature Superconductor Wires	Patent Cooperation Treaty	US2007/016567	23-Jul-2007	Published		
Low Resistance Splice For High Temperature Superconductor Wires	USA	11/880586	23-Jul-2007	Granted	8030246	04-Oct-2011
Low Resistance Splice For High Temperature Superconductor Wires	USA	13/236824	20-Sep-2011	Allowed		
Synthesis Of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> Using Subatmospheric Processing	USA	09/950888	12-Sep-2001	Granted	6794339	21-Sep-2004
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Australia	2007297485	13-Sep-2007	Granted	200729485	18-Nov-2010
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Brazil	IP 0715152-7	19-Mar-2009	Pending		

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Torque Transmission Assembly For Use In Superconducting Rotating Machines	Canada	2661563	13-Sep-2007	Granted	2661563	06-Dec-2011
Torque Transmission Assembly For Use In Superconducting Rotating Machines	China (PRC)	200780034812.6	13-Sep-2007	Granted	ZL200780034812.6	28-Mar-2012
Torque Transmission Assembly For Use In Superconducting Rotating Machines	European Patent Convention	07842415.7	13-Sep-2007	Published		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	France	07842415.7	19-Mar-2009	Pending		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Germany	07842415.7	19-Mar-2009	Pending		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	India	876/KOLNP/2009	13-Sep-2007	Pending		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Italy	07842415.7	19-Mar-2009	Pending		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Japan	2007/078384	27-Feb-2009	Published		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Korea (ROK)	10-2009-7007638	14-Apr-2009	Granted	10-1070598	29-Sep-2011
Torque Transmission Assembly For Use In Superconducting Rotating Machines	Russian Federation	2009114697	13-Sep-2007	Granted	2418352	10-May-2011
Torque Transmission Assembly For Use In Superconducting Rotating Machines	United Kingdom	07842415.7	19-Mar-2009	Pending		
Torque Transmission Assembly For Use In Superconducting Rotating Machines	USA	11/533595	20-Sep-2006	Granted	7592721	22-Sep-2009
Torque Transmission Assembly For Use In Superconducting Rotating Machines	USA	12/252723	16-Oct-2008	Granted	7638908	29-Dec-2009
High Temperature Superconductors Having Planar Magnetic Flux Pinning Centers And Methods For Making The Same	USA	11/880533	23-Jul-2007	Granted	7902120	08-Mar-2011

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Systems And Methods For Solution-Based Deposition Of Metallic Cap Layers For High Temperature Superconductor Wires	USA	11/728108	23-Mar-07	Granted	7893006	22-Feb-11
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	USA	11/673281	9-Feb-07	Published		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	USA	12/692793	25-Jan-10	Published		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	Brazil	PI0807347-3	7-Aug-09	Pending		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	Canada	2677777	9-Oct-09	Published		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	China (PRC)	200880011212.2	9-Oct-09	Published		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	European Patent Convention	8780386.2	6-Aug-09	Published		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	India	4667/CHENP/2009	7-Aug-09	Pending		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	Japan	2009-549170	7-Aug-09	Pending		
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	Korea (ROK)	10-2009-7018863	9-Sep-09	Allowed		



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Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	Mexico	MX/a/2009/008568	10-Aug-09	Granted	283225	24-Jan-11
Technique To Enhance The Fault Withstand Capability Of Utility HTS Devices	USA	11/688802	20-Mar-07	Published		
Fault Current Limiting HTS Cable And Method Of Configuring Same	Australia	2008214111	12-Aug-09	Granted	2008214111	5-Jan-12
Fault Current Limiting HTS Cable And Method Of Configuring Same	Brazil	PI0807527-1	10-Aug-09	Pending		
Fault Current Limiting HTS Cable And Method Of Configuring Same	Canada	2678251	7-Aug-09	Published		
Fault Current Limiting HTS Cable And Method Of Configuring Same	China (PRC)	200880011215.6	9-Oct-09	Published		
Fault Current Limiting HTS Cable And Method Of Configuring Same	European Patent Convention	8728446.9	6-Aug-09	Published		
Fault Current Limiting HTS Cable And Method Of Configuring Same	India	4658/CHENP/2009	7-Aug-09	Pending		
Fault Current Limiting HTS Cable And Method Of Configuring Same	Japan	JP2009-549169	7-Aug-09	Pending		
Fault Current Limiting HTS Cable And Method Of Configuring Same	Korea (ROK)	10-2009-7018866	9-Sep-09	Allowed		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Fault Current Limiting HTS Cable And Method Of Configuring Same	Korea (ROK)	10-2011-70195	23-Aug-11	Pending		
Fault Current Limiting HTS Cable And Method Of Configuring Same	Mexico	MX/a/2009/008567	10-Aug-09	Granted	283227	24-Jan-11
Fault Current Limiting HTS Cable And Method Of Configuring Same	Patent Cooperation Treaty	US2008/052290	29-Jan-08	Published		
Fault Current Limiting HTS Cable And Method Of Configuring Same	USA	11/688809	20-Mar-07	Granted	7902461	8-Mar-11
Fault Current Limiting HTS Cable And Method Of Configuring Same	USA	12/951293	22-Nov-10	Published		
Parallel Connected HTS FCL Device	Patent Cooperation Treaty	US2008/052307	29-Jan-08	Published		
Parallel Connected HTS FCL Device	USA	11/688827	20-Mar-07	Granted	7724482	25-May-10
HTS 2G Conductor For A Fault Current Limiting Cable	Australia	2008216583	12-Aug-09	Granted	2008216583	5-Jan-12
HTS 2G Conductor For A Fault Current Limiting Cable	Brazil	PI0807758-4	7-Aug-09	Pending		
HTS 2G Conductor For A Fault Current Limiting Cable	Canada	2677680	7-Aug-09	Published		

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HTS 2G Conductor For A Fault Current Limiting Cable	China (PRC)	200880011213.7	9-Oct-09	Published		
HTS 2G Conductor For A Fault Current Limiting Cable	European Patent Convention	8728454.3	6-Aug-09	Published		
HTS 2G Conductor For A Fault Current Limiting Cable	India	4669/CHENP/2009	7-Aug-09	Pending		
HTS 2G Conductor For A Fault Current Limiting Cable	Japan	JP2009-549171	7-Aug-09	Pending		
HTS 2G Conductor For A Fault Current Limiting Cable	Korea (ROK)	10-2009-7018864	9-Sep-09	Pending		
HTS 2G Conductor For A Fault Current Limiting Cable	Mexico	MX/a/2009/008569	10-Aug-09	Granted	283214	24-Jan-11
HTS 2G Conductor For A Fault Current Limiting Cable	Patent Cooperation Treaty	US2008/052302	29-Jan-08	Published		
HTS 2G Conductor For A Fault Current Limiting Cable	USA	11/688817	20-Mar-07	Published		
Composite Substrates For High Temperature Superconductors Having Improved Properties	USA	12/061421	2-Apr-08	Granted	8114526	14-Feb-12
Cooling System In A Rotating Reference Frame	Australia	2009255589	30-Jul-10	Granted	2009255589	22-Dec-11
Cooling System In A Rotating Reference Frame	Brazil	PI0906161-4	10-Sep-10	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Cooling System In A Rotating Reference Frame	Canada	2717577	2-Sep-10	Published		
Cooling System In A Rotating Reference Frame	China (PRC)	200980000077.6	11-Mar-09	Published		
Cooling System In A Rotating Reference Frame	European Patent Convention	9758836.2	3-Aug-10	Published		
Cooling System In A Rotating Reference Frame	India	2821/KOLNP/2010	2-Aug-10	Pending		
Cooling System In A Rotating Reference Frame	Korea (ROK)	10-2010-7022280	5-Oct-10	Pending		
Cooling System In A Rotating Reference Frame	Patent Cooperation Treaty	PCT/US09/36760	11-Mar-09	Published		
Cooling System In A Rotating Reference Frame	USA	12/045973	11-Mar-08	Published		
High Temperature Superconductor (HTS) Connection Bus For A Degaussing System Junction Box.	Australia	2009228535	30-Aug-10	Pending		
High Temperature Superconductor (HTS) Connection Bus For A Degaussing System Junction Box.	Canada	2719469	23-Sep-10	Published		
High Temperature Superconductor (HTS) Connection Bus For A Degaussing System Junction Box.	European Patent Convention	9725012	1-Sep-10	Published		

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High Temperature Superconductor (HTS) Connection Bus For A Degaussing System Junction Box.	Korea (ROK)	10-2010-7023902	26-Oct-10	Pending		
High Temperature Superconductor (HTS) Connection Bus For A Degaussing System Junction Box.	USA	12/057836	28-Mar-08	Published		
Superconducting Cable Assembly And Method Of Assembly	Australia	2009228246	18-Aug-10	Pending		
Superconducting Cable Assembly And Method Of Assembly	Canada	2719524	23-Sep-10	Published		
Superconducting Cable Assembly And Method Of Assembly	European Patent Convention	9726332.1	26-Aug-10	Published		
Superconducting Cable Assembly And Method Of Assembly	Korea (ROK)	10-2010-7023864	25-Oct-10	Pending		
Superconducting Cable Assembly And Method Of Assembly	USA	12/057804	28-Mar-08	Published		
Current Source Gate Drive Circuit For Simultaneous Firing Of Thyristors	USA	267860	29-Jun-94	Granted	5585758	17-Dec-96
Apparatus And Method For Regulating A Power Line Using Frequency Domain Self-Synchronization Control	USA	268762	29-Jun-94	Granted	5631545	20-May-97
Capacitor Polarity-Based Var Correction Controller For Resonant Line Conditions And Large Amplitude	USA	*/269165	29-Jun-94	Granted	5548203	20-Aug-96

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Wind Turbine Low-Voltage Ride-Through Solution	Australia	2008358896	4-Jan-11	Pending		
Wind Turbine Low-Voltage Ride-Through Solution	Brazil	PI0822478-1	29-Dec-10	Pending		
Wind Turbine Low-Voltage Ride-Through Solution	Canada	2728849	21-Dec-11	Published		
Wind Turbine Low-Voltage Ride-Through Solution	China (PRC)	200910151842.6	1-Jul-09	Published		
Wind Turbine Low-Voltage Ride-Through Solution	European Patent Convention	8781252.5	31-Jan-11	Published		
Wind Turbine Low-Voltage Ride-Through Solution	India	96/KOLNP/2011	7-Jan-11	Pending		
Wind Turbine Low-Voltage Ride-Through Solution	Korea (ROK)	10-2011-7002437	31-Mar-11	Pending		
Wind Turbine Low-Voltage Ride-Through Solution	Spain	200850076	2-Jul-08	Published		
Wind Turbine Low-Voltage Ride-Through Solution	USA	12/165921	1-Jul-08	Granted	8120932	21-Feb-12
Circuit To Allow A Static Var Corrector (SVC) To Turn On When The Source Voltage Is Reduced	China (PRC)	200910151846.4	1-Jul-09	Allowed		
Circuit To Allow A Static Var Corrector (SVC) To Turn On When The Source Voltage Is Reduced	Patent Cooperation Treaty	PCT/US2009/48592	25-Jun-09	Published		
Circuit To Allow A Static Var Corrector (SVC) To Turn On When The Source Voltage Is Reduced	USA	12/166357	2-Jul-08	Granted	7940029	10-May-11
Electricity Transmission Cooling System	Australia	2009298856	14-Feb-11	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Electricity Transmission Cooling System	Canada	PCT/US2009/057957	30-Mar-11	Pending		
Electricity Transmission Cooling System	China (PRC)	200910204982.5	30-Sep-09	Published		
Electricity Transmission Cooling System	European Patent Convention	9792877.4	2-Mar-11	Published		
Electricity Transmission Cooling System	India	2613/DELNP/2011	8-Apr-11	Pending		
Electricity Transmission Cooling System	Korea (ROK)	10-2011-7003947	21-Feb-11	Pending		
Electricity Transmission Cooling System	Patent Cooperation Treaty	PCT/US2009/57957	23-Sep-09	Published		
Electricity Transmission Cooling System	USA	12/245138	3-Oct-08	Published		
Superconductor Structure With High TC Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	European Patent Convention	98965108.8	7-Dec-98	Granted	1042820	12-Mar-03
Superconductor Structure With High TC Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	France			Granted	1042820	12-Mar-03
Superconductor Structure With High TC Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	Italy			Granted	1042820	12-Mar-03

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Superconductor Structure With High Tc Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	Japan	2001527298	7-Dec-98	Pending	2001527298	
Superconductor Structure With High TC Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	Netherlands			Granted	1042820	12-Mar-03
Superconductor Structure With High TC Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	Sweden			Granted	1042820	12-Mar-03
Superconductor Structure With High TC Superconductor Material Process For Producing The Structure And Current Limiter Device Having Such A Structure	USA	9592743	13-Jun-00	Granted	6522236	18-Feb-03
Elongated Superconductor Structure With A High-TC Superconductor Material And A Metallic Mount, And Method For Producing The Structure	Germany		27-Jan-00	Granted	1155461	1-Dec-04
Elongated Superconductor Structure With A High-TC Superconductor Material And A Metallic Mount, And Method For Producing The Structure	USA	9920109	1-Aug-01	Granted	6596421	22-Jul-03
High-Temperature Superconductor	USA		10-Mar-89	Granted	5665662	9-Aug-95
High Temperature Superconductor	USA	08/150786	10-Mar-89	Granted	6028036	9-Sep-97
Method Of Manufacturing An Oxide Ceramic Superconductor Having A High Core Density	France	93100838.7	21-Jan-93	Granted	556581	9-Apr-97



<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Method Of Manufacturing An Oxide Ceramic Superconductor Having A High Core Density	Germany	93100838.7	21-Jan-93	Granted	556581	9-Apr-97
Method Of Manufacturing An Oxide Ceramic Superconductor Having A High Core Density	Italy	93100838.7	21-Jan-93	Granted	556581	9-Apr-97
Method Of Manufacturing An Oxide Ceramic Superconductor Having A High Core Density	United Kingdom	93100838.7	21-Jan-93	Granted	556581	9-Apr-97
Method Of Manufacturing An Oxide Ceramic Superconductor Having A High Core Density	USA	08/020304	19-Feb-93	Granted	5898021	27-Apr-99
Two-Sided Splice For High Temperature Superconductor Laminated Wires	Australia	2009274080	18-Jan-11	Pending		
Two-Sided Splice For High Temperature Superconductor Laminated Wires	Canada	2731693	22-Jul-09	Published		
Two-Sided Splice For High Temperature Superconductor Laminated Wires	China (PRC)	200980128997.6	24-Jan-11	Published		
Two-Sided Splice For High Temperature Superconductor Laminated Wires	European Patent Convention	9800935	3-Dec-10	Published		
Two-Sided Splice For High Temperature Superconductor Laminated Wires	India	639/KOLNP/2011	10-Feb-11	Pending		
Two-Sided Splice For High Temperature Superconductor Laminated Wires	Japan	2011/520160	21-Jan-11	Published		

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Two-Sided Splice For High Temperature Superconductor Laminated Wires	Korea (ROK)	10-2011-7004084	22-Feb-11	Pending		
Two-Sided Splice For High Temperature Superconductor Laminated Wires	USA	12/178469	23-Jul-08	Granted	8195260	5-Jun-12
A Method For Analyzing Superconducting Wire	Patent Cooperation Treaty	PCT/US09/51524	23-Jul-09	Published		
Static Var Compensator For Use In Utility Power Systems	Patent Cooperation Treaty	PCT/US2010/031153	15-Apr-10	Published		
Static Var Compensator For Use In Utility Power Systems	USA	12/425736	17-Apr-09	Published		
Oxide-Ceramic Superconducting Material And Process Of Fabrication Thereof	France	93107783.8	13-May-93	Granted	573804	13-May-93
Oxide-Ceramic Superconducting Material And Process Of Fabrication Thereof	Germany	93107783.8	13-May-93	Granted	573804	13-May-93
Oxide-Ceramic Superconducting Material And Process Of Fabrication Thereof	Italy	93107783.8	13-May-93	Granted	573804	13-May-93
Oxide-Ceramic Superconducting Material And Process Of Fabrication Thereof	United Kingdom	93107783.8	13-May-93	Granted	573804	13-May-93
Elongated Bismuth Cuprate Superconductor And Process For Its Manufacture	Germany	P4434523.2	27-Sep-94	Granted	DE4434523	27-Sep-94

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Method Of Heat Treatment Of High-Temperature Superconductor	France	94,104,648	24-Mar-94	Granted	621610	27-Oct-94
Method Of Heat Treatment Of High-Temperature Superconductor	Germany	94104647.6	24-Mar-94	Granted	621610	27-Oct-94
Method Of Heat Treatment Of High-Temperature Superconductor	Italy	94104647.6	24-Mar-94	Granted	621610	27-Oct-94
Method Of Heat Treatment Of High-Temperature Superconductor	Japan	06-096964	11-Apr-94	Granted	3614461	12-Nov-04
Method Of Heat Treatment Of High-Temperature Superconductor	United Kingdom	94104647.6	24-Mar-94	Granted	621610	27-Oct-94
Method Of Making High TC Multifilament Superconductors	France			Granted	683533	5-May-95
Method Of Making High TC Multifilament Superconductors	Germany			Granted	683533	5-May-95
Method Of Making High TC Multifilament Superconductors	United Kingdom			Granted	683533	5-May-95
Production Of Elongated Superconductor Having High Critical Density	Germany	P4444938.0	16-Dec-94	Granted	4444938	27-Jun-96
Verfahren Zur Herstellung Eines Langgestreckten Hoch-Tc-Supraleiters Mit Einer Bi-2223-Phase	Germany	P4444937.2	16-Dec-94	Granted	4444937	27-Jun-96

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Process For Producing An Elongated Superconductor With A Bismuth Phase Having A High Transition	France			Granted	799166	8-Oct-97
Process For Producing An Elongated Superconductor With A Bismuth Phase Having A High Transition	United Kingdom			Granted	799166	8-Oct-97
Process For Producing An Elongated Superconductor With A Bismuth Phase Having A High Transition	USA	08/849896	19-Jun-97	Granted	6074991	13-Jun-00
Strip-Like Multifilament Superconductor Production	Germany	19620824	23-May-96	Granted	19620824	10-Sep-97
High Temperature Superconductive Composite Conductor Production	Germany	19620825	23-May-96	Granted	19620825	9-Oct-97
Tape-Shaped High TC Multifilament Superconductor And Method Of Manufacturing The Same	Denmark		13-Jun-96	Granted	809305	26-Nov-97
Tape-Shaped High TC Multifilament Superconductor And Method Of Manufacturing The Same	France		22-May-97	Granted	809305	30-Jan-02
Tape-Shaped High TC Multifilament Superconductor And Method Of Manufacturing The Same	Germany	1921068	23-Oct-97	Granted	809305	30-Jan-02
Tape-Shaped High TC Multifilament Superconductor And Method Of Manufacturing The Same	United Kingdom		22-May-97	Granted	809305	30-Jan-02

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Strip-Like Multifilament Superconductor	Germany	19621070	24-May-96	Granted	19621070	6-Mar-03
Silver-Sheathed High Temperature Superconductor Production	Germany	19645995	7-Nov-96	Granted	19645995	30-Jan-03
Long High Temperature Superconductor Product Manufacture	Germany	19719722	9-May-97	Granted	19719722	9-May-97
Long High Temperature Superconductor Product Manufacture	Germany	19820489	7-May-98	Granted	19820489	2-Oct-03
Oxide Superconductor Production Process Involves Multistage Annealing	Germany	19827928	23-Jun-98	Granted	19827928	23-Jun-98
Elementary Conductor For Multi-Filament Superconductor	Germany	19742365	25-Sep-97	Granted	19742365	4-Feb-99
High TC Single Or Multifilament Superconductor And Method Of Manufacturing The Same	France			Granted	905800	31-Mar-99
High TC Single Or Multifilament Superconductor And Method Of Manufacturing The Same	Germany			Granted	905800	31-Mar-99
High TC Single Or Multifilament Superconductor And Method Of Manufacturing The Same	United Kingdom			Granted	905800	31-Mar-99
Method For Producing A Superconductor, In Strip Form, Having A High-TC Superconductor Material	France			Granted	1038301	7-Aug-02
Method For Producing A Superconductor, In Strip Form, Having A High-TC Superconductor Material	Germany	09/591456		Granted	1038301	7-Aug-02
Method For Producing A Superconductor, In Strip Form, Having A High-TC Superconductor Material	United Kingdom			Granted	1038301	7-Aug-02

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Method For Producing A Superconductor, In Strip Form, Having A High-TC Superconductor Material	USA	9591456	9-Jun-00	Granted	US6571453	7-Aug-02
Process For Producing A Strip-Shaped, Multi-Core Superconductor With High-TC Superconducting Material And Superconductor	France			Granted	1042821	29-Oct-02
Process For Producing A Strip-Shaped, Multi-Core Superconductor With High-TC Superconducting Material And Superconductor	Germany			Granted	1042821	29-Oct-02
Process For Producing A Strip-Shaped, Multi-Core Superconductor With High-TC Superconducting Material And Superconductor	United Kingdom			Granted	1042821	29-Oct-02
Process For Producing A Strip-Shaped, Multi-Core Superconductor With High-TC Superconducting Material And Superconductor	USA	9581901	25-Aug-00	Granted	6471785	29-Oct-02
Manufacturing Method E.G. For Extruded Multi-Filament Superconductors	Germany	19754471	26-Nov-97	Granted	19754471	26-Nov-97
Manufacturing Method For A Ribbon-Shaped Multifilament-Superconductor With Bi-Cuprate	European Patent Convention	99103416.6	22-Feb-99	Granted	940820	26-Aug-99
Manufacturing Method For A Ribbon-Shaped Multifilament-Superconductor With Bi-Cuprate	Germany	19809557	5-Mar-98	Granted	19809557	26-Aug-99
Manufacturing Method For A Ribbon-Shaped Multifilament-Superconductor With Bi-Cuprate	Germany			Granted	940820	26-Aug-99

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Manufacturing Method For A Ribbon-Shaped Multifilament-Superconductor With Bi-Cuprate	United Kingdom			Granted	940820	26-Aug-99
Multi-Filament Superconductor Strip With Increased Critical Current Density	Germany	19815140	3-Apr-98	Granted	19815140	14-Oct-99
Coating Method For Use In A Process For Producing High-Temperature Supraconductive Strip Conductors	European Patent Convention	99944141.3	30-Mar-99	Granted	1082766	13-Aug-03
Coating Method For Use In A Process For Producing High-Temperature Supraconductive Strip Conductors	France			Granted	1082766	13-Aug-03
Coating Method For Use In A Process For Producing High-Temperature Supraconductive Strip Conductors	Germany			Granted	1082766	13-Aug-03
Coating Method For Use In A Process For Producing High-Temperature Supraconductive Strip Conductors	Italy			Granted	1082766	13-Aug-03
Coating Method For Use In A Process For Producing High-Temperature Supraconductive Strip Conductors	United Kingdom			Granted	1082766	13-Aug-03
Coating Method For Use In A Process For Producing High-Temperature Supraconductive Strip Conductors	USA	9647564	4-Jan-01	Granted	US6572916	3-Jun-03
Display Device, E.G. A Computer Display Or Television Set, Has An Anion Generating Material	Germany	19929653	28-Jun-99	Granted	19929653	30-Dec-99
Method Of Manufacturing A Strip-Shaped Multiple Channel Superconductor	Germany	19828954	29-Jun-98	Granted	19828954	29-Jun-98

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Multifilament High Temperature Superconductor Strip Production, Having Interior Matrix Regions Of	Germany	19829849	3-Jul-98	Granted	19829849	3-Jul-98
High Tc Multifilament Superconductor For Alternating Current And Method Of Making The Same	France			Granted	FR2783084	3-Oct-00
High Tc Multifilament Superconductor For Alternating Current And Method Of Making The Same	Germany	19833918.6		Granted	1983318	3-Feb-00
Stripform High Critical Temperature (Tc) Superconductor Manufacturing Method	Germany	19859452	22-Dec-98	Granted	19859452	10-Feb-02
Oxidic Superconductor With A Bismuth Phase Of The 2223 Type And Method Of Manufacture Thereof	France			Granted	2787785	21-Feb-02
Oxidic Superconductor With A Bismuth Phase Of The 2223 Type And Method Of Manufacture Thereof	Germany	19860074	23-Dec-98	Granted	19860074	21-Feb-02
Oxidic Superconductor With A Bismuth Phase Of The 2223 Type And Method Of Manufacture Thereof	USA	9469805	22-Dec-99	Granted	US6207619	27-Mar-01
Superconductor Assembly	Germany	10117370	6-Apr-01	Granted	10117370	22-May-03
Torque Support Member For Rotating Electrical Machine	Patent Cooperation Treaty	PCT/US10/42561	20-Jul-10	Published		



<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Torque Support Member For Rotating Electrical Machine	USA	12/575762	8-Oct-09	Granted	7834510	16-Nov-10
Low Cost HTS Wind Generator With Saturated Ferromagnetic Teeth	China (PRC)	201080043826.6	29-Mar-12	Pending		
Low Cost HTS Wind Generator With Saturated Ferromagnetic Teeth	India	2572/DELNP/2012	23-Mar-12	Pending		
Low Cost HTS Wind Generator With Saturated Ferromagnetic Teeth	Japan		29-Mar-12	Pending		
Low Cost HTS Wind Generator With Saturated Ferromagnetic Teeth	Korea (ROK)	10-2012-7010868	27-Apr-12	Pending		
Low Cost HTS Wind Generator With Saturated Ferromagnetic Teeth	Patent Cooperation Treaty	PCT/US2010/042546	20-Jul-10	Published		
Low Cost HTS Wind Generator With Saturated Ferromagnetic Teeth	USA	13/164023	20-Jun-11	Published		
Thyristor Gate Pulses In Static Var Compensator	USA	12/749930	30-Mar-10	Published		
Thick Oxide Film By Single Coating	Patent Cooperation Treaty	PCT/US2011/026779	2-Mar-11	Published		
Thick Oxide Film By Single Coating	USA	12/751064	31-Mar-10	Published		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Torque Limiting Coupling For Direct Drive Wind Turbine	Patent Cooperation Treaty	PCT/US2010061734	22-Dec-10	Published		
Torque Limiting Coupling For Direct Drive Wind Turbine	USA	12/683877	7-Jan-10	Granted	8035246	11-Oct-11
Reducing Photovoltaic Array Voltage During Inverter Re-Enablement	Patent Cooperation Treaty	PCT/US2010/56665	15-Nov-10	Published		
Reducing Photovoltaic Array Voltage During Inverter Re-Enablement	USA	12/625645	25-Nov-09	Published		
Power Conversion Systems	Patent Cooperation Treaty	PCT/US2010/055552	5-Nov-10	Published		
Power Conversion Systems	USA	12/625093	24-Nov-09	Granted	7989983	2-Aug-11
Power Conversion Systems	USA	13/195950	2-Aug-11	Published		
Power Electronic Assembly With Slotted Heatsink	Patent Cooperation Treaty	PCT/US2010/55794	8-Nov-10	Published		
Power Electronic Assembly With Slotted Heatsink	USA	12/632379	7-Dec-09	Issued	8189324	29-May-12
Superconductor Electricity Transmission System	Patent Cooperation Treaty	PCT/US2011/21849	20-Jan-11	Published		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Superconductor Electricity Transmission System	USA	13/010239	20-Jan-11	Published		
Scheme To Provide A Series Connected Dc-Dc Function From One Or More Paralleled Dc-Ac Converters	Patent Cooperation Treaty			Published		
Scheme To Provide A Series Connected Dc-Dc Function From One Or More Paralleled Dc-Ac Converters	USA	12/957501	1-Dec-10	Published		
Centralized Power Conditioning	Patent Cooperation Treaty	PCT/US11/55079	6-Oct-11	Published		
Centralized Power Conditioning	USA	13/267326	6-Oct-11	Published		
Protocol And Topology For Synchronization And Communication Of Networked Power Converters	Patent Cooperation Treaty	PCT/US12/28156	8-Mar-12	Pending		
Protocol And Topology For Synchronization And Communication Of Networked Power Converters	USA	13/074225	29-Mar-11	Granted	8120935	21-Feb-12
Live Tank Resistive Superconductor Fault Current Limiter	USA	12/945974	15-Nov-10	Published		
Circuit To Allow A Static Var Corrector (SVC) System To Adaptively Gate Thyristor Valves	USA	12/983957	4-Jan-11	Pending		
Reduced Low Voltage Cable - Degaussing	USA	13/435197	30-Mar-12	Pending		
Internal HTS Splicing And Jumpering	Patent Cooperation Treaty	PCT/US12/28168	8-Mar-12	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Internal HTS Splicing And Jumpering	USA	13/414811	8-Mar-12	Pending		
System For Quick Disconnect Termination Or Connection For Cryogenic Transfer Lines With Simultaneous Electrical Connection & Method Thereof	USA	12/231767	5-Sep-08	Published		
Wide Electrical Conductor Having High C-Axis Strength	USA	13/435156	30-Mar-12	Pending		
Superconductive Compounds Having High Transition Temperature & Methods For Their Use & Preparation	Canada	558106	04-Feb-1988	Pending		
Superconductive Compounds Having High Transition Temperature & Methods For Their Use & Preparation	USA	09/479810	07-Jun-1995	Granted	8060169	15-Nov-11
Rotor Bearing	Austria	AT19940001833	26-Sep-94	Granted	403189	27-Nov-97
Load-Raising Device On A Wind Power Arrangement	Austria	95931076.4	26-Sep-95	Granted	188276	29-Dec-99
Load-Raising Device On A Wind Power Arrangement	Austria	19940001834	26-Sep-94	Granted	401674	25-Nov-96
Load-Raising Device On A Wind Power Arrangement	Denmark	95931076.4	26-Sep-95	Granted	783630	29-Dec-99
Load-Raising Device On A Wind Power Arrangement	Germany	95931076.4	26-Sep-95	Granted	9507537.1	29-Dec-99
Load-Raising Device On A Wind Power Arrangement	Netherlands	95931076.4	26-Sep-95	Granted	783630	29-Dec-99

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Load-Raising Device On A Wind Power Arrangement	Spain	95931076.4	26-Sep-95	Granted	2143652	29-Dec-99
Load-Raising Device On A Wind Power Arrangement	Switzerland	95931076.4	26-Sep-95	Granted	783630	29-Dec-99
Planetary Gear For Wind Turbines	Austria	95933222.2	5-Oct-95	Granted	209753	28-Nov-01
Planetary Gear For Wind Turbines	Germany	95933222.2	5-Oct-95	Granted	9509888.6	28-Nov-01
Planetary Gear For Wind Turbines	Italy	95933222.2	5-Oct-95	Granted	792415	28-Nov-01
Planetary Gear For Wind Turbines	Spain	95933222.2	5-Oct-95	Granted	2166832	28-Nov-01
Wind Power Plant	Austria	98954052.1	3-Nov-98	Granted	261062	3-Mar-04
Wind Power Plant	Denmark	98954052.1	3-Nov-98	Granted	1029176	3-Mar-04
Wind Power Plant	France	98954052.1	3-Nov-98	Granted	1029176	3-Mar-04
Wind Power Plant	Germany	98954052.1	3-Nov-98	Granted	9810927.7	3-Mar-04
Wind Power Plant	Italy	98954052.1	3-Nov-98	Granted	1029176	3-Mar-04
Wind Power Plant	Spain	98954052.1	3-Nov-98	Granted	2214745	3-Mar-04
Wind Power Plant	United Kingdom	98954052.1	3-Nov-98	Granted	1029176	3-Mar-04
Wind Power Plant	USA	09/530751	3-Nov-98	Granted	6428274	6-Aug-02

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Adaptor For Fastening Of Rotor Blades Of A Wind Power Plant To A Rotor Hub And Wind Power Plant With Such Adaptor	Germany	202005007450	11-May-05	Granted	202005007450U1	14-Jul-05
Power Train Of A Wind Power Plant	Australia	2005266829	1-Aug-05	Granted	2005266829	10-Mar-11
Power Train Of A Wind Power Plant	Austria	2004/1319	30-Jul-04	Published		
Power Train Of A Wind Power Plant	Brazil	PI0512646-0	1-Aug-05	Pending		
Power Train Of A Wind Power Plant	Canada	CA2575095	1-Aug-05	Granted	CA2575095	18-Jan-11
Power Train Of A Wind Power Plant	China (PRC)	200580025839	1-Aug-05	Allowed	200580025839	29-Feb-12
Power Train Of A Wind Power Plant	India	454/KOLNP/2007	1-Aug-05	Pending		
Power Train Of A Wind Power Plant	Korea (ROK)	10-2007-7003204	1-Aug-05	Pending		
Power Train Of A Wind Power Plant	USA	11/658325	1-Aug-05	Granted	7560824	14-Jul-09
Power Train Of A Wind Power Plant	USA	12/482912	11-Jun-09	Granted	7816798	19-Oct-10
Method And Device For Braking The Rotor Of A Wind Energy Plant	Australia	2006225057	18-Mar-05	Granted	2006225057	15-Mar-12
Method And Device For Braking The Rotor Of A Wind Energy Plant	Austria	2005/468	18-Mar-05	Granted	500843	15-Apr-06
Method And Device For Braking The Rotor Of A Wind Energy Plant	Brazil	PI0608534-2	18-Sep-07	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Method And Device For Braking The Rotor Of A Wind Energy Plant	Canada	2601675	9-Mar-06	Granted	2601675	21-Sep-10
Method And Device For Braking The Rotor Of A Wind Energy Plant	China (PRC)	200680008824.7	18-Sep-07	Published		
Method And Device For Braking The Rotor Of A Wind Energy Plant	European Patent Convention	6704743.1	9-Mar-06	Granted	1866543	16-May-12
Method And Device For Braking The Rotor Of A Wind Energy Plant	France	6704743.1	9-Mar-06	Granted	1866543	16-May-12
Method And Device For Braking The Rotor Of A Wind Energy Plant	Germany	6704743.1	9-Mar-06	Granted	1866543	16-May-12
Method And Device For Braking The Rotor Of A Wind Energy Plant	United Kingdom	6704743.1	9-Mar-06	Granted	1866543	16-May-12
Method And Device For Braking The Rotor Of A Wind Energy Plant	European Patent Convention	8015451.1	9-Mar-06	Published		
Method And Device For Braking The Rotor Of A Wind Energy Plant	India	3731/KOLNP/2007	3-Oct-07	Pending		
Method And Device For Braking The Rotor Of A Wind Energy Plant	Japan	JP20080501103T	9-Mar-06	Granted	4953469	23-Mar-12
Method And Device For Braking The Rotor Of A Wind Energy Plant	Korea (ROK)	10-2007-7023734	18-Mar-05	Granted	961732	28-May-10

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Method And Device For Braking The Rotor Of A Wind Energy Plant	Mexico	MX/a/2007/011442	9-Mar-06	Granted	276928	25-Jun-10
Method And Device For Braking The Rotor Of A Wind Energy Plant	USA	11/908570	13-Sep-07	Published		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	Australia	PCT/AT2007/000498	5-Nov-07	Granted	2007324315	25-Jan-12
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	Austria	2006/1929	21-Nov-06	Granted	504395	15-May-09
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	Brazil	PI10721387-5	21-May-09	Pending		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	Canada	2670013	5-Nov-07	Pending		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	China (PRC)	200780043122.7	21-May-09	Published		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	European Patent Convention	7815165.1	3-Jun-09	Published		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	India	3975/DELNP/2009	17-Jun-09	Pending		



<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	Japan	2009-537439	21-May-09	Published		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	Korea (ROK)	10-2009-7012798	19-Jun-09	Pending		
Differential Gear Of A Wind Power Plant And Method For Changing Or Switching The Range Of Capacity Of This Differential Gear	USA	12/515849	21-May-09	Allowed		
Variable Ratio Gear	Australia	2009242395	18-Aug-10	Granted	2009242395	15-Dec-11
Variable Ratio Gear	Brazil	PI0906228-9	28-Sep-10	Pending		
Variable Ratio Gear	Canada	2716899	24-Aug-10	Published		
Variable Ratio Gear	China (PRC)	200980000139.3	31-Aug-09	Allowed		
Variable Ratio Gear	European Patent Convention	8450047.9	31-Mar-08	Published		
Variable Ratio Gear	India	3014/KOLNP/2010	16-Aug-10	Pending		
Variable Ratio Gear	Korea (ROK)	10-2010-7024391	29-Oct-10	Pending		
Variable Ratio Gear	Patent Cooperation Treaty	PCT/EP2009/051011	29-Jan-09	Published		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Variable Ratio Gear	USA	12/527304	14-Aug-09	Granted	7993240	9-Aug-11
Control System For Wind Energy Converters	Australia	2009231247	11-Aug-10	Allowed		
Control System For Wind Energy Converters	Brazil	PI0907068-0	23-Sep-10	Pending		
Control System For Wind Energy Converters	Canada	2714145	4-Aug-10	Published		
Control System For Wind Energy Converters	China (PRC)	200980000179.8	18-Sep-09	Published		
Control System For Wind Energy Converters	European Patent Convention	8450046.1	31-Mar-08	Published		
Control System For Wind Energy Converters	India	3113/KOLNP/2010	23-Aug-10	Pending		
Control System For Wind Energy Converters	Korea (ROK)	10-2010-7024390	29-Oct-10	Pending		
Control System For Wind Energy Converters	Patent Cooperation Treaty	PCT/EP2009/050968	29-Jan-09	Published		
Control System For Wind Energy Converters	USA	12/528138	21-Aug-09	Granted	8154143	10-Apr-12
Development Of A New Tower Cabling	China (PRC)	200980000200.4	25-Sep-09	Published		
Development Of A New Tower Cabling	European Patent Convention	9718569.8	10-Sep-09	Published		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Development Of A New Tower Cabling	Patent Cooperation Treaty	PCT/EP2009/053454	24-Mar-09	Published		
Development Of A New Tower Cabling	USA	12/528504	25-Aug-09	Published		
Method For Operating A Wind Energy Converter, Control Device For A Wind Energy Converter, And Wind Energy Converter	China (PRC)	200980000186.8	22-Sep-09	Published		
Method For Operating A Wind Energy Converter, Control Device For A Wind Energy Converter, And Wind Energy Converter	European Patent Convention	9716196.2	2-Sep-09	Published		
Method For Operating A Wind Energy Converter, Control Device For A Wind Energy Converter, And Wind Energy Converter	Patent Cooperation Treaty	PCT/EP2009/053302	20-Mar-09	Published		
Method For Operating A Wind Energy Converter, Control Device For A Wind Energy Converter, And Wind Energy Converter	USA	12/527952	20-Aug-09	Published		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Australia	2009337789	12-Aug-11	Pending		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Brazil	18110026917 (temp)	14-Jul-11	Pending		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	China (PRC)	200980100023.7	27-Jan-10	Published		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	European Patent Convention	9716195.4	9-Sep-09	Granted	2232060	24-Aug-11
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Italy	9716195.4	9-Sep-09	Granted	2232060	24-Aug-11
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Spain	9716195.4	9-Sep-09	Granted	2232060	24-Aug-11
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	United Kingdom	9716195.4	9-Sep-09	Granted	2232060	24-Aug-11
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	France	9716195.4	9-Sep-09	Granted	2232060	24-Aug-11
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Germany	9716195.4	9-Sep-09	Granted	2232060	24-Aug-11
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	India	6094/DELNP/2011	10-Aug-11	Pending		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Korea (ROK)	10-2011-7018472	8-Aug-11	Pending		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	USA	12/528140	21-Aug-09	Granted	7944077	17-May-11
Foundation Fixing Unit, Wind Energy Converter, And Method For Fixing A Tower Of A Wind Energy Converter Onto A Foundation	European Patent Convention	9744669.4	14-Apr-10	Published		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Foundation Fixing Unit, Wind Energy Converter, And Method For Fixing A Tower Of A Wind Energy Converter Onto A Foundation	Patent Cooperation Treaty	PCT/EP2009/063919	22-Oct-09	Published		
Foundation Fixing Unit, Wind Energy Converter, And Method For Fixing A Tower Of A Wind Energy Converter Onto A Foundation	USA	12/921184	7-Sep-10	Pending		
Retro-Fitting A Wind Energy Converter	Patent Cooperation Treaty	PCT/IB2011/051067	14-Mar-11	Published		
Retro-Fitting A Wind Energy Converter	USA	12/751448	31-Mar-10	Allowed		
Device For Adjustment Of A Rotor Blade, Wind Energy Converter, And Method For Adjusting A Rotor Blade	China (PRC)	200980100756.0	20-Apr-10	Published		
Device For Adjustment Of A Rotor Blade, Wind Energy Converter, And Method For Adjusting A Rotor Blade	European Patent Convention	9755879.5	14-Apr-10	Published		
Device For Adjustment Of A Rotor Blade, Wind Energy Converter, And Method For Adjusting A Rotor Blade	Patent Cooperation Treaty	PCT/EP2009/064999	11-Nov-09	Published		
Device For Adjustment Of A Rotor Blade, Wind Energy Converter, And Method For Adjusting A Rotor Blade	Brazil	PI112012010966	09-May-12	Pending		
Device For Adjustment Of A Rotor Blade, Wind Energy Converter, And Method For Adjusting A Rotor Blade	India	4255/DELNP/2012	15-May-12	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Device For Adjustment Of A Rotor Blade, Wind Energy Converter, And Method For Adjusting A Rotor Blade	USA	12/680999	31-Mar-10	Granted	8172532	8-May-12
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	China (PRC)	200980100993.7	14-May-10	Published		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	European Patent Convention	9782974.1	20-Apr-10	Published		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	Patent Cooperation Treaty	PCT/EP2009/061879	14-Sep-09	Published		
Generator, Nacelle, And Mounting Method Of A Nacelle Of A Wind Energy Converter	USA	12/682818	13-Apr-10	Granted	8154146	10-Apr-12
Wind Turbine Tower And Method Of Fabricating A Wind Turbine Tower	Patent Cooperation Treaty	PCT/EP2011/054847	29-Mar-11	Pending		
Dual-Generator Arrangement For A Wind Power Plant	Patent Cooperation Treaty	PCT/US11/30477	30-Mar-11	Pending		
Dynamic Braking And Low Voltage Ride Through	Patent Cooperation Treaty	PCT/US11/30440	30-Mar-11	Pending		

<u>Title</u>	<u>Country</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Status</u>	<u>Grant No.</u>	<u>Grant Date</u>
Offshore Foundation Structure For Wind Turbines, Corresponding Hull Structure For Offshore Foundation Structures, And Method Of Forming An Offshore Foundation Structure For Wind Turbines	Patent Cooperation Treaty	PCT/EP2011/054844	29-Mar-11	Pending		
Bearing Arrangement, Wind Energy Converter, Method For Manufacturing A Wind Energy Converter And Apparatus For Accomplishing The Method	Patent Cooperation Treaty	PCT/EP2011/054953	30-Mar-11	Pending		
Constant Turning Resistance Bearing	Patent Cooperation Treaty	PCT/IB2011/055674	14-Dec-11	Pending		
WEC Components Made Of UHPC (Ultra High Performance Concrete)	Patent Cooperation Treaty	PCT/IB2012050251	18-Jan-12	Pending		
LVRT Retrofits For SCIG Wind Turbines Based On Passive Rectifier And Self Excitation	Patent Cooperation Treaty	US2011045825	29-Jul-11	Pending		

**TRADEMARKS**

<u>Trademark</u>	<u>Country</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Reg. Date</u>	<u>Reg. No.</u>	<u>Status</u>
D-VAR	Argentina	21-Jul-2009	2930622	07-May-2010	2364642	Registered
D-VAR	Australia		1318569	24-Jun-2009	IR1009501	Registered
D-VAR	Brazil	20-Jul-2009	830351124			Allowed
D-VAR	Canada	07-Jul-2009	1443953	22-Jun-2010	770457	Registered
D-VAR	Chile	08-Jul-2009	868720	25-Mar-2010	877947	Registered
D-VAR	China (PRC)	10-Nov-2006	5715065	21-Feb-2011	571065	Registered
D-VAR	European Patent Convention	24-Jun-2009	IR1009501	24-Jun-2009	IR1009501	Registered
D-VAR	India	30-Jun-2009	1834964	18-Feb-2012	1834964	Registered
D-VAR	Korea (ROK)	24-Jun-2009	1009501			Published
D-VAR	Mexico	23-Jul-2009	1020990			Pending
D-VAR	New Zealand	25-Jun-2009	808502	25-Jun-2009	808502	Registered
D-VAR	Patent Cooperation Treaty	24-Jun-2009	IR1009501	30-Jun-2009	IR1009501	Registered
D-VAR	USA	18-Jan-2001	76/195690	15-Jul-2003	2737801	Registered
PQ-IVR	China (PRC)	10-Nov-2006	5715066	09-Jul-2009	5715066	Registered



<u>Trademark</u>	<u>Country</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Reg. Date</u>	<u>Reg. No.</u>	<u>Status</u>
PQ-IVR	United States Of America	03-Apr-2003	76/503811	10-Jul-2007	3261435	Registered
American Superconductor SWIRL Logo	China (PRC)	20-Jun-2008	6795368	14-Sept-2010	6795368	Registered
American Superconductor SWIRL Logo	China (PRC)	20-Jun-2008	6795367	28-Oct-2010	6795367	Registered
American Superconductor SWIRL Logo	Mexico	24-Nov-2010	1137045	21-Feb-2011	1202771	Registered
American Superconductor SWIRL Logo	United States Of America	17-May-2004	78/419611	04-Jul-2006	3111182	Registered
American Superconductor	United States Of America	17-May-2004	78/419599	01-Aug-2006	3122641	Registered
AMSC	Argentina	22-Oct-2007	2708757	22-Oct-2008	2254370	Registered
AMSC	Australia	21-Sep-2007	948158	21-Sep-2007	1220736	Registered
AMSC	Brazil	28-Sep-2007	829393803			Pending
AMSC	Canada	17-Oct-2007	1367815			Allowed
AMSC	Chile	24-Oct-2007	793150	03-Oct-2008	829311	Registered
AMSC	China (PRC)	10-Nov-2006	5715070	07-Aug-2009	5715070	Registered
AMSC	China (PRC)	10-Nov-2006	5715069	07-Jun-2010	5715069	Registered
AMSC	European Patent Convention	21-Sept-2007	IR948158	21-Sep-2007	IR948158	Registered
AMSC	India	24-Sep-2007	1605078			Pending
AMSC	Korea, Republic of	21-Sep-2007	IR948158	21-Sep-2007	IR948158	Registered
AMSC	Mexico	09-Nov-2007	894828	30-Nov-2007	1016429	Registered
AMSC	New Zealand	20-Sep-2007	776256	20-Mar-2008	776256	Registered
AMSC	Patent Cooperation Treaty	24-Sep-2007	1605078	21-Sep-2007	IR948158	Registered
AMSC	United States Of America	11-Jun-2004	78/433607	03-Mar-2009	3584523	Registered
Windtec & Design/logo	Argentina	03-Sep-2007	2769962	09-Sep-2018	2247391	Allowed

<u>Trademark</u>	<u>Country</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Reg. Date</u>	<u>Reg. No.</u>	<u>Status</u>
Windtec & Design/logo	Australia	10-Sep-2007	1198069	10-Sep-2017	1198069	Registered
Windtec & Design/logo	Brazil	24-Aug-2007	829322361		804644	Pending
Windtec & Design/logo	Canada	15-Aug-2007	1359857	18-Aug-2026	825280	Registered
Windtec & Design/logo	Chile	29-Aug-2007	786700	22-Aug-2018	6294924	Registered
Windtec & Design/logo	China (PRC)	25-Sep-2007	6294924	27-Aug-2020	6294925	Registered
Windtec & Design/logo	China (PRC)	25-Sep-2007	6294925	27-Feb-2020	6294926	Registered
Windtec & Design/logo	China (PRC)	25-Sep-2007	6294926		9294927	Registered
Windtec & Design/logo	China (PRC)	25-Sep-2007	6294927	25-Sep-2020	006298491	Registered
Windtec & Design/logo	European Patent Convention	03-Sep-2007	006298491	03-Sep-2017		Registered
Windtec & Design/logo	India	20-Aug-2007	1592075			Published
Windtec & Design/logo	Japan	17-Aug-2007	2007089437	26-Mar-2020	5311739	Registered
Windtec & Design/logo	Korea, Republic of	22-Aug-2007	20073638	14-Nov-2018	25373	Registered
Windtec & Design/logo	Mexico	16-Aug-2007	974377	14-Nov-2018	1106623	Registered
Windtec & Design/logo	New Zealand	10-Aug-2007	77375	10-Aug-2017	773725	Registered
Windtec & Design/logo	United States Of America	09-Aug-2007	77/25859	12-Nov-2011		Allowed
American Superconductor & Swirl logo	Argentina	28-Jul-2009	2932531	07-May-2010	2366391	Registered
American Superconductor & Swirl logo	Australia	30-Jun-2009	1318595	30-Jun-2009	IR1009600	Registered
American Superconductor & Swirl logo	Brazil	20-Jul-2009	830351132			Published
American Superconductor & Swirl logo	Canada	07-Jul-2009	1443954	05-Jul-2010	771176	Registered
American Superconductor & Swirl logo	Chile	30-Jun-2009	869135	08-Jul-2011	924065	Registered
American Superconductor & Swirl logo	China (PRC)	10-Nov-2006	5715056	07-Mar-2011	5715056	Registered

<u>Trademark</u>	<u>Country</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Reg. Date</u>	<u>Reg. No.</u>	<u>Status</u>
American Superconductor & Swirl logo	China (PRC)	10-Nov-2006	5715055	07-Mar-2011	5715055	Registered
American Superconductor & Swirl logo	European Patent Convention	30-Jun-2009	IR1009600	30-Jun-2009	IR1009600	Registered
American Superconductor & Swirl logo	India	20-Jul-2009	1841667			Pending
American Superconductor & Swirl logo	Korea, Republic of	30-Jun-2009	IR1009600	30-Jun-2009	IR1009600	Registered
American Superconductor & Swirl logo	New Zealand	26-Jun-2009	808589	11-Feb-2010	808589	Registered
American Superconductor & Swirl logo	Patent Cooperation Treaty	30-Jun-2009	IR1009600	30-Jun-2009	IR1009600	Registered
American Superconductor & Swirl logo	United States Of America	24-Jun-2009	77/766815	22-Jun-2010	3805786	Registered
SeaTitan (text)	Australia	13-Jul-2010	IR1047301	13-Jul-2010	IR1047301	Registered
SeaTitan (text)	Brazil	13-Jul-2010	830681906			Published
SeaTitan (text)	Brazil	13-Jul-2010	830681892			Published
SeaTitan (text)	Canada	05-Jul-2010	1487426			Allowed
SeaTitan (text)	China (PRC)	13-Jul-2010	IR1047301	13-Jul-2010	IR1047301	Registered
SeaTitan (text)	European Patent Convention	12-Jul-2010	009238321	24-Dec-2010	009238321	Registered
SeaTitan (text)	India	07-Jul-2010	190393			Pending
SeaTitan (text)	Japan	13-Jul-2010	IR1047301			Pending
SeaTitan (text)	Korea, Republic of	13-Jul-2010	1047301	21-Jul-2010	1047301	Registered
SeaTitan (text)	Patent Cooperation Treaty	13-Jul-2010	IR1047301	13-Jul-2010	IR1047301	Registered

<u>Trademark</u>	<u>Country</u>	<u>App. Date</u>	<u>App. No.</u>	<u>Reg. Date</u>	<u>Reg. No.</u>	<u>Status</u>
SeaTitan (text)	United States Of America	14-Jan-2010	77911597			Allowed
AMPERIUM (text)	Australia	08-Mar-2011	1419784	20-Oct-2011	IR1071446	Registered
AMPERIUM (text)	Brazil	16-Mar-2011	830980130			Allowed
AMPERIUM (text)	Canada	08-Mar-2011	1518200			Pending
AMPERIUM (text)	China (PRC)	08-Mar-2011	IR1071446			Allowed
AMPERIUM (text))	European Patent Convention	08-Mar-2011	IR1071446			Allowed
AMPERIUM (text))	India	17-Mar-2011	217038			Pending
AMPERIUM (text)	Japan	08-Mar-2011	IR1071446	08-Mar-2011	1071446	Registered
AMPERIUM (text)	Korea, Republic of	08-Mar-2011	85132153	05-Jan-2012	1071446	Registered
AMPERIUM (text)	Patent Cooperation Treaty	08-Mar-2011	IR1071446	08-Mar-2011	IR1071446	Registered
AMPERIUM (text)	United States of America	07-Sep-2010	85/132153	10-Jan-2012	4084725	Registered
American Superconductor in CN characters with English text below line	China (PRC)	01-Apr-2011	9290983			Pending
American Superconductor in CN characters with English text below line	China (PRC)	01-Apr-2011	9290982			Pending
AMSC & Swirl in tear drop	United States of America	12-Oct-2011	85/445162			Pending
Smarter, Cleaner Better Energy (tagline)	United States of America	25-Jan-2010	85524908			Pending

**SOFTWARE LICENSES**

<b>Product</b>	<b>Software Name</b>	<b>Component</b>	<b>Platform / HW controller</b>	<b>SubComponent</b>	<b>Description</b>
D-VAR	PM2000 DSPA	Power Module Enclosure (PME)	Inverter control card	PM2000 converter	Software controls the inverter half of a PM2000 converter pair
D-VAR	PM2000 DSPB	Power Module Enclosure (PME)	Inverter control card	PM2000 converter	Software controls the inverter half of a PM2000 converter pair
D-VAR	PME-Controller	Power Module Enclosure (PME)	PC104		Software controls the PME cabinet and interfaces between the MCB and the inverters
D-VAR	DAS	Data Acquisition System in Master Control Enclosure (MCE)	PC104		Software gathers and records data from all the components in the system to a hard drive
D-VAR	MCB-controller	Master Control Board in the Master Control Enclosure (MCE)	PC104		This unique software is the brains of a DVAR
D-VAR	Human Machine Interface (HMI)	Windows Laptop in control room	Windows GUI		Application allows customer to interface with the DVAR
D-VAR	Full Conversion Turbine-Line Side - DSP A (FC-LSA)	PMx000 Converter	PM control card		Software that runs on the Line-side DSP A, for full conversion turbines
D-VAR	Full Conversion Turbine-Line Side - DSP B (FC-LSB)	PMx000 Converter	PM control card		Software that runs on the Line-side DSP B, for full conversion turbines
D-VAR	Full Conversion Turbine-Generator Side - DSP A (FC-GSA)	PMx000 Converter	PM control card		For full conversion turbines, this is the software that runs on Generator-side DSP A Software that runs on the Generator-side DSP A, for full conversion turbines
D-VAR	Full Conversion Turbine-Generator Side - DSP B (FC-GSB)	PMx000 Converter	PM control card		Software that runs on the Generator-side DSP B, for full conversion turbines
D-VAR	Doubly Fed Turbine-Line Side - DSP A (FC-LSA)	PMx000 Converter	PM control card		Software that runs on Line-side DSP A, for Doubly Fed turbines
D-VAR	Doubly Fed Turbine-Line Side - DSP B (FC-LSB)	PMx000 Converter	PM control card		Software that runs on Line-side DSP B, for Doubly Fed turbines

D-VAR	Doubly Fed Turbine-Generator Side - DSP A (FC-GSA)	PMx000 Converter	PM control card	Software that runs on Generator-side DSP A, for Doubly Fed turbines
D-VAR	Doubly Fed Turbine-Generator Side - DSP B (FC-GSB)	PMx000 Converter	PM control card	Software that runs on Generator-side DSP B, for Doubly Fed turbines
D-VAR	Software Developers Kit (SDK)	PMx000 Converter	PM control card	Software sold to small organizations (schools etc.) for prototyping a PM converter in their application
D-VAR	DVAR-RT DSP A	PMx000 Converter	PM control card	Software runs on the DSP A of the PM converter, used in the DVAR-RT project
D-VAR	DVAR-RT DSP B	PMx000 Converter	PM control card	Software runs on the DSP B of the PM converter, used in the DVAR-RT project
D-VAR	WIND-RT	PMx000 Converter	Next Gen Control Card (NGCC)	Software for the new NGCC

**EXHIBIT E**

**BORROWER'S DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS**

<u>Bank Name</u>	<u>Account Number</u>	<u>Branch Address</u>	<u>Entity's Name on Account</u>	<u>Description of purpose of account</u>
Silicon Valley Bank	1. 3300415781	275 Grove Street	American	1. Operating
	2. 3300864510	Newton, MA 02462	Superconductor	2. Cash Collateral/ Money Market
	3. 3300824400 - SVBSP000609	617-630-4120	Corporation	3. Cash Collateral/ Money Market
	4. 3300824320 - SVBSP000437			4. Cash Collateral/ Money Market
	5. 3300824335 - SVBSP000564			5. Cash Collateral/ Money Market
	6. 3300824354 - SVBSP000588			6. Cash Collateral/ Money Market
	7. 3300824369 - SVBSP000589			7. Cash Collateral/ Money Market
	8. 3300824373 - SVBSP000609			8. Cash Collateral/ Money Market
Barclays Capital Inc.	9. 834-54776	125 High St	American	9. Cash/Liquidity
	10. 834-60878	16th floor Boston, MA 02110 617-342-4187	Superconductor Corporation	10. Investment
Bank of America	11. 000057196818	100 Federal Street	American	11. MA Operating
	12. 002220016772	MA5-100-08-12	Superconductor	12. MA Positive Pay
	13. 5A2-01F09-1-5 QBR	Boston, MA 02110	Corporation	13. Money Market
	14. 002220017079	617-434-0202		14. WI Positive Pay
Bank of America	15. 004602291543	100 Federal Street MA5-100-08-12 Boston, MA 02110 617-434-0202	Superconductivity, Inc.	15. WI Operating
Bank of America	16. 004634431407	100 Federal Street MA5-100-08-12 Boston, MA 02110 617-434-0202	AMSC Wisconsin Wind LLC	16. Operating
HSBC Bank USA	17. 005557704	125 High Street Oliver Tower Floor 16 Boston, MA 02110 617-292-8485	American Superconductor Corporation	17. Cash Collateral

**EXHIBIT F**

**COMPLIANCE CERTIFICATE**

Hercules Technology Growth Capital, Inc.  
400 Hamilton Avenue, Suite 310  
Palo Alto, CA 94301

Reference is made to that certain Loan and Security Agreement dated as of June , 2012 and all ancillary documents entered into in connection with such Loan and Security Agreement all as may be amended from time to time, (hereinafter referred to collectively as the "Loan Agreement") between Hercules Technology Growth Capital, Inc. ("Hercules") as Lender and AMERICAN SUPERCONDUCTOR CORPORATION (the "Company") as Borrower. All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of the Company, knowledgeable of all Company financial matters, and is duly authorized, in his capacity as an Officer and not in his individual capacity, to provide certification of information regarding the Company; hereby certifies that in accordance with the terms and conditions of the Loan Agreement, the Company is in compliance for the period ending of all covenants, conditions and terms and hereby reaffirms that all representations and warranties contained therein are true and correct on and as of the date of this Compliance Certificate with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, after giving effect in all cases to any standard(s) of materiality contained in the Loan Agreement as to such representations and warranties. Attached are the required documents supporting the above certification. The undersigned further certifies that these are prepared in accordance with GAAP (except for the absence of footnotes with respect to unaudited financial statement and subject to normal year end adjustments) and are consistent from one period to the next except as explained below.

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Interim Financial Statements	Monthly within 30 days	
Interim Financial Statements	Quarterly within 45 days	
Audited Financial Statements	FYE within 150 days	

Very Truly Yours,

AMERICAN SUPERCONDUCTOR CORPORATION

By: \_\_\_\_\_  
Name:  
Its:



**EXHIBIT G**

**FORM OF JOINDER AGREEMENT**

This Joinder Agreement (the "Joinder Agreement") is made and dated as of [ ], 20[ ], and is entered into by and between , a corporation ("Subsidiary"), and HERCULES TECHNOLOGY GROWTH CAPITAL, INC., a Maryland corporation, as a Lender.

**RECITALS**

A. Subsidiary's Affiliate, AMERICAN SUPERCONDUCTOR CORPORATION ("Company") [has entered/desires to enter] into that certain Loan and Security Agreement dated as of June , 2012, with Lender, as such agreement may be amended (the "Loan Agreement"), together with the other agreements executed and delivered in connection therewith;

B. Subsidiary acknowledges and agrees that it will benefit both directly and indirectly from Company's execution of the Loan Agreement and the other agreements executed and delivered in connection therewith;

**AGREEMENT**

NOW THEREFORE, Subsidiary and Lender agree as follows:

1. The recitals set forth above are incorporated into and made part of this Joinder Agreement. Capitalized terms not defined herein shall have the meaning provided in the Loan Agreement.
2. By signing this Joinder Agreement, Subsidiary shall be bound by the terms and conditions of the Loan Agreement the same as if it were Borrower (as defined in the Loan Agreement) under the Loan Agreement, mutatis mutandis, provided however, (a) that with respect to (i) Section 5.1 of the Loan Agreement, Subsidiary represents that it is an entity duly organized, legally existing and in good standing under the laws of [ ], (b) that Lender shall have no duties, responsibilities or obligations to Subsidiary arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, (c) that if Subsidiary is covered by Borrower's insurance, Subsidiary shall not be required to maintain separate insurance or comply with the provisions of Section 6.4 of the Loan Agreement, and (d) that as long as Borrower satisfies the requirements of Section 6.1 of the Loan Agreement, Subsidiary shall not have to provide Lender separate Financial Statements. Rather, to the extent that Lender has any duties, responsibilities or obligations arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, those duties, responsibilities or obligations shall flow only to Company and not to Subsidiary or any other person or entity. By way of example (and not an exclusive list): (a) Lender's providing notice to Company in accordance with the Loan Agreement or as otherwise agreed between Company and Lender shall be deemed provided to Subsidiary; (b) a Lender's providing an Advance to Company shall be deemed an Advance to Subsidiary; and (c) Subsidiary shall have no right to request an Advance or make any other demand on Lender.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

SUBSIDIARY:

\_\_\_\_\_  
By:  
Name:  
Title:

Address:

Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Address: 400 Hamilton Ave., Suite 310  
Palo Alto, CA 94301  
Facsimile: 650-473-9194  
Telephone: 650-289-3060

**EXHIBIT H**

**ACH DEBIT AUTHORIZATION AGREEMENT**

Hercules Technology Growth Capital, Inc.  
400 Hamilton Avenue, Suite 310  
Palo Alto, CA 94301

Re: Loan and Security Agreement dated as of June , 2012 between AMERICAN SUPERCONDUCTOR CORPORATION (“Borrower”) and Hercules Technology Growth Capital, Inc. (“Company”) (the “Agreement”)

In connection with the above referenced Agreement, Borrower hereby authorizes the Company to initiate debit entries for the periodic payments due under the Agreement to Borrower’s account indicated below. Borrower authorizes the depository institution named below to debit to such account.

DEPOSITORY NAME	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER

This authority will remain in full force and effect so long as any amounts are due under the Agreement.

AMERICAN SUPERCONDUCTOR CORPORATION

By: \_\_\_\_\_

Date:

## Schedules to AMSC-Hercules Loan Agreement

### Schedule 1

#### Subsidiaries

<u>Name</u>	<u>Location of Formation/Incorporation</u>
AMSC Australia Pty Ltd (*)	Australia
AMSC India Private Limited (*)	India
AMSC Austria GmbH (*)	Austria
AMSC Wisconsin Wind LLC (*)	Delaware
AMSC United Kingdom Limited (*)	United Kingdom
ASC Devens LLC (*)	Delaware
ASC Securities Corp. (*)	Massachusetts
NST Asset Holding Corporation (*)	Delaware
Superconductivity, Inc. (*)	Delaware
Suzhou AMSC Super Conductor Co., Ltd. (*)	China
American Superconductor Europe LLC (*)	Delaware
American Superconductor Europe GmbH (*)	Germany
American Superconductor Korea Co., Ltd. (*)	South Korea
American Superconductor Canada Limited (*)	Canada
American Superconductor Singapore PTE. Ltd. (*)	Singapore
American Superconductor Europe C.V. (*)	The Netherlands
American Superconductor Europe B.V. (wholly-owned subsidiary of American Superconductor Europe C.V.)	The Netherlands

\* Wholly owned subsidiary of Borrower.

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**Schedule 1A**

**Existing Permitted Indebtedness**

1. Indebtedness evidenced by any 7% Senior Convertible Note, including all Senior Convertible Notes issued in exchange, transfer or replacement thereof, issued pursuant to the Securities Purchase Agreement, dated as of April 4, 2012, by and between Borrower and each of the investors listed on the Schedule of Buyers attached thereto.
2. Intercompany Loan Agreement, dated as of January 16, 2012, by and between Borrower and AMSC Austria GmbH.
3. Confidential Settlement Agreement and Release, dated May 16, 2012, by and among Moog Unna GmbH, Borrower and Borrower's wholly-owned Austrian subsidiary AMSC Austria GmbH.
4. Offer (Settlement Agreement) by and among KEB Antriebstechnik Austria GmbH, Borrower and Borrower's wholly-owned Austrian subsidiary AMSC Austria GmbH.

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**Schedule 1B**

**Existing Permitted Investments**

1. Borrower holds 4,361,939 Common Units of Tres Amigas, LLC, a Delaware limited liability company. This ownership represents approximately 25% of the issued and outstanding equity of Tres Amigas, LLC as of January 2012.
2. Borrower, through its wholly-owned Austrian subsidiary, AMSC Austria GmbH, holds 100,000 Redeemable Ordinary Shares, each with a par value of £0.01, of Blade Dynamics Limited, a company organized under the laws of England. This ownership represents approximately 25% of the issued and outstanding equity of Blade Dynamics Limited as of January 2012.
3. Intercompany loan made by Borrower to its wholly-owned Chinese subsidiary, Suzhou AMSC Super Conductor Co., Ltd.

**Schedule 1C**

**Existing Permitted Liens**

<u>Name of Holder of Lien/Encumbrance</u>	<u>Description of Property Encumbered</u>
GFC Leasing, a division of Gordon Flesch Co., Inc. (DE filing)	Image runners
U.S. Bancorp (DE filing)	Certain equipment
Electro Rent Corporation (DE filing)	Specific rented equipment (hi frequency transformers and related equipment)
U.S. Bancorp (DE filing)	Certain equipment
HSBC Bank USA, National Association (DE filing)	Deposit Account containing approximately \$3,700,000 in cash to collateralize the Company's letter of credit with HSBC
Air Liquide Industrial U.S., LP (MA filing)	Specific equipment (liquid nitrogen storage vessel, vaporizer, and other related equipment)
US Bancorp (MA filing)	Copiers
Silicon Valley Bank	Money Market Account(s) containing approximately \$16,000,000 in cash to collateralize the Company's letter(s) of credit issued by Silicon Valley Bank

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**Schedule 5.3**

**Consents, Etc.**

None.



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**Schedule 5.5**

**Actions Before Governmental Authorities**

Controversy with Sinovel Wind Group Co., Ltd.

Controversy with S & C Electric Company

Controversy with Ghodawat Energy Pvt Ltd.

Controversy with SIP Shineful Technology Ltd.

Controversy with John J. Kenney, Jr.

Controversies with respect to securities litigation disclosed in the Borrower's filings with the United States Securities and Exchange Commission made pursuant to the reporting requirements of the Securities Exchange Act of 1934, as amended (all of the foregoing filed prior to the date hereof, as each may have been amended, and all exhibits included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein)

Controversies arising out of or related to any adverse purchase commitment described below:

Adverse purchase commitments in excess of the Company's estimated future demand from certain of its customers in China.

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**Schedule 5.8**

**Tax Matters**

None.

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**Schedule 5.9**

**Intellectual Property Claims**

None.

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**Schedule 5.10**

**Intellectual Property**

None.

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**Schedule 5.11**

**Borrower Products**

None.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL (WHICH MAY BE COMPANY COUNSEL) REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAWS.

## WARRANT AGREEMENT

To Purchase Shares of Common Stock of

AMERICAN SUPERCONDUCTOR CORPORATION

Dated as of June 5, 2012 (the "Effective Date")

WHEREAS, AMERICAN SUPERCONDUCTOR CORPORATION, a Delaware corporation, has entered into a Loan and Security Agreement of even date herewith (the "Loan Agreement") with Hercules Technology Growth Capital, Inc., a Maryland corporation (the "Warrantholder");

WHEREAS, the Company (as defined below) desires to grant to Warrantholder, in consideration for, among other things, the financial accommodations provided for in the Loan Agreement, the right to purchase shares of Common Stock (as defined below) pursuant to this Warrant Agreement (the "Agreement");

NOW, THEREFORE, in consideration of the Warrantholder executing and delivering the Loan Agreement and providing the financial accommodations contemplated therein, and in consideration of the mutual covenants and agreements contained herein, the Company and Warrantholder agree as follows:

### SECTION 1. GRANT OF THE RIGHT TO PURCHASE COMMON STOCK.

For value received, the Company hereby grants to the Warrantholder, and the Warrantholder is entitled, upon the terms and subject to the conditions hereinafter set forth, to subscribe for and purchase, from the Company, an aggregate number of fully paid and non-assessable shares of the Common Stock equal to the quotient derived by dividing (a) \$500,000 by (b) the Exercise Price (defined below), rounded to the nearest whole number of shares. As used herein, the following terms shall have the following meanings:

"Act" means the Securities Act of 1933, as amended.

"Adjustment Right" means any right granted with respect to any securities issued in connection with, or with respect to, any issuance or sale (or deemed issuance or sale in accordance with Section 8) of shares of Common Stock (other than rights of the type described in Sections 8(a), 8(d) or 8(f) hereof) that could result in a decrease in the net consideration received by the Company in connection with, or with respect to, such securities (including, without limitation, any cash settlement rights, cash adjustment or other similar rights).

"Company" means American Superconductor Corporation, a Delaware corporation, and any successor or surviving entity that assumes the obligations of the Company under this Warrant pursuant to Section 8(a).

"Charter" means the Company's Certificate of Incorporation or other constitutional document, as may be amended from time to time.

"Common Stock" means the Company's common stock.

"Exercise Price" means \$3.59, subject to adjustment pursuant to Section 8.

"Merger Event" means any merger or consolidation involving the Company in which the Company is not the surviving entity, or in which the outstanding shares of the Company's capital stock are otherwise converted into or exchanged for shares of common stock, other securities or property of another entity.

“Purchase Price” means, with respect to any exercise of this Warrant, an amount equal to the Exercise Price as of the relevant time multiplied by the number of shares of Common Stock requested to be exercised under this Warrant pursuant to such exercise.

## SECTION 2. TERM OF THE AGREEMENT.

Except as otherwise provided for herein, the term of this Warrant and the right to purchase Common Stock as granted herein (the “Warrant”) shall commence on the Effective Date and shall be exercisable for a period ending on December 5, 2017.

## SECTION 3. EXERCISE OF THE PURCHASE RIGHTS.

(a) Exercise. The purchase rights set forth in this Warrant are exercisable by the Warrantholder, in whole or in part, at any time, or from time to time, prior to the expiration of the term set forth in Section 2, by tendering to the Company at its principal office a notice of exercise in the form attached hereto as Exhibit I (the “Notice of Exercise”), duly completed and executed. Promptly upon receipt of the Notice of Exercise and the payment of the Purchase Price in accordance with the terms set forth below, and in no event later than three (3) days thereafter, the Company shall issue to the Warrantholder a certificate for the number of shares of Common Stock purchased and shall execute the acknowledgment of exercise in the form attached hereto as Exhibit II (the “Acknowledgment of Exercise”) indicating the number of shares which remain subject to future purchases, if any.

The Purchase Price may be paid at the Warrantholder’s election either (i) by cash or check, or (ii) by surrender of all or a portion of the Warrant for shares of Common Stock to be exercised under this Warrant and, if applicable, an amended Agreement representing the remaining number of shares purchasable hereunder, as determined below (“Net Issuance”). If the Warrantholder elects the Net Issuance method, the Company will issue Common Stock in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where:

- X = the number of shares of Common Stock to be issued to the Warrantholder.
- Y = the number of shares of Common Stock requested to be exercised under this Warrant.
- A = the fair market value of one (1) share of Common Stock at the time of issuance of such shares of Common Stock.
- B = the Exercise Price.

For purposes of the above calculation, the fair market value of Common Stock shall mean with respect to each share of Common Stock:

(A) if the Common Stock is traded on a securities exchange, the fair market value shall be deemed to be the average of the closing prices over a five (5) day period ending three days before the day the fair market value of the Common Stock is being determined; or

(B) if the Common Stock is traded over-the-counter, the fair market value shall be deemed to be the average of the closing bid and asked prices quoted on the over-the-counter system over the five (5) day period ending three days before the day the fair market value of the Common Stock is being determined;

(ii) if at any time the Common Stock is not listed on any securities exchange or quoted in the over-the-counter market, the fair market value of Common Stock shall be the

highest price per share which the Company could obtain from a willing buyer (not a current employee or director) for shares of Common Stock sold by the Company, from authorized but unissued shares, as determined in good faith by its Board of Directors, unless the Company shall become subject to a Merger Event, in which case the fair market value of Common Stock shall be deemed to be the per share value received by the holders of the Company's Common Stock on a common equivalent basis pursuant to such Merger Event.

Upon partial exercise by either cash or Net Issuance, the Company shall promptly issue an amended Agreement representing the remaining number of shares purchasable hereunder. All other terms and conditions of such amended Agreement shall be identical to those contained herein, including, but not limited to the Effective Date hereof.

(b) Exercise Prior to Expiration. To the extent this Warrant is not previously exercised as to all Common Stock subject hereto, and if the fair market value of one share of the Common Stock is greater than the Exercise Price then in effect, this Warrant shall be deemed automatically exercised pursuant to Section 3(a) (even if not surrendered) immediately before its expiration. For purposes of such automatic exercise, the fair market value of one share of the Common Stock upon such expiration shall be determined pursuant to Section 3(a). To the extent this Warrant or any portion thereof is deemed automatically exercised pursuant to this Section 3(b), the Company agrees to promptly notify the Warrantholder of the number of shares of Common Stock, if any, the Warrantholder is to receive by reason of such automatic exercise.

#### **SECTION 4. RESERVATION OF SHARES.**

During the term of this Warrant, the Company will at all times have authorized and reserved a sufficient number of shares of its Common Stock to provide for the exercise of the rights to purchase Common Stock as provided for herein.

#### **SECTION 5. NO FRACTIONAL SHARES OR SCRIP.**

No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant, but in lieu of such fractional shares the Company shall make a cash payment therefor upon the basis of the Exercise Price then in effect.

#### **SECTION 6. NO RIGHTS AS SHAREHOLDER/STOCKHOLDER.**

This Warrant does not entitle the Warrantholder to any voting rights or other rights as a shareholder/stockholder of the Company prior to the exercise of this Warrant.

#### **SECTION 7. WARRANTHOLDER REGISTRY.**

The Company shall maintain a registry showing the name and address of the registered holder of this Warrant. Warrantholder's initial address, for purposes of such registry, is set forth below Warrantholder's signature on this Warrant. Warrantholder may change such address by giving written notice of such changed address to the Company.

#### **SECTION 8. ADJUSTMENT RIGHTS.**

The Exercise Price and the number of shares of Common Stock purchasable hereunder are subject to adjustment, as follows:

(a) Merger Event. If at any time there shall be a Merger Event, then, as a part of such Merger Event, lawful provision shall be made so that the Warrantholder shall thereafter be entitled to receive, upon exercise of this Warrant, the number of shares of Common Stock or other securities or property (collectively, "Reference Property") that the Warrantholder would have received in connection with such Merger Event if Warrantholder had exercised this Warrant immediately prior to the Merger Event. In any such case, if the term of this Warrant has not expired pursuant to Section 2 hereof, appropriate adjustment (as determined in good faith by the Company's Board of Directors and reasonably



acceptable to the Warrantholder) shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Warrantholder after the Merger Event to the end that the provisions of this Warrant (including adjustments of the Exercise Price and adjustments to ensure that the provisions of this Section 8 shall thereafter be applicable, as nearly as possible, to the purchase rights under this Warrant in relation to any Reference Property thereafter acquirable upon exercise of such purchase rights) shall continue to be applicable in their entirety, and to the greatest extent possible. Without limiting the foregoing, in connection with any Merger Event, upon the closing thereof, the successor or surviving entity shall assume the obligations of this Warrant; provided that if the Reference Property includes shares of stock or other securities and assets of an entity other than the successor or purchasing company, as the case may be, in such Merger Event, then such other entity shall assume the obligations under this Warrant and any such assumption shall contain such additional provisions to protect the interests of the Warrantholder as reasonably necessary by reason of the foregoing (as determined in good faith by the Company's Board of Directors and reasonably acceptable to the Warrantholder). In connection with a Merger Event and upon Warrantholder's written election to the Company, the Company shall cause this Warrant Agreement to be exchanged for the consideration that Warrantholder would have received if Warrantholder chose to exercise its right to have shares issued pursuant to the Net Issuance provisions of this Warrant Agreement without actually exercising such right, acquiring such shares and exchanging such shares for such consideration. The provisions of this Section 8(a) shall similarly apply to successive Merger Events.

(b) Reclassification of Shares. Except for Merger Events subject to Section 8(a), and subject to Section 8(f), if the Company at any time shall, by combination, reclassification, exchange or subdivision of securities or otherwise, change any of the securities as to which purchase rights under this Warrant exist into the same or a different number of securities of any other class or classes, this Warrant shall thereafter represent the right to acquire such number and kind of securities as would have been issuable as the result of such change with respect to the securities which were subject to the purchase rights under this Warrant immediately prior to such combination, reclassification, exchange, subdivision or other change. The provisions of this Section 8(b) shall similarly apply to successive combinations, reclassifications, exchanges, subdivisions or other changes.

(c) Subdivision or Combination of Shares. If the Company at any time shall combine or subdivide its Common Stock, (i) in the case of a subdivision, the Exercise Price shall be proportionately decreased, or (ii) in the case of a combination, the Exercise Price shall be proportionately increased.

(d) Stock Dividends. If the Company at any time while this Warrant is outstanding and unexpired shall:

(i) pay a dividend with respect to the Common Stock payable in Common Stock, then the Exercise Price shall be adjusted, from and after the date of determination of stockholders entitled to receive such dividend or distribution, to that price determined by multiplying the Exercise Price in effect immediately prior to such date of determination by a fraction (A) the numerator of which shall be the total number of shares of Common Stock outstanding immediately prior to such dividend or distribution, and (B) the denominator of which shall be the total number of shares of Common Stock outstanding immediately after such dividend or distribution; or

(ii) make any other distribution with respect to Common Stock (or stock into which the Common Stock is convertible), except any distribution specifically provided for in any other clause of this Section 8, then, in each such case, provision shall be made by the Company such that the Warrantholder shall receive upon exercise or conversion of this Warrant a proportionate share of any such distribution as though it were the holder of the Common Stock (or other stock for which the Common Stock is convertible) as of the record date fixed for the determination of the stockholders of the Company entitled to receive such distribution.

(e) Adjustment Upon Issuance of Shares of Common Stock. If and whenever on or after the Issue Date, the Company issues or sells, or in accordance with this Section 8(e) is deemed to have issued or sold, any shares of Common Stock (including the issuance or sale of shares of Common Stock

owned or held by or for the account of the Company, but excluding (i) any Excluded Securities (as defined in that certain Series A Warrant to Purchase Common Stock issued by the Company to Capital Ventures International on April 4, 2012 (the "CV Warrant")) issued or sold or deemed to have been issued or sold and (ii) any securities issued or sold or deemed to have been issued or sold pursuant to that certain Securities Purchase Agreement dated as of April 4, 2012 between Capital Ventures International and the Company or any instrument, agreement or document contemplated thereby, that certain Senior Convertible Note dated April 4, 2012 issued by the Company in favor of Capital Ventures International, or the CV Warrant) for consideration per share (the "New Issuance Price") less than the Exercise Price in effect immediately prior to such issue or sale or deemed issuance or sale (such Exercise Price then in effect is referred to as the "Applicable Price", and the foregoing a "Dilutive Issuance") (such number being appropriately adjusted to reflect the occurrence of any event described in Section 8(a)), then, immediately after such Dilutive Issuance, the Exercise Price then in effect shall be reduced to an amount equal to the product of (A) the Applicable Price and (B) the quotient determined by dividing (1) the sum of (I) the product derived by multiplying the Applicable Price and the number of shares of Common Stock Deemed Outstanding immediately prior to such Dilutive Issuance plus (II) the consideration, if any, received by the Company upon such Dilutive Issuance, by (2) the product derived by multiplying (I) the Applicable Price by (II) the number of shares of Common Stock Deemed Outstanding immediately after such Dilutive Issuance. For all purposes of the foregoing (including, without limitation, determining the adjusted Exercise Price, the consideration per share and the New Issuance Price under this Section 8(e)), the following shall be applicable:

(i) Issuance of Options. If the Company in any manner grants or sells any Options and the lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the granting or sale of such Option for such price per share. For purposes of this Section 8(e)(i), the "lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option" shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option and (y) the lowest exercise price set forth in such Option for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option minus (2) the sum of all amounts paid or payable to the holder of such Option (or any other Person) upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Option (or any other Person). Except as contemplated below, no further adjustment of the Exercise Price shall be made upon the actual issuance of such shares of Common Stock or of such Convertible Securities upon the exercise of such Options or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities.

(ii) Issuance of Convertible Securities. If the Company in any manner issues or sells any Convertible Securities and the lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the issuance or sale of such Convertible Securities for such price per share. For the purposes of this Section 8(e)(ii), the "lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof" shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to one share of Common Stock upon the issuance or sale of the Convertible Security and upon conversion, exercise or exchange of such Convertible Security and (y) the lowest conversion price set forth in such Convertible Security for which one share of Common Stock is issuable upon conversion, exercise or exchange thereof minus (2) the sum of all amounts paid or payable to the holder of such Convertible

Security (or any other Person) upon the issuance or sale of such Convertible Security plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Convertible Security (or any other Person). Except as contemplated below, no further adjustment of the Exercise Price shall be made upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities, and if any such issue or sale of such Convertible Securities is made upon exercise of any Options for which adjustment of this Warrant has been or is to be made pursuant to other provisions of this Section 8(e), except as contemplated below, no further adjustment of the Exercise Price shall be made by reason of such issue or sale.

(iii) Change in Option Price or Rate of Conversion. If the purchase or exercise price provided for in any Options referred to in Section 8(e)(i), the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any Convertible Securities referred to in Section 8(e)(i) or 8(e)(ii), or the rate at which any Convertible Securities referred to in Section 8(e)(i) or 8(e)(ii) are convertible into or exercisable or exchangeable for shares of Common Stock increases or decreases at any time, the Exercise Price in effect at the time of such increase or decrease shall be adjusted to the Exercise Price which would have been in effect at such time had such Options or Convertible Securities provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. For purposes of this Section 8(e)(iii), if the terms of any Option or Convertible Security that was outstanding as of the date of issuance of this Warrant are increased or decreased in the manner described in the immediately preceding sentence, then such Option or Convertible Security and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. On the expiration of any Options referred to in Section 8(e)(i) or any Convertible Securities referred to in Section 8(e)(ii), or the termination of any such right to exercise, convert or exchange such Options or Convertible Securities, the Applicable Price then in effect hereunder shall forthwith be increased to the Applicable Price which would have been in effect at the time of such expiration or termination had such Options or Convertible Securities, to the extent outstanding immediately prior to such expiration or termination, never been issued.

(iv) Calculation of Consideration Received. If any Option or Convertible Security or Adjustment Right is issued in connection with the issuance or sale or deemed issuance or sale of any other securities of the Company, together comprising one integrated transaction, (x) such Option or Convertible Security (as applicable) or Adjustment Right (as applicable) will be deemed to have been issued for consideration equal to the Black Scholes Consideration Value thereof and (y) the other securities issued or sold or deemed to have been issued or sold in such integrated transaction shall be deemed to have been issued for consideration equal to the difference of (I) the aggregate consideration received or receivable by the Company minus (II) the Black Scholes Consideration Value of each such Option or Convertible Security (as applicable) or Adjustment Right (as applicable). If any shares of Common Stock, Options or Convertible Securities are issued or sold or deemed to have been issued or sold for cash, the consideration received therefor will be deemed to be the net amount of consideration received by the Company therefor. If any shares of Common Stock, Options or Convertible Securities are issued or sold for a consideration other than cash, the amount of such consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company for such securities will be the arithmetic average of the VWAPs of such security for each of the five (5) trading days immediately preceding the date of receipt. If any shares of Common Stock, Options or Convertible Securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock, Options or Convertible Securities, as the case may be. The fair value of any consideration other than cash or publicly traded securities will be determined jointly by the Company and the Holder. If such parties are unable to reach agreement within ten (10) days after the occurrence of an event requiring valuation (the "Valuation Event"), the fair value of such consideration will be determined within five (5) trading days after the tenth (10th) day following such Valuation Event by an independent, reputable appraiser jointly selected by the Company and the Holder. The determination of such appraiser shall be final and binding upon all parties absent manifest error and the fees and expenses of such appraiser shall be borne by the Company.

(v) Record Date. If the Company takes a record of the holders of shares of Common Stock for the purpose of entitling them (A) to receive a dividend or other distribution payable in shares of Common Stock, Options or in Convertible Securities or (B) to subscribe for or purchase shares of Common Stock, Options or Convertible Securities, then such record date will be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase (as the case may be).

(f) Notice of Adjustments. If: (i) the Company shall declare any dividend or distribution upon its stock, whether in stock, cash, property or other securities; (ii) the Company shall offer for subscription pro rata to the holders of any class of its Common Stock or other capital stock any additional shares of stock of any class or other rights; (iii) there shall be any Merger Event; (iv) the Company shall sell, lease, license or otherwise transfer all or substantially all of its assets; or (v) there shall be any voluntary dissolution, liquidation or winding up of the Company; then, in connection with each such event, the Company shall send to the Warrantholder written notice of the occurrence of any such event, setting forth, in reasonable detail, (i) the event requiring the notice, and (ii) if any adjustment is required to be made, (A) the amount of such adjustment, (B) the method by which such adjustment was calculated, (C) the adjusted Exercise Price (if the Exercise Price has been adjusted), and (D) the number of shares subject to purchase hereunder after giving effect to such adjustment, and shall be given by first class mail, postage prepaid, or by reputable overnight courier with all charges prepaid, addressed to the Warrantholder at the address for Warrantholder set forth in the registry referred to in Section 7.

(g) Share Cap. Notwithstanding anything contained herein to the contrary, the Company shall not be obligated to issue any shares of Common Stock upon exercise or conversion of this Warrant or otherwise pursuant to the terms of this Warrant if the issuance of such shares of Common Stock would exceed the aggregate number of shares of Common Stock which the Company may issue upon exercise or conversion of this Warrant or otherwise pursuant to the terms of this Warrant without conflicting with or breaching the Company's obligations under the rules or regulations of the Nasdaq Stock Market or other securities exchange upon which the Common Stock is listed.

## **SECTION 9. REPRESENTATIONS, WARRANTIES AND COVENANTS OF THE COMPANY.**

(a) Reservation of Common Stock. The Common Stock issuable upon exercise of the Warrantholder's rights has been duly and validly reserved and, when issued in accordance with the provisions of this Warrant, will be validly issued, fully paid and non-assessable, and will be free of any taxes, liens, charges or encumbrances of any nature whatsoever; provided, that the Common Stock issuable pursuant to this Warrant may be subject to restrictions on transfer under state and/or federal securities laws. The Company has made available to the Warrantholder true, correct and complete copies of its Charter and current bylaws. The issuance of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Warrantholder for any issuance tax in respect thereof, or other cost incurred by the Company in connection with such exercise and the related issuance of shares of Common Stock; provided, that the Company shall not be required to pay any tax which may be payable in respect of any transfer and the issuance and delivery of any certificate in a name other than that of the Warrantholder.

(b) Due Authority. The execution and delivery by the Company of this Warrant and the performance of all obligations of the Company hereunder, including the issuance to Warrantholder of the right to acquire the shares of Common Stock, have been duly authorized by all necessary corporate action on the part of the Company. This Warrant: (1) does not violate the Company's Charter or current bylaws; (2) does not contravene any law or governmental rule, regulation or order applicable to it; and (3) does not and will not contravene any provision of, or constitute a default under, any indenture, mortgage, contract or other instrument to which it is a party or by which it is bound. This Warrant constitutes a legal, valid and binding agreement of the Company, enforceable in accordance with its terms except as limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or other laws of general application affecting enforcement of creditors' rights generally.

(c) Consents and Approvals. No consent or approval of, giving of notice to, registration with, or taking of any other action in respect of any state, federal or other governmental authority or agency is required with respect to the execution, delivery and performance by the Company of its obligations under this Warrant, except as may be required pursuant to the Securities Exchange Act of 1934, as amended (the “1934 Act”), for the filing of notices pursuant to Regulation D under the Act and any filing required by applicable state securities law, which filings will be effective by the time required thereby.

(d) Exempt Transaction. Subject to the accuracy of the Warrantholder’s representations in Section 10, the issuance of the Common Stock upon exercise of this Warrant, and the issuance of the Common Stock upon conversion of the Common Stock, will each constitute a transaction exempt from (i) the registration requirements of Section 5 of the Act, in reliance upon Section 4(2) thereof, and (ii) the qualification requirements of the applicable state securities laws.

(e) Compliance with Rule 144. If the Warrantholder proposes to sell Common Stock issuable upon the exercise of this Warrant in compliance with Rule 144 promulgated by the SEC, then, upon Warrantholder’s written request to the Company, the Company shall furnish to the Warrantholder, within ten days after receipt of such request, a written statement regarding the Company’s compliance with the filing requirements of the SEC as set forth in such Rule, as such Rule may be amended from time to time.

(f) Information Rights. During the term of this Warrant, unless the Company is delivering financial information pursuant to the Loan Agreement between the Company and the Warrantholder, the Company shall deliver to the Warrantholder (a) promptly after mailing, copies of any written communications sent to all preferred shareholders of the Company, (b) within one hundred fifty (150) days after the end of each fiscal year of the Company, the annual audited financial statements of the Company certified by *independent* public accountants of recognized standing and (c) within forty-five (45) days after the end of each of the first three quarters of each fiscal year, an unaudited statement of operations and unaudited balance sheet as of the end of such fiscal quarter (it being understood that posting of a link on Borrower’s website on the Internet to such annual and quarterly statements shall satisfy the delivery requirements hereunder).

#### **SECTION 10. REPRESENTATIONS AND COVENANTS OF THE WARRANTHOLDER.**

This Warrant has been entered into by the Company in reliance upon the following representations and covenants of the Warrantholder:

(a) Investment Purpose. The right to acquire Common Stock is being acquired for investment and not with a view to the sale or distribution of any part thereof, and the Warrantholder has no present intention of selling or engaging in any public distribution of such rights or the Common Stock except pursuant to an effective registration statement or an exemption from the registration requirements of the Act.

(b) Private Issue. The Warrantholder understands (i) that the Common Stock issuable upon exercise of this Warrant is not registered under the Act or qualified under applicable state securities laws on the ground that the issuance contemplated by this Warrant will be exempt from the registration and qualifications requirements thereof, and (ii) that the Company’s reliance on such exemption is predicated on the representations set forth in this Section 10.

(c) Financial Risk. The Warrantholder has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment, and has the ability to bear the economic risks of its investment.

(d) No Obligation to Register. The Warrantholder understands that that Company has no obligation to, and if the Company does not, register with the SEC pursuant to Section 12 of the 1934 Act, or file reports pursuant to Section 15(d) of the 1934 Act, or if a registration statement covering (i) the

rights to purchase Common Stock pursuant to this Warrant or (ii) the Common Stock issuable upon exercise of the right to purchase under the Act is not in effect when it desires to sell (i) the rights to purchase Common Stock pursuant to this Warrant or (ii) the Common Stock issuable upon exercise of the right to purchase, it may be required to hold such securities for an indefinite period. The Warrantholder also understands that any sale of (A) its rights hereunder to purchase Common Stock or (B) Common Stock issued or issuable hereunder which might be made by it in reliance upon Rule 144 under the Act may be made only in accordance with the terms and conditions of that Rule.

(e) Accredited Investor. The Warrantholder is an “accredited investor” within the meaning of the Rule 501 of Regulation D promulgated under the Act, as presently in effect.

#### **SECTION 11. TRANSFERS.**

Subject to compliance with applicable federal and state securities laws, this Warrant and all rights hereunder are transferable, in whole or in part, without charge to the holder hereof (except for transfer taxes) upon surrender of this Warrant properly endorsed. Each taker and holder of this Warrant, by taking or holding the same, consents and agrees that this Warrant, when endorsed in blank, shall be deemed negotiable, and that the holder hereof, when this Warrant shall have been so endorsed and its transfer recorded on the Company’s books, shall be treated by the Company and all other persons dealing with this Warrant as the absolute owner hereof for any purpose and as the person entitled to exercise the rights represented by this Warrant. The transfer of this Warrant shall be recorded on the books of the Company upon receipt by the Company of a notice of transfer in the form attached hereto as Exhibit III (the “Transfer Notice”), at its principal offices and the payment to the Company of all transfer taxes and other governmental charges imposed on such transfer. Until the Company receives such Transfer Notice, the Company may treat the registered owner hereof as the owner for all purposes.

#### **SECTION 12. MISCELLANEOUS.**

(a) Effective Date. The provisions of this Warrant shall be construed and shall be given effect in all respects as if it had been executed and delivered by the Company on the date hereof. This Warrant shall be binding upon any successors or assigns of the Company.

(b) Remedies. In the event of any default hereunder, the non-defaulting party may proceed to protect and enforce its rights either by suit in equity and/or by action at law, including but not limited to an action for damages as a result of any such default, and/or an action for specific performance for any default where Warrantholder will not have an adequate remedy at law and where damages will not be readily ascertainable. The Company expressly agrees that it shall not oppose an application by the Warrantholder or any other person entitled to the benefit of this Warrant requiring specific performance of any or all provisions hereof or enjoining the Company from continuing to commit any such breach of this Warrant.

(c) No Impairment of Rights. The Company will not, by amendment of its Charter or through any other means, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate in order to protect the rights of the Warrantholder against impairment.

(d) Attorney’s Fees. In any litigation, arbitration or court proceeding between the Company and the Warrantholder relating hereto, the prevailing party shall be entitled to attorneys’ fees and expenses and all costs of proceedings incurred in enforcing this Warrant. For the purposes of this Section, attorneys’ fees shall include without limitation fees incurred in connection with the following: (i) contempt proceedings; (ii) discovery; (iii) any motion, proceeding or other activity of any kind in connection with an insolvency proceeding; (iv) garnishment, levy, and debtor and third party examinations; and (v) post-judgment motions and proceedings of any kind, including without limitation any activity taken to collect or enforce any judgment.

(e) Severability. In the event any one or more of the provisions of this Warrant shall for any reason be held invalid, illegal or unenforceable, the remaining provisions of this Warrant shall be unimpaired, and the invalid, illegal or unenforceable provision shall be replaced by a mutually acceptable valid, legal and enforceable provision, which comes closest to the intention of the parties underlying the invalid, illegal or unenforceable provision.

(f) Notices. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication that is required, contemplated, or permitted under this Warrant or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by facsimile or hand delivery if transmission or delivery occurs on a business day at or before 5:00 pm in the time zone of the recipient, or, if transmission or delivery occurs on a non-business day or after such time, the first business day thereafter, or the first business day after deposit with an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid, and shall be addressed to the party to be notified as follows:

If to Warrantholder:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.  
Legal Department  
Attention: Chief Legal Officer and Manuel Henriquez  
400 Hamilton Avenue, Suite 310  
Palo Alto, CA 94301  
Facsimile: 650-473-9194

If to the Company:

AMERICAN SUPERCONDUCTOR CORPORATION  
64 Jackson Road  
Devens, MA 01434  
Attention: Chief Financial Officer  
Facsimile: 978-842-3364

with copies to:

AMERICAN SUPERCONDUCTOR CORPORATION  
64 Jackson Road  
Devens, MA 01434  
Attention: General Counsel  
Facsimile: 978-842-3530

and

Latham & Watkins LLP  
John Hancock Tower, 20<sup>th</sup> Floor  
200 Clarendon Street  
Boston, MA 02116  
Attention: Peter N. Handrinos, Esq.  
Facsimile: 617-948-6001

or to such other address as each party may designate for itself by like notice.

(g) Entire Agreement; Amendments. This Warrant constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter hereof, and supersedes and replaces in their entirety any prior proposals, term sheets, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof. None of the terms of this Warrant may be amended except by an instrument executed by each of the parties hereto.

(h) Headings. The various headings in this Warrant are inserted for convenience only and shall not affect the meaning or interpretation of this Warrant or any provisions hereof.

(i) No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Warrant. In the event an ambiguity or question of intent or interpretation arises, this Warrant shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Warrant.

(j) No Waiver. No omission or delay by Warrantholder at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by the Company at any time designated, shall be a waiver of any such right or remedy to which Warrantholder is entitled, nor shall it in any way affect the right of Warrantholder to enforce such provisions thereafter.

(k) Survival. All agreements, representations and warranties contained in this Warrant or in any document delivered pursuant hereto shall survive the execution and delivery of this Warrant and the expiration or other termination of this Warrant.

(l) Governing Law. This Warrant have been negotiated and delivered to Warrantholder in the State of California, and shall have been accepted by Warrantholder in the State of California. Delivery of Common Stock to Warrantholder by the Company under this Warrant is due in the State of California. This Warrant shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

(m) Consent to Jurisdiction and Venue. All judicial proceedings arising in or under or related to this Warrant may be brought in any state or federal court of competent jurisdiction located in the State of California. By execution and delivery of this Warrant, each party hereto generally and unconditionally: (a) consents to personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Warrant. Service of process on any party hereto in any action arising out of or relating to this Warrant shall be effective if given in accordance with the requirements for notice set forth in Section 12(f), and shall be deemed effective and received as set forth in Section 12(f). Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

(n) Mutual Waiver of Jury Trial. Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF THE COMPANY AND WARRANTHOLDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY THE COMPANY AGAINST WARRANTHOLDER OR ITS ASSIGNEE OR BY WARRANTHOLDER OR ITS ASSIGNEE AGAINST THE COMPANY. This waiver extends to all such Claims, including Claims that involve persons other than the Company and the Warrantholder; Claims that arise out of or are in any way connected to the relationship between the Company and Warrantholder; and any Claims for damages, breach of contract, specific performance, or any equitable or legal relief of any kind, arising out of this Warrant.

(o) Judicial Reference. If the waiver of jury trial set forth above is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.



(p) Counterparts. This Warrant and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

(q) Specific Performance. The parties hereto hereby declare that it is impossible to measure in money the damages which will accrue to Warranholder by reason of the Company's failure to perform any of the obligations under this Warrant and agree that the terms of this Warrant shall be specifically enforceable by Warranholder. If Warranholder institutes any action or proceeding to specifically enforce the provisions hereof, any person against whom such action or proceeding is brought hereby waives the claim or defense therein that Warranholder has an adequate remedy at law, and such person shall not offer in any such action or proceeding the claim or defense that such remedy at law exists.

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IN WITNESS WHEREOF, the parties hereto have caused this Warrant to be executed by its officers thereunto duly authorized as of the Effective Date.

COMPANY:

AMERICAN SUPERCONDUCTOR CORPORATION

By: /s/ David A. Henry

Name: David A. Henry

Title: Senior Vice President, Chief Financial Officer and Treasurer

WARRANTHOLDER:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

By: /s/ K. Nicholas Martitsch

Name: K. Nicholas Martitsch

Title: Associate General Counsel

EXHIBIT I

NOTICE OF EXERCISE

To: American Superconductor Corporation

- (1) The undersigned Warrantholder hereby elects to purchase [ ] shares of the Common Stock of American Superconductor Corporation, pursuant to the terms of the Agreement dated the [ ] day of June, 2012 (the "Agreement") between American Superconductor Corporation and the Warrantholder, and [CASH PAYMENT: tenders herewith payment of the Purchase Price in full, together with all applicable transfer taxes, if any] [NET ISSUANCE: elects pursuant to Section 3(a) of the Agreement to effect a Net Issuance], and hereby reaffirms as of the date hereof the representations and covenants of the Warrantholder set forth in Section 10 of the Agreement.
- (2) Please issue a certificate or certificates representing said shares of Common Stock in the name of the undersigned or in such other name as is specified below.

\_\_\_\_\_  
(Name)

(Address)

WARRANTHOLDER:

HERCULES TECHNOLOGY GROWTH CAPITAL, INC.

By: \_\_\_\_\_

Name:

Title:

Date:

EXHIBIT II

ACKNOWLEDGMENT OF EXERCISE

The undersigned American Superconductor Corporation, hereby acknowledge receipt of the "Notice of Exercise" from Hercules Technology Growth Capital, Inc., to purchase [ ] shares of the Common Stock of [ ], pursuant to the terms of the Agreement, and further acknowledges that [ ] shares remain subject to purchase under the terms of the Agreement.

COMPANY:

AMERICAN SUPERCONDUCTOR CORPORATION

By: \_\_\_\_\_  
Title:  
Date:

EXHIBIT III

TRANSFER NOTICE

(To transfer or assign the foregoing Agreement execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Agreement and all rights evidenced thereby are hereby transferred and assigned to

\_\_\_\_\_  
(Please Print)  
whose address is \_\_\_\_\_  
\_\_\_\_\_

Dated: \_\_\_\_\_  
Holder's Signature: \_\_\_\_\_  
Holder's Address: \_\_\_\_\_  
\_\_\_\_\_



# AMSC Reports Fourth Quarter and Fiscal Year 2011 Financial Results

*Company exceeds financial guidance and announces new \$10 million financing*

**Devens, MA – June 6, 2012** – AMSC (NASDAQ: AMSC), a global solutions provider serving wind and grid leaders, today reported financial results for its fourth quarter and full year fiscal 2011 ended March 31, 2012.

Revenues for the fourth quarter of fiscal 2011 were \$28.6 million. This compares with \$59.8 million for the fourth quarter of fiscal 2010 and \$18.1 million for the third quarter of fiscal 2011. The year-over-year decline is due primarily to a lack of revenue from AMSC's former customer, Sinovel Wind Group Co., Ltd. (Sinovel), while the quarter-over-quarter increase was driven by growth in the company's Wind and Grid reporting segments.

AMSC reported a net loss for the fourth fiscal quarter of \$21.2 million, or \$0.42 per share. For the fourth quarter of fiscal year 2010, AMSC reported a net loss of \$185.1 million, or \$3.67 per share, which included \$155.3 million in aggregate one-time asset write-downs, impairments and accrued charges. AMSC reported a net loss of \$26.3 million, or \$0.52 per share, for the third quarter of fiscal year 2011.

The company's non-GAAP net loss for the fourth quarter of fiscal 2011 was \$15.1 million, or \$0.30 per share. This compares with a non-GAAP net loss of \$26.1 million, or \$0.52 per diluted share, for the fourth quarter of fiscal 2010 and a non-GAAP net loss of \$17.5 million, or \$0.34 per share, for the third quarter of fiscal year 2011. Please refer to the financial table below for a reconciliation of GAAP to non-GAAP results.

Revenues for the full year fiscal 2011 were \$76.5 million, which compares with \$286.6 million for full year fiscal 2010. The year-over-year decline is due primarily to a lack of revenue from Sinovel. AMSC reported a net loss for full year fiscal 2011 of \$136.8 million, or \$2.69 per share. For fiscal year 2010, AMSC reported a net loss of \$186.3 million, or \$3.95 per share. The company's non-GAAP net loss for full year fiscal 2011 was \$85.5 million, or \$1.68 per share. This compares with a non-GAAP net loss of \$12.8 million, or \$0.27 per diluted share, for fiscal year 2010.

AMSC's cash, cash equivalents, marketable securities and restricted cash at March 31, 2012 totaled \$66.2 million, well above the company's \$50 million forecast. This compares with \$75.5 million as of December 31, 2011. Subsequent to March 31, 2012, AMSC raised an aggregate of \$35 million in gross proceeds through the issuance of \$25 million of 7% Senior Convertible Notes and a \$10 million senior secured term loan (see details below).

press release

The company's total backlog as of March 31, 2012 was approximately \$291 million. This compares with approximately \$300 million as of December 31, 2011. Approximately one-third of AMSC's backlog on March 31, 2012 was scheduled to be delivered in fiscal year 2012.

"I am proud of the resiliency and resolve that we demonstrated throughout fiscal year 2011," said AMSC President and Chief Executive Officer Daniel P. McGahn. "We restructured our business, diversified our revenue streams and significantly reduced our cost structure. Our fourth fiscal quarter proved to be a culmination of these efforts as we exceeded all of our financial objectives and maintained a healthy backlog. Now, with fiscal 2011 behind us and a bolstered balance sheet in place, we are focused on driving year-over-year growth, enhancing our gross margin and booking orders for shipment in late fiscal 2012 and early fiscal 2013."

#### **Further Strengthening Liquidity**

AMSC announced today that, on June 5, 2012, it entered into a \$10 million loan and security agreement with Hercules Technology Growth Capital. The company plans to pay interest only starting July 1, 2012 until November 1, 2012. At that time, AMSC plans to begin to repay the loan in equal monthly installments until maturity on December 1, 2014. The loan carries an interest rate of 11%, which will adjust upward if the prime rate increases by more than 50 basis points over the life of the loan. Upon prepayment in full or at maturity, AMSC will pay a success fee of \$500,000. In addition, Hercules received warrants to purchase 139,276 shares of common stock at an exercise price of \$3.59 per share. The warrants are immediately exercisable and expire on December 5, 2017. This loan follows a financing that AMSC completed in early April, which provided the company with \$25 million in gross proceeds and an option for an additional \$15 million in proceeds subject to certain conditions. For more information about the loan and security agreement, please refer to AMSC's filing on Form 8-K today.

#### **Looking Forward**

"We expect fiscal year 2012 to be a period of continued progress at AMSC," said McGahn. "AMSC is well positioned with a highly skilled global team and a set of solutions that allow our partners and customers to deliver smarter, cleaner ... better energy. We believe these competencies and relationships provide the foundation we require to continue growing the business year over year, expanding our regional reach and working toward sustainable profitability."

For the quarter ending June 30, 2012, AMSC expects that its revenues will exceed \$26 million. AMSC expects that its net loss for the first quarter of fiscal 2012 will be less than \$10 million, or \$0.19 per share, which includes a benefit of approximately \$7 million for the settlement of adverse purchase commitments with certain vendors. AMSC expects that its non-GAAP net loss for the first fiscal quarter will be less than \$13 million, or \$0.25 per share. AMSC estimates that it will have approximately \$85 million in cash, cash equivalents, marketable securities and restricted cash on June 30, 2012.

#### **Conference Call Reminder**

In conjunction with this announcement, AMSC management will participate in a conference call with investors beginning at 10:00 a.m. Eastern Time today to discuss the company's results and its business outlook. Those who wish to listen to the live or archived conference call webcast should visit the "Investors" section of the company's website at <http://www.amsco.com/investors>. The live call also can be accessed by dialing 719-325-2104 and using conference ID 5408896.

#### **[About AMSC \(NASDAQ: AMSC\)](#)**

AMSC generates the ideas, technologies and solutions that meet the world's demand for smarter, cleaner ... better energy. Through its Windtec™ Solutions, AMSC enables manufacturers to launch best-in-class wind turbines quickly, effectively and profitably. Through its Gridtec™ Solutions, AMSC provides the engineering planning services and advanced grid systems that optimize network reliability, efficiency and performance. The company's solutions are now powering gigawatts of renewable energy globally and enhancing the performance and reliability of power networks in more than a dozen countries. Founded in 1987, AMSC is headquartered near Boston, Massachusetts with operations in Asia, Australia, Europe and North America. For more information, please visit [www.amscc.com](http://www.amscc.com).

*AMSC, Windtec and Gridtec are trademarks or registered trademarks of American Superconductor Corporation. All other brand names, product names, trademarks or service marks belong to their respective holders.*

*Any statements in this release about future expectations, plans and prospects for the company, including without limitation our prospects for future growth, expectations regarding the sufficiency of our existing cash balance, expectations regarding future financial results and liquidity and other statements containing the words "believes," "anticipates," "plans," "expects," "will" and similar expressions, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements represent management's current expectations and are inherently uncertain. There are a number of important factors that could materially impact the value of our common stock or cause actual results to differ materially from those indicated by such forward-looking statements. Such factors include: our success in addressing the wind energy market is dependent on the manufacturers that license our designs; we may not realize all of the sales expected from our backlog of orders and contracts; our business and operations would be adversely impacted in the event of a failure or security breach of our information technology infrastructure; our success is dependent upon attracting and retaining qualified personnel and our inability to do so could significantly damage our business and prospects; we rely upon third-party suppliers for the components and subassemblies of many of our Wind and Grid products, making us vulnerable to supply shortages and price fluctuations, which could harm our business; many of our revenue opportunities are dependent upon subcontractors and other business collaborators; if we fail to implement our business strategy successfully, our financial performance could be harmed; problems with product quality or product performance may cause us to incur warranty expenses and may damage our market reputation and prevent us from achieving increased sales and market share; our contracts with the U.S. government are subject to audit, modification or termination by the U.S. government and include certain other provisions in favor of the government—the continued funding of such contracts remains subject to annual congressional appropriation which, if not approved, could reduce our revenue and lower or eliminate our profit; we may acquire additional complementary businesses or technologies, which may require us to incur substantial costs for which we may never realize the anticipated benefits; many of our customers outside of the United States are, either directly or indirectly, related to governmental entities, and we could be adversely affected by violations of the United States Foreign Corrupt Practices Act and similar worldwide anti-bribery laws outside the United States; we have limited experience in marketing and selling our superconductor products and system-level solutions, and our failure to effectively market and sell our products and solutions could lower our revenue and cash flow; we have a history of operating losses, and we may incur additional losses in the future; our operating results may fluctuate significantly from quarter to quarter and may fall below expectations in any particular fiscal quarter; we may require additional funding in the future and may be unable to raise capital when needed; our new debt obligations include certain covenants and other events of default—should we not comply with the covenants or incur an event of default, we may be required to repay our debt obligations in cash, which could have an adverse effect on our liquidity; we have recorded a liability for adverse purchase commitments with certain of our vendors—should we be required to settle these liabilities in cash, our liquidity could be adversely affected; if we fail to maintain proper and effective internal controls over financial reporting, our ability to produce accurate and timely financial statements could be impaired and may lead investors and other users to lose confidence in our financial data; we may be required to issue performance bonds or provide letters of credit, which restricts our ability to access any cash used as collateral for the bonds or letters of credit; changes in exchange rates could adversely affect our results from operations; growth of the wind energy market depends largely on the availability and size of government subsidies and economic incentives; we depend on sales to customers in China, and global conditions could negatively affect our operating results or limit our ability to expand our operations outside of China; changes in China's political, social, regulatory and economic environment may affect our financial performance; our products face intense competition, which could limit our ability to acquire or retain customers; our international operations are subject to risks that we do not face in the United States, which could have an adverse effect on our operating results; adverse changes in domestic and global economic conditions could adversely affect our operating results; we may be unable to adequately prevent disclosure of trade secrets and other proprietary information; our patents may not provide meaningful protection for our technology, which could result in us losing some or all of our market position; the commercial uses of superconductor products are limited today, and a widespread commercial market for our products may not develop; there are a number of technological challenges that must be successfully addressed before our superconductor products can gain*



widespread commercial acceptance, and our inability to address such technological challenges could adversely affect our ability to acquire customers for our products; we have not manufactured our Amperium wire in commercial quantities, and a failure to manufacture our Amperium wire in commercial quantities at acceptable cost and quality levels would substantially limit our future revenue and profit potential; third parties have or may acquire patents that cover the materials, processes and technologies we use or may use in the future to manufacture our Amperium products, and our success depends on our ability to license such patents or other proprietary rights; our technology and products could infringe intellectual property rights of others, which may require costly litigation and, if we are not successful, could cause us to pay substantial damages and disrupt our business; we have filed a demand for arbitration and other lawsuits against our former largest customer, Sinovel, regarding amounts we contend are overdue—we cannot be certain as to the outcome of these proceedings; we have been named as a party to purported stockholder class actions and stockholder derivative complaints, and we may be named in additional litigation, all of which will require significant management time and attention, result in significant legal expenses and may result in an unfavorable outcome, which could have a material adverse effect on our business, operating results and financial condition; our 7% convertible note contains warrants and provisions that could limit our ability to repay the note in shares of common stock and should the note be repaid in stock, shareholders could experience significant dilution; our common stock has experienced, and may continue to experience, significant market price and volume fluctuations, which may prevent our stockholders from selling our common stock at a profit and could lead to costly litigation against us that could divert our management's attention. Reference is made to many of these factors and others in the "Risk Factors" section of the company's most recent quarterly or annual report filed with the Securities and Exchange Commission. In addition, any forward-looking statements included in this release represent the company's expectations as of the date of this release. While the company anticipates that subsequent events and developments may cause the company's views to change, the company specifically disclaims any obligation to update these forward-looking statements. These forward-looking statements should not be relied upon as representing the company's views as of any date subsequent to the date of this release.

**UNAUDITED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(In thousands, except per share data)

	Three months ended March 31,		Year ended March 31,	
	2012	2011	2012	2011
<b>Revenues:</b>				
Wind	\$ 16,804	\$ 48,599	\$ 44,642	\$ 231,761
Grid	11,823	11,152	31,901	54,842
Total revenues	<u>28,627</u>	<u>59,751</u>	<u>76,543</u>	<u>286,603</u>
Cost of revenues	<u>25,071</u>	<u>159,016</u>	<u>82,882</u>	<u>308,183</u>
Gross profit	<u>3,556</u>	<u>(99,265)</u>	<u>(6,339)</u>	<u>(21,580)</u>
<b>Operating expenses:</b>				
Research and development	5,932	8,908	27,271	32,517
Selling, general and administrative	17,165	25,662	72,118	72,382
Restructuring and impairments	795	49,955	9,188	49,955
Write-off of advance payment	—	—	20,551	—
Amortization of acquisition related intangibles	82	394	972	1,549
Total operating expenses	<u>23,974</u>	<u>84,919</u>	<u>130,100</u>	<u>156,403</u>
Operating loss	(20,418)	(184,184)	(136,439)	(177,983)
Interest income, net	11	281	243	830
Other income (expense), net	(577)	2,079	738	6,822
Loss before income tax expense	(20,984)	(181,824)	(135,458)	(170,331)
Income tax expense	184	3,311	1,369	15,953
Net loss	<u><u>\$(21,168)</u></u>	<u><u>\$(185,135)</u></u>	<u><u>\$(136,827)</u></u>	<u><u>\$(186,284)</u></u>
<b>Net loss per common share</b>				
Basic	<u><u>\$ (0.42)</u></u>	<u><u>\$ (3.67)</u></u>	<u><u>\$ (2.69)</u></u>	<u><u>\$ (3.95)</u></u>
Diluted	<u><u>\$ (0.42)</u></u>	<u><u>\$ (3.67)</u></u>	<u><u>\$ (2.69)</u></u>	<u><u>\$ (3.95)</u></u>
<b>Weighted average number of common shares outstanding</b>				
Basic	<u><u>51,004</u></u>	<u><u>50,423</u></u>	<u><u>50,842</u></u>	<u><u>47,103</u></u>
Diluted	<u><u>51,004</u></u>	<u><u>50,423</u></u>	<u><u>50,842</u></u>	<u><u>47,103</u></u>

**UNAUDITED CONSOLIDATED BALANCE SHEETS**  
(In thousands)

	March 31, 2012	March 31, 2011
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 46,279	\$ 123,783
Marketable securities	5,304	116,126
Accounts receivable, net	18,999	15,259
Inventory	29,256	25,828
Prepaid expenses and other current assets	31,444	32,759
Restricted cash	12,086	5,566
Deferred tax assets	203	484
Total current assets	<u>143,571</u>	<u>319,805</u>
Property, plant and equipment, net	90,828	96,494
Intangibles, net	3,772	7,054
Restricted cash	2,540	—
Deferred tax assets	3,129	5,840
Other assets	11,216	12,016
Total assets	<u>\$ 255,056</u>	<u>\$ 441,209</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable and accrued expenses	\$ 37,582	\$ 90,273
Adverse purchase commitments	25,894	38,763
Deferred revenue	19,718	10,304
Deferred tax liabilities	3,129	5,840
Total current liabilities	<u>86,323</u>	<u>145,180</u>
Deferred revenue	1,558	2,181
Deferred tax liabilities	203	484
Other liabilities	2,093	509
Total liabilities	<u>90,177</u>	<u>148,354</u>
Stockholders' equity:		
Common stock	520	507
Additional paid-in capital	896,603	885,704
Treasury stock	(271)	—
Accumulated other comprehensive income	2,027	3,817
Accumulated deficit	(734,000)	(597,173)
Total stockholders' equity	<u>164,879</u>	<u>292,855</u>
Total liabilities and stockholders' equity	<u>\$ 255,056</u>	<u>\$ 441,209</u>

**UNAUDITED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In thousands)

	<u>Year ended March 31,</u>	
	<u>2012</u>	<u>2011</u>
<b>Cash flows from operating activities:</b>		
Net (loss) income	\$(136,827)	\$(186,284)
Adjustments to reconcile net (loss) income to net cash (used in) provided by operations:		
Depreciation and amortization	15,455	11,300
Stock-based compensation expense	9,864	13,443
Write-off of advanced payment to The Switch	20,551	—
Patent costs	4,917	—
Restructuring charges, net of payments	2,798	—
Impairment of goodwill	—	48,959
Impairment of long-lived and intangible assets	1,715	996
Provision for excess and obsolete inventory	4,357	63,882
Adverse purchase commitment losses (recoveries), net	(1,299)	38,763
Provision for doubtful accounts receivable	—	25
Write-off of prepaid taxes	—	5,905
Loss on minority interest investments	2,407	1,396
Deferred income taxes	—	3,660
Other non-cash items	771	949
Changes in operating asset and liability accounts:		
Accounts receivable	(4,820)	63,175
Inventory	(7,528)	(51,942)
Prepaid expenses and other current assets	1,685	(15,428)
Accounts payable and accrued expenses	(64,148)	(222)
Deferred revenue	9,060	(21,398)
Net cash used in operating activities	<u>(141,042)</u>	<u>(22,821)</u>
<b>Cash flows from investing activities:</b>		
Purchase of property, plant and equipment	(10,895)	(40,862)
Purchase of marketable securities	—	(157,905)
Proceeds from the maturity of marketable securities	110,117	104,830
Change in restricted cash	(9,093)	247
Purchase of intangible assets	(4,227)	(2,514)
Purchase of minority investments	(1,800)	(9,765)
Advance payment for planned acquisition	(20,551)	—
Change in other assets	(214)	1,136
Net cash provided by (used in) investing activities	<u>63,337</u>	<u>(104,833)</u>
<b>Cash flows from financing activities:</b>		
Employee taxes paid related to net settlement of equity awards	(271)	—
Proceeds from debt	4,682	—
Repayment of debt	(4,682)	—
Proceeds from public equity offering, net	—	155,240
Proceeds from exercise of employee stock options and ESPP	328	7,818
Net cash provided by financing activities	<u>57</u>	<u>163,058</u>
Effect of exchange rate changes on cash and cash equivalents	144	785
Net (decrease) increase in cash and cash equivalents	<u>(77,504)</u>	<u>36,189</u>
Cash and cash equivalents at beginning of year	123,783	87,594
Cash and cash equivalents at end of year	<u>\$ 46,279</u>	<u>\$ 123,783</u>

**RECONCILIATION OF GAAP NET INCOME (LOSS) TO NON-GAAP NET INCOME (LOSS)**  
(In thousands, except per share data)

	Three months ended March 31,		Year ended March 31,	
	2012	2011	2012	2011
Net loss	\$ (21,168)	\$ (185,135)	\$ (136,827)	\$ (186,284)
Goodwill and long-lived asset impairment	—	49,955	—	49,955
Provision for excess and obsolete inventory	—	61,216	—	63,882
Adverse purchase commitments (recoveries) losses, net	(1,372)	38,763	(1,299)	38,763
Write-off of prepaid value added taxes	—	5,355	—	5,905
Stock-based compensation	2,167	3,338	9,864	13,412
Amortization of acquisition-related intangibles	82	394	972	1,549
Restructuring and impairment charges	795	—	9,188	—
Executive severance	—	—	2,066	—
Sinovel litigation	89	—	5,846	—
Margin on zero cost-basis accounting	(621)	—	(794)	—
Patent costs	4,917	—	4,917	—
Write-off of advance payment	—	—	20,551	—
Non-GAAP net loss	\$ (15,111)	\$ (26,114)	\$ (85,516)	\$ (12,818)
Non-GAAP loss per share	\$ (0.30)	\$ (0.52)	\$ (1.68)	\$ (0.27)
Weighted average diluted shares outstanding	51,004	50,423	50,842	47,103

**RECONCILIATION OF FORECAST GAAP NET LOSS TO NON-GAAP NET LOSS**  
(In millions, except per share data)

	Three months ending June 30, 2012
Net loss	\$ (10.0)
Amortization of acquisition-related intangibles	0.4
Stock-based compensation	2.2
Non-cash interest expense	1.4
Recovery of adverse purchase commitments	(7.0)
Non-GAAP net loss	\$ (13.0)
Non-GAAP net loss per share	\$ (0.25)
Shares outstanding	51.5

*Note: Non-GAAP net income (loss) is defined by the company as net income (loss) before goodwill and long-lived asset impairment; provisions for excess and obsolete inventory; adverse purchase commitments (recoveries) losses, net; write-off of prepaid value-added taxes, patent costs and advance payments; stock-based compensation; amortization of acquisition-related intangibles; restructuring and impairment charges; executive severance; Sinovel litigation; margin on zero cost-basis accounting; non-cash interest expense and other unusual charges; and any tax effects related to these items. The company believes non-GAAP net income (loss) assists management and investors in comparing the company's performance across reporting periods on a consistent basis by excluding these non-cash or non-recurring charges that it does not believe are indicative of its core operating performance. The company also regards non-GAAP net income (loss) as a useful measure of operating performance and cash flow to complement operating income, net income (loss) and other GAAP financial performance measures. In addition, the company uses non-GAAP net (loss) income as a factor in evaluating management's performance when determining incentive compensation and to evaluate the effectiveness of its business strategies.*

*Generally, a non-GAAP financial measure is a numerical measure of a company's performance, financial position or cash flow that either excludes or includes amounts that are not normally excluded or included in the most directly comparable measure calculated and presented in accordance with GAAP. The non-GAAP measures included in this release, however, should be considered in addition to, and not as a substitute for or superior to, operating income, cash flows, or other measures of financial performance prepared in accordance with GAAP. A reconciliation of non-GAAP to GAAP net income is set forth in the table above.*

**AMSC Contact:**

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