
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

**QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934**

For The Quarter Ended: June 30, 2003

Commission File Number 0-19672

American Superconductor Corporation

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
organization or incorporation)

04-2959321

(I.R.S. Employer
Identification Number)

Two Technology Drive

Westborough, Massachusetts 01581

(Address of principal executive offices, including zip code)

(508) 836-4200

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by checkmark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

<u>Class</u>	<u>Outstanding as of August 12, 2003</u>
Common Stock, par value \$.01 per share	21,343,720

AMERICAN SUPERCONDUCTOR CORPORATION

INDEX

	<u>Page No.</u>
Part I—Financial Information	
Item 1. Financial Statements	
Consolidated Balance Sheets June 30, 2003 (unaudited) and March 31, 2003	3
Consolidated Statements of Operations for the three months ended June 30, 2003 and 2002 (unaudited)	4
Consolidated Statements of Comprehensive Loss for the three months ended June 30, 2003 and 2002 (unaudited)	5
Consolidated Statements of Cash Flows for the three months ended June 30, 2003 and 2002 (unaudited)	6
Notes to Interim Consolidated Financial Statements	7-14
Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations	15-27
Item 3. Quantitative and Qualitative Disclosures About Market Risk	28
Item 4. Controls and Procedures	28
Part II—Other Information	
Item 1. Legal Proceedings	29
Item 2. Changes in Securities and Use of Proceeds	29
Item 3. Defaults Upon Senior Securities	29
Item 4. Submission of Matters to a Vote of Security Holders	29
Item 5. Other Information	29
Item 6. Exhibits and Reports on Form 8-K	29
Signatures	30
Exhibit Index	31

AMERICAN SUPERCONDUCTOR CORPORATION
CONSOLIDATED BALANCE SHEETS

	June 30, 2003	March 31, 2003
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 11,089,265	\$ 18,487,752
Accounts receivable, net	6,758,683	5,446,007
Inventory	3,517,696	5,117,786
Prepaid expenses and other current assets	1,297,124	1,264,839
Total current assets	22,662,768	30,316,384
Property and equipment:		
Land	4,021,611	4,021,611
Construction in progress—building and equipment	9,523,702	8,773,458
Building	34,102,138	34,102,138
Equipment	32,040,541	31,966,730
Furniture and fixtures	4,158,119	4,167,345
Leasehold improvements	6,246,497	6,246,497
	90,092,608	89,277,779
Less: accumulated depreciation	(29,587,993)	(28,241,982)
Property and equipment, net	60,504,615	61,035,797
Long-term marketable securities	1,012,620	1,561,120
Long-term inventory	3,250,000	3,250,000
Goodwill	1,107,735	1,107,735
Other assets	4,724,384	4,707,603
Total assets	\$ 93,262,122	\$ 101,978,639
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	\$ 10,066,835	\$ 9,773,874
Deferred revenue	297,383	1,136,002
Total current liabilities	10,364,218	10,909,876
Long-term deferred revenue	3,250,000	3,250,000
Commitments (Note 9)		
Stockholders' equity:		
Common stock, \$.01 par value		
Authorized shares—50,000,000; shares issued and outstanding 21,343,720 and 21,293,772 at June 30, 2003 and March 31, 2003, respectively	213,437	212,938
Additional paid-in capital	361,488,915	361,024,689
Deferred compensation	(596,457)	(311,563)
Accumulated other comprehensive income	8,193	2,407
Accumulated deficit	(281,466,184)	(273,109,708)
Total stockholders' equity	79,647,904	87,818,763
Total liabilities and stockholders' equity	\$ 93,262,122	\$ 101,978,639

The accompanying notes are an integral part of the consolidated financial statements.

AMERICAN SUPERCONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

	Three months ended June 30,	
	2003	2002
	(Unaudited)	
Revenues:		
Contract revenue	\$ 355,777	\$ 131,125
Product sales and prototype development contracts	7,400,530	2,728,848
Total revenues	7,756,307	2,859,973
Costs and expenses:		
Costs of revenue—contract revenue	335,640	128,118
Costs of revenue—product sales and prototype development contracts	8,272,789	4,230,822
Research and development	4,863,057	6,217,335
Selling, general and administrative	2,704,848	3,463,923
Total costs and expenses	16,176,334	14,040,198
Operating loss	(8,420,027)	(11,180,225)
Interest income	34,519	370,806
Other income (expense), net	29,032	(19,820)
Net loss	\$ (8,356,476)	\$ (10,829,239)
Net loss per common share		
Basic and diluted	\$ (0.39)	\$ (0.53)
Weighted average number of common shares outstanding		
Basic and diluted	21,343,720	20,535,175

The accompanying notes are an integral part of the consolidated financial statements.

AMERICAN SUPERCONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Three months ended June 30,	
	2003	2002
	(Unaudited)	
Net loss	\$ (8,356,476)	\$ (10,829,239)
Other comprehensive income (loss)		
Foreign currency translation	9,161	19,827
Unrealized loss on investments	(3,375)	(1,688)
Other comprehensive income	5,786	18,139
Comprehensive loss	\$ (8,350,690)	\$ (10,811,100)

The accompanying notes are an integral part of the consolidated financial statements.

AMERICAN SUPERCONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Three months ended June 30,	
	2003	2002
	(Unaudited)	
Cash flows from operating activities:		
Net loss	\$ (8,356,476)	\$ (10,829,239)
Adjustments to reconcile net loss to net cash used in operations:		
Depreciation and amortization	1,615,976	1,520,406
Gain on disposal of PP&E	(2,813)	—
Amortization of deferred compensation expense	54,002	34,578
Amortization of deferred warrant costs	13,322	49,421
Changes in operating asset and liability accounts:		
Accounts receivable	(1,312,676)	(93,390)
Inventory—current and long-term	1,600,090	67,117
Prepaid expenses and other current assets	(29,874)	(16,047)
Accounts payable and accrued expenses	292,961	(7,582,340)
Deferred revenue—current and long-term	(838,619)	(808,928)
Net cash used in operating activities	(6,964,107)	(17,658,422)
Cash flows from investing activities:		
Purchase of property and equipment	(889,799)	(4,787,488)
Proceeds from the sale of property and equipment	27,938	—
Sale of long-term marketable securities	551,875	7,089,215
Increase in other assets	(236,901)	(390,375)
Net cash (used in) provided by investing activities	(546,887)	1,911,352
Cash flows from financing activities:		
Net proceeds from issuance of common stock	112,507	249,930
Net cash provided by financing activities	112,507	249,930
Net cash decrease in cash and cash equivalents	(7,398,487)	(15,497,140)
Cash and cash equivalents at beginning of period	18,487,752	37,170,927
Cash and cash equivalents at end of period	\$ 11,089,265	\$ 21,673,787
Supplemental schedule of cash flow information:		
Noncash issuance of common stock	\$ 54,002	\$ 34,578

The accompanying notes are an integral part of the consolidated financial statements.

AMERICAN SUPERCONDUCTOR CORPORATION
NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of the Business:

American Superconductor Corporation (the “Company” or “AMSC”), which was formed on April 9, 1987, is a world leader in developing and manufacturing products using superconducting materials and power electronic converters for electric power applications. The focus of the Company’s development and commercialization efforts is on electrical equipment for electric utilities, transmission grid operators, industrial and commercial users of electrical power, and commercial and military ships. For large-scale applications, the Company’s development efforts are focused on high temperature superconductor (“HTS”) wire for use in power transmission cables, motors, and generators. The Company is also developing and commercializing electric motors and generators based on its HTS wire. For power quality and reliability applications, the Company is focused on proprietary power electronic converters that rapidly switch, control and modulate power. The Company also designs, manufactures, and sells systems based on those power electronic converters for power quality and reliability solutions. The Company operates in three business segments—AMSC Wires, SuperMachines and Power Electronic Systems.

The Company has generated operating losses since its inception in 1987 and expects to continue incurring losses until at least the end of fiscal 2005. Operating losses for the fiscal years ended March 31, 2003, 2002 and 2001 have contributed to net cash used by operating activities of \$39,604,957, \$26,456,387 and \$26,424,059, respectively, for these periods. For the three months ended June 30, 2003, net cash used by operating activities was \$6,964,107. The Company’s average annual use of cash over this period is greater than our balance of cash, cash equivalents and long-term marketable securities at June 30, 2003 of \$12,101,885.

In July 2003, the Company implemented approximately \$5 million of reductions in its operating and capital budgets for fiscal 2004, primarily through the elimination of 34 positions, including a reduction in force of 23 employees, or 8% of its workforce. Cuts were also made in controllable expenses and capital equipment purchase plans.

The cash savings from the aforementioned cost reduction actions combined with an increasing level of revenues for the remainder of the fiscal year are expected to lower the Company’s quarterly cash usage beginning in the second quarter of fiscal 2004. The revenue increase is supported by the Company’s receipt in March 2003 of the three-year 36.5 MW motor contract from the Office of Naval Research as well as its selection in April 2003 by the Department of Energy (DOE) as the prime contractor for an HTS cable project with the Long Island Power Authority (LIPA).

To supplement the Company’s anticipated cash needs for operations as well as its investment in the second generation wire development program, the Company has been examining a number of options for raising additional capital. Based on these efforts over the last year, the Company signed in June 2003 non-binding letters of intent with three groups of investors to provide up to \$50 million in financing. These letters of intent are subject to satisfactory due diligence by these investors, the completion of formal legal documentation and

[Table of Contents](#)

approval of the financings by the Company's shareholders. The \$50 million financing is expected to be comprised of a five-year term loan of up to \$30 million to be provided by a corporate finance company and several institutional investors with these amounts secured by the Company's existing assets and additional assets projected to be acquired, excluding accounts receivable and inventory. In addition, three institutional investors have also signed a non-binding letter of intent to provide \$10 million in the form of subordinated notes that are convertible into the Company's common stock. The Company has also signed a non-binding letter of intent with a commercial bank to provide up to \$10 million in the form of a working capital credit facility that is to be secured by its accounts receivable and inventory.

Each of the investor groups will also be issued warrants to acquire shares of the Company's common stock. The conversion feature of the subordinated convertible notes combined with the warrants will trigger the NASDAQ requirement that the Company's shareholders approve this \$50 million financing transaction prior to its closing. Consequently, should the Company be able to close this transaction, the earliest this would occur would be the end of September 2003. The Company expects that all of the contemplated financings will be required to close simultaneously. While the Company believes it will be able to complete the \$50 million financing transaction, it can make no assurance that such funds will be available, or available under terms acceptable to them, or that its shareholders will approve this financing transaction. In the event that this transaction cannot be completed, the Company is confident that they could obtain conventional mortgage financing on its Devens, MA manufacturing facility that, combined with its available cash, cash equivalents and long-term marketable securities, would be sufficient to satisfy its anticipated cash requirements for at least the next 12 months.

The Company currently derives a portion of its revenue from research and development contracts. The Company recorded contract revenue related to research and development contracts of \$355,777 and \$131,125 for the three months ended June 30, 2003 and 2002, respectively. In addition, the Company recorded prototype development contract revenues on U.S. Navy and other contracts of \$5,549,894 and \$2,271,611, which are included under "Revenues – Product sales and prototype development contracts," in the three months ended June 30, 2003 and 2002, respectively.

Costs of revenue include research and development and selling, general and administrative expenses that are incurred in the performance of these development contracts.

Research and development ("R&D") and selling, general and administrative ("SG&A") expenses included as costs of revenue for these development contracts were as follows:

	Three Months Ended June 30,	
	2003	2002
Research and development expenses	\$4,754,088	\$2,087,747
Selling, general and administrative expenses	\$1,524,654	\$ 308,745

[Table of Contents](#)

2. Basis of Presentation:

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles. The unaudited consolidated financial statements of the Company presented herein have been prepared in accordance with the SEC's instructions to Form 10-Q and as such do not include all of the information and note disclosures included in annual financial statements prepared in accordance with generally accepted accounting principles. Certain information and footnote disclosure normally included in the Company's annual consolidated financial statements have been condensed or omitted. The interim consolidated financial statements, in the opinion of management, reflect all adjustments (consisting of normal recurring accruals) necessary for a fair presentation of the results for the interim periods ended June 30, 2003 and 2002 and the financial position at June 30, 2003.

The results of operations for the interim period are not necessarily indicative of the results of operations to be expected for the fiscal year. It is suggested that these interim consolidated financial statements be read in conjunction with the audited consolidated financial statements for the fiscal year ended March 31, 2003 which are contained in the Company's Annual Report on Form 10-K covering the fiscal year ended March 31, 2003.

There has been no material change to the Company's significant accounting policies from those filed in the Form 10-K. Certain prior year amounts have been reclassified to be consistent with the current year presentation.

3. Stock-Based Compensation Plans and Pro Forma Stock-Based Compensation Expense

The Company applies Accounting Principles Board Opinion ("APB") No. 25, "Accounting for Stock Issued to Employees," and related interpretations in accounting for its stock-based compensation plans. Accordingly, no accounting recognition is given to stock options granted at fair market value until they are exercised. Upon exercise, net proceeds, including tax benefits realized, are credited to stockholders' equity.

In October 1995, the FASB issued SFAS No. 123, "Accounting for Stock-Based Compensation," which sets forth a fair-value-based method of recognizing stock-based compensation expense. As permitted by SFAS No. 123, the Company has elected to continue to apply APB No. 25 to account for its stock-based compensation plans.

Had compensation cost for awards granted after 1994 under the Company's stock-based compensation plan been determined based on the fair value at the grant dates consistent with the method set forth under SFAS No. 123, the effect on certain financial information of the Company would have been as follows:

	For the three months ended June 30,	
	2003	2002
Net loss	\$ (8,356,476)	\$ (10,829,239)
Add: Stock compensation expense under APB 25	\$ 52,927	\$ 34,578
Less: Stock compensation, net of tax, had all options been recorded at fair value per SFAS 123	\$ (949,757)	\$ (1,681,451)
Pro forma net loss	\$ (9,253,306)	\$ (12,476,112)
Weighted average shares, basic and diluted	21,343,720	20,535,175
Net loss per share, as reported	\$ (0.39)	\$ (0.53)
Net loss per share, pro forma	\$ (0.43)	\$ (0.61)

[Table of Contents](#)

The pro forma amounts include the effects of all activity under the Company's stock-based compensation plans since April 1, 1998. The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions used for grants:

	For the three months ended June 30,	
	2003	2002
Dividend yield	None	None
Expected volatility	100%	101%
Risk-free interest rate	4.0%	4.0%
Expected life (years)	6.5	6.5

Weighted average fair value of options granted at fair market value during the three months ended June 30,

2003	\$3.03
2002	\$7.24

The above amounts may not be indicative of future expense because amounts are recognized over the vesting period and the Company expects it will have additional grants and related activity under these plans in the future.

4. Net Loss Per Common Share:

Basic Earnings Per Share ("EPS") excludes dilution and is computed by dividing net income by the weighted-average number of common shares outstanding for the period. Diluted EPS includes dilution and is computed using the weighted average number of common shares and dilutive common equivalent shares outstanding during the period. Common equivalent shares include the dilutive effect of stock options and warrants. For the three months ended June 30, 2003 and 2002, common equivalent shares of 4,324,255 and 4,817,851 were not included in the calculation of diluted EPS as their effect was antidilutive.

5. Accounts Receivable:

Accounts receivable at June 30, 2003 and March 31, 2003 consisted of the following:

	June 30, 2003	March 31, 2003
Accounts Receivable (billed)	\$ 4,133,828	\$ 4,828,214
Accounts Receivable (unbilled)	5,282,340	3,275,278
Less: Allowance for Doubtful Accounts	(2,657,485)	(2,657,485)
Accounts Receivable, net	\$ 6,758,683	\$ 5,446,007

[Table of Contents](#)

6. Inventories:

Inventories at June 30, 2003 and March 31, 2003 consisted of the following:

	<u>June 30, 2003</u>	<u>March 31, 2003</u>
Raw materials	\$ 763,084	\$ 1,217,033
Work-in-progress	2,121,972	2,250,321
Finished goods	632,640	1,650,432
	<hr/>	<hr/>
Inventory	<u>\$3,517,696</u>	<u>\$ 5,117,786</u>

7. Long-term Inventory and Deferred Revenue:

Long-term inventory of \$3,250,000 represents SMES units that were delivered in fiscal 2001 to one of our customers, Wisconsin Public Service Corporation ("WPS"), for a total purchase price of \$3,787,000, less \$537,000 recorded as revenue in the quarter ended December 31, 2002. As the sale of these units is subject to certain return and buyback provisions which expire from 2002 to 2009, the Company is deferring recognition of the revenue related to the remaining \$3,250,000 in sales until the applicable buyback provisions lapse. Long-term deferred revenue of \$3,250,000 represents the \$3,787,000 cash payment received from WPS related to this transaction, less \$537,000 recorded as revenue in the third quarter of fiscal 2003.

The buyback provisions, which are subject to a minimum 6-month written notice requirement, began to lapse in the quarter ended December 31, 2002, until which time WPS had the right to return all the units for the full purchase price of \$3,787,000. On December 31 of each year after 2002, WPS has the right, subject to a minimum 6-month notice requirement, to sell the units back to the Company at a reduced price. Between January 1, 2003 and the next annual buyback date of December 31, 2003, the repurchase price for the units will be \$3,250,000 and that price is further reduced by approximately 12% per year through December 31, 2009.

The Company recorded \$537,000 of revenue and an equal amount of cost of revenue in the quarter ended December 31, 2002, as the buyback price transitioned from \$3,787,000 to \$3,250,000. The Company also recorded a \$537,000 reduction in long-term inventory and long-term deferred revenue.

8. Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses at June 30, 2003 and March 31, 2003 consisted of the following:

[Table of Contents](#)

	<u>June 30, 2003</u>	<u>March 31, 2003</u>
Accounts payable	\$ 4,726,486	\$ 3,721,307
Accrued employee stock purchase plan	109,416	199,567
Accrued expenses	4,486,368	5,184,644
Accrued vacation	744,565	668,356
	<hr/>	<hr/>
Accounts payable and accrued expenses	\$ 10,066,835	\$ 9,773,874
	<hr/>	<hr/>

9. Commitments

As permitted under Delaware law, the Company has agreements whereby the Company indemnifies its officers and directors for certain events or occurrences while the officer or director is or was serving at its request in such capacity. The term of the indemnification period is for the officer's or director's lifetime. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a Director and Officer insurance policy that limits its exposure and enables it to recover a portion of future amounts paid. As a result of its insurance policy coverage, the Company believes the estimated fair value of these indemnification agreements is minimal. All of these indemnification agreements were grandfathered under the provisions of FIN No. 45 as they were in effect prior to March 31, 2003. Accordingly, the Company has no liabilities recorded for these agreements as of June 30, 2003.

10. Cost-Sharing Arrangements:

The Company has entered into several cost-sharing arrangements with various agencies of the United States government. Funds paid to the Company under these agreements are not reported as revenues but are used to directly offset the Company's research and development and selling, general and administrative expenses, and to purchase capital equipment. The Company recorded costs and funding under these agreements of \$312,719 and \$103,321 for the three months ended June 30, 2003 and 2002, respectively. At June 30, 2003, total funding received to date under these agreements was \$14,491,000. Future funding expected to be received under existing agreements is approximately \$1,753,000, subject to continued future funding allocations.

11. Business Segment Information:

The Company has three reportable business segments—AMSC Wires, SuperMachines, and Power Electronic Systems.

[Table of Contents](#)

The AMSC Wires business segment develops, manufactures and sells HTS wire. The focus of this segment's current development, manufacturing and sales efforts is on HTS wire for power transmission cables, motors, generators, synchronous condensers and specialty magnets.

The SuperMachines business segment is developing and commercializing electric motors, generators, and synchronous condensers based on HTS wire. Its primary focus for motors and generators is on ship propulsion.

The Power Electronic Systems business segment develops and sells power electronic converters and designs, manufactures and sells integrated systems based on those converters for power quality and reliability solutions and for wind farm applications.

The operating results for the three business segments are as follows:

	Three Months Ended June 30,	
	2003	2002
Revenues		
AMSC Wires	\$ 1,097,124	\$ 217,633
SuperMachines	5,549,894	1,535,849
Power Electronic Systems	1,109,289	1,106,491
Total	\$ 7,756,307	\$ 2,859,973

	Three Months Ended June 30,	
	2003	2002
Operating income (loss)		
AMSC Wires	\$(6,333,675)	\$(6,979,978)
SuperMachines	11,858	(1,762,721)
Power Electronic Systems	(1,824,065)	(2,108,006)
Unallocated corporate expense	(274,145)	(329,520)
Total	\$(8,420,027)	\$(11,180,225)

The assets for the three business segments (plus Corporate Cash) are as follows:

	For the period ended	
	June 30, 2003	March 31, 2003
Assets		
AMSC Wires	\$64,428,601	\$ 66,393,042
SuperMachines	7,037,906	4,992,328
Power Electronic Systems	9,693,730	10,544,397
Corporate cash and marketable securities	12,101,885	20,048,872
Total	\$93,262,122	\$101,978,639

[Table of Contents](#)

The accounting policies of the business segments are the same as those for the consolidated Company, except that certain corporate expenses which the Company does not believe are specifically attributable or allocable to any of the three business segments have been excluded from the segment operating income (loss).

12. New Accounting Pronouncements:

In January 2003, the FASB issued FASB Interpretation No. 46 (FIN 46), "Consolidation of Variable Interest Entities." In general, a variable interest entity is a corporation, partnership, trust or any other legal structure used for business purposes that either (a) does not have equity investors with voting rights or (b) has equity investors that do not provide sufficient financial resources for the entity to support its activities. A variable interest entity often holds financial assets, including loans or receivables, real estate or other property. Variable interest entities have been commonly referred to as special-purpose entities or off-balance sheet structures. This Interpretation requires a variable interest entity to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity's activities or entitled to receive a majority of the entity's residual returns or both. The Company does not expect that this Interpretation will have a material impact on its financial position or results of operations.

In May 2003, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity (SFAS No. 150). This accounting standard establishes standards for classifying and measuring certain financial instruments with characteristics of both liabilities and equity. It requires that certain financial instruments that were previously classified as equity now be classified as a liability. This accounting standard is effective for financial instruments entered into or modified after May 31, 2003, and otherwise at the beginning of the first interim period beginning after June 15, 2003. The Company does not expect the adoption of SFAS No. 150 will have an impact on its financial position or results of operations.

AMERICAN SUPERCONDUCTOR CORPORATION

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

American Superconductor Corporation was founded in 1987. We are focused on developing, manufacturing and selling products using two core technologies: high temperature superconductor ("HTS") wires and power electronic converters for electric power applications. We also assemble superconductor wires and power electronic converters into fully-integrated products, such as HTS ship propulsion motors and dynamic reactive compensation systems, which we sell or plan to sell to end users.

Critical Accounting Policies

The preparation of consolidated financial statements requires that we make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. We base our estimates on historical experiences and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ under different assumptions or conditions.

Our accounting policies that involve the most significant judgments and estimates are as follows:

- Revenue recognition;
- Long-term inventory and deferred revenue;
- Allowance for doubtful accounts;
- Long-lived assets;
- Inventory accounting;
- Deferred tax assets
- Goodwill; and
- Acquisition accounting.

Revenue recognition. For certain arrangements, such as contracts to perform research and development and prototype development contracts, we record revenues using the percentage of completion method, measured by the relationship of costs incurred to total estimated contract costs. We follow this method since reasonably dependable estimates of the revenue and costs

[Table of Contents](#)

applicable to various stages of a contract can be made. Since many contracts extend over a long period of time, revisions in cost and funding estimates during the progress of work have the effect of adjusting earnings applicable to performance in prior periods in the current period. Recognized revenues and profit or loss are subject to revisions as the contract progresses to completion. Revisions in profit or loss estimates are charged to income in the period in which the facts that give rise to the revision become known.

We recognize revenue from product sales upon shipment, installation or acceptance, where applicable, provided persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and the collectibility is reasonably assured, or for some programs, on the percentage of completion method of accounting. When other significant obligations remain after products are delivered, revenue is recognized only after such obligations (including buyback provisions) are fulfilled.

Long-term inventory and deferred revenue. Long-term inventory of \$3,250,000 represents SMES units that were delivered in fiscal 2001 to one of our customers, Wisconsin Public Service Corporation (“WPS”), for a total purchase price of \$3,787,000, less \$537,000 recorded as revenue in the quarter ended December 31, 2002. As the sale of these units is subject to certain return and buyback provisions which expire from 2002 to 2009, we are deferring recognition of the revenue related to the remaining \$3,250,000 in sales until the applicable buyback provisions lapse. Long-term deferred revenue of \$3,250,000 represents the \$3,787,000 cash payment received from WPS related to this transaction, less \$537,000 recorded as revenue in the third quarter of fiscal 2003. The buyback provisions, which are subject to a minimum 6-month written notice requirement, began to lapse in the quarter ended December 31, 2002, until which time WPS had the right to return all the units for the full purchase price of \$3,787,000. On December 31 of each year after 2002, WPS has the right, subject to a minimum 6-month notice requirement, to sell the units back to us at a reduced price. Between January 1, 2003 and the next annual buyback date of December 31, 2003, the repurchase price for the units will be \$3,250,000 and that price is further reduced by approximately 12% per year through December 31, 2009. We recorded \$537,000 of revenue and an equal amount of cost of revenue in the quarter ended December 31, 2002, as the buyback price transitioned from \$3,787,000 to \$3,250,000. We also recorded a \$537,000 reduction in long-term inventory and long-term deferred revenue.

Allowance for doubtful accounts. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional provisions for bad debt allowances may be required.

Long-Lived Assets. We periodically evaluate our long-lived assets for potential impairment under Statement of Financial Accounting Standards (“SFAS”) No. 144, “Accounting for the Impairment or Disposal of Long-Lived Assets.” We perform these evaluations whenever events or circumstances suggest that the carrying amount of an asset or group of assets is not recoverable. Our judgments regarding the existence of impairment indicators are based on market and operational performance. Indicators of potential impairment include:

- a significant change in the manner in which an asset is used;

[Table of Contents](#)

- a significant decrease in the market value of an asset;
- a significant adverse change in its business or the industry in which it is sold;
- a current period operating cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the asset; and
- significant advances in our technologies that require changes in our manufacturing process.

If we believe an indicator of potential impairment exists, we test to determine whether impairment recognition criteria in SFAS No. 144 have been met. To analyze a potential impairment, we project undiscounted future cash flows over the remaining life of the asset or the primary asset in the asset group. If these projected cash flows are less than the carrying amount, an impairment loss is recognized based on the fair value of the asset or asset group less any costs of disposition. Evaluating the impairment requires judgment by our management to estimate future operating results and cash flows. If different estimates were used, the amount and timing of asset impairments could be affected. We charge impairments of the long-lived assets to operations if our evaluations indicate that the carrying values of these assets are not recoverable.

In the fourth quarter of fiscal 2003 ended March 31, 2003, we recorded a \$39,231,000 impairment charge to write down our first-generation (1G) asset group, primarily comprised of the Devens manufacturing facility and capital equipment, to an estimated fair value.

Inventory accounting. We write down inventory for estimated obsolescence or unmarketable inventory in an amount equal to the difference between the cost of the inventory and the estimated realizable value based upon assumptions of future demand and market conditions. If actual market conditions are less favorable than those projected, additional inventory write-downs may be required.

Deferred tax assets. We have recorded a full valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. While we consider future taxable income and tax planning strategies in assessing the need for the valuation allowance, if management were to determine that we would be able to realize deferred tax assets in the future in excess of the net recorded amount, an adjustment to the deferred tax asset would increase income in the period such determination was made. Likewise, should we determine that we would not be able to realize all or part of our net deferred tax assets in the future, an adjustment to the deferred tax asset would decrease income in the period such determination was made.

Goodwill. Goodwill represents the excess of cost over net assets of acquired businesses that are consolidated. Pursuant to SFAS No. 142 "Goodwill and Other Intangible Assets," goodwill is not amortized. In lieu of amortization, we perform an impairment review of our goodwill at least annually or when events and changes in

[Table of Contents](#)

circumstances indicate the need for such a detailed impairment loss analysis, as prescribed by SFAS 142. To date, we have determined that goodwill is not impaired, but we could in the future determine that goodwill is impaired, which would result in a charge to earnings.

Acquisition accounting. We account for our acquisitions under the purchase method of accounting pursuant to SFAS No. 141 "Business Combinations." In June 2000, we acquired in a business combination substantially all of the assets of Integrated Electronics, LLC ("IE"), as well as IE's employees and facility lease. The IE acquisition was accounted for under the purchase method of accounting. Goodwill of \$1,329,282 represented the excess of the purchase price of \$1,833,125 over the fair value of the acquired assets of \$503,843 at June 1, 2000. Goodwill was \$1,107,735 at June 30, 2003 and March 31, 2003.

Results of Operations

The Company has three reportable business segments—AMSC Wires, SuperMachines, and Power Electronic Systems.

The AMSC Wires business segment develops, manufactures and sells HTS wire. The focus of this segment's current development, manufacturing and sales efforts is on HTS wire for power transmission cables, motors, generators, synchronous condensers and specialty magnets.

The SuperMachines business segment is developing and commercializing electric motors, generators, and synchronous condensers based on HTS wire. Its primary focus for motors and generators is on ship propulsion.

The Power Electronic Systems business segment develops and sells power electronic converters and designs, manufactures and sells integrated systems based on those converters for power quality and reliability solutions and for wind farm applications.

Total revenues during the three months ended June 30, 2003 were \$7,756,000, a 171% increase compared to the \$2,860,000 of revenue recorded for the same period a year earlier.

The increase in consolidated revenues of \$4,896,000 was mainly the result of an increase in prototype development contract revenues, primarily relating to work performed on the Navy 36.5 Megawatt (MW) motor program. Revenues in our SuperMachines business unit increased by \$4,014,000 to \$5,550,000 for the quarter ended June 30, 2003 from \$1,536,000 for the quarter ended June 30, 2002. Approximately 88%, or \$4,878,000, of this business unit's first-quarter revenues related to the performance of design work on the 36.5 MW motor program, which began in March 2003. The remainder of SuperMachines' revenue related to the completion of work on the 5 MW motor, which was delivered to the U.S. Navy in July 2003, and to work performed on the SuperVAR™ synchronous condenser prototype being developed for the Tennessee Valley Authority. SuperMachines' revenues in the prior-year quarter were exclusively related to the 5 MW motor program.

Revenues in our AMSC Wires business unit increased by \$879,000 to \$1,097,000 for the quarter ended June 30, 2003 from \$218,000 for the same period of the prior year. The growth in revenues in AMSC Wires in the first quarter of fiscal 2004, compared to the prior-year first quarter, was attributable to two factors. Product sales increased by \$654,000 to \$741,000 in the quarter ended June 30, 2003 from \$87,000 in the prior-year quarter, due to a higher level of 1G wire sales, our first delivery of second generation (2G) wire to a customer, and the beginning of work on a project to install an HTS power cable in the transmission grid of the Long Island Power Authority (LIPA). Contract revenues also grew by \$225,000 to \$356,000 from \$131,000 due to a higher level of work performed on two Phase II Small Business Innovation Research (SBIR) grants with the Department of Energy and the National Institutes of Health, both focused on 2G wire development.

Revenues in the Power Electronic Systems business unit were \$1,109,000 for the quarter ended June 30, 2003 compared to \$1,106,000 for the same period of the prior year. An increase in product sales due to the delivery of one D-VAR™ system was offset by a lower level of prototype

[Table of Contents](#)

development contract revenues on our ongoing Power Electronic Building Blocks (PEBB) program with the Navy.

For the three months ended June 30, 2003, we recorded approximately \$313,000 in funding under two government cost-sharing agreements with the U.S. Air Force and the Department of Commerce. For the three months ended June 30, 2002, we recorded approximately \$103,000 of funding under the U.S. Air Force agreement. We anticipate that a portion of our funding in the future will continue to come from cost-sharing agreements as we continue to develop joint programs with government agencies. Funding from government cost-sharing agreements is recorded as an offset to research and development and selling, general and administrative expenses, as required by government contract accounting guidelines, rather than as revenues.

Total costs and expenses for the quarter ended June 30, 2003 were \$16,176,000 compared to \$14,040,000 for the same period last year.

Costs of revenue—product sales and prototype development contracts increased by \$4,042,000 to \$8,273,000 for the three months ended June 30, 2003, compared to \$4,231,000 for the same period of the prior year. This increase was directly related to the higher level of prototype development contract revenues with the U.S. Navy in the SuperMachines business unit. Also contributing to this increase was a \$272,000 increase in costs (including building and equipment depreciation) related to the AMSC Wires business unit's growing utilization of the Devens, Massachusetts manufacturing plant. Costs of revenue—contract revenue increased by \$208,000 to \$336,000 for the three months ended June 30, 2003, compared to \$128,000 for the same period of the prior year. Costs of revenue—contract revenue increased proportionally with the higher level of contract revenue, particularly with regard to two Phase II SBIR grants with the Department of Energy and National Institute of Health.

Our research and development (“R&D”) expenditures are summarized as follows:

	Three Months Ended June 30,	
	2003	2002
R&D expenses per Consolidated Statements of Operations	\$4,863,000	\$6,217,000
R&D expenditures classified as Costs of revenue	4,754,000	2,088,000
R&D expenditures offset by cost sharing funding	286,000	53,000
Pro forma R&D expenses	<u>\$9,903,000</u>	<u>\$8,358,000</u>

R&D expenses (exclusive of amounts classified as costs of revenue and amounts offset by cost sharing funding) decreased to \$4,863,000 in the three months ended June 30, 2003 from \$6,217,000 for the same period last year. This amount decreased in the first three months of fiscal year 2004 when compared to the same period of 2003 as a result of a higher percentage of the R&D costs being classified as costs of revenue due to the higher level of funded prototype development contract work in SuperMachines. Pro forma R&D expenses, which include amounts classified as costs of revenue and amounts offset by cost sharing funding, increased to \$9,903,000 in the three months ended June 30, 2003 from \$8,358,000 for the same period last year. The increase in pro forma R&D spending in the first quarter of fiscal 2004, compared to the prior-year quarter, was the result of a \$1,920,000 increase in material, subcontractor, and temporary labor costs in the SuperMachines business unit. This increase was partially offset by reduced R&D spending in the AMSC Wires and Power Electronic Systems business units, primarily due to headcount reductions in those two business units over the last year. A portion of the R&D expenditures related to externally funded development contracts has been classified as costs of revenue (rather than as R&D expenses). Additionally, a portion of R&D expenses was offset by cost sharing funding.

[Table of Contents](#)

Our selling, general and administrative (“SG&A”) expenditures are summarized as follows::

	Three Months Ended June 30,	
	2003	2002
SG&A expenses per Consolidated Statements of Operations	\$2,705,000	\$3,464,000
SG&A expenditures classified as Costs of revenue	1,524,000	309,000
SG&A expenditures offset by cost sharing funding	27,000	50,000
Pro forma SG&A expenses	\$4,256,000	\$3,823,000

SG&A expenses (exclusive of amounts classified as costs of revenue and amounts offset by cost sharing funding) decreased to \$2,705,000 in the three months ended June 30, 2003 from \$3,464,000 for the same period last year. This amount decreased in the first three months of fiscal year 2004 when compared to the same period of 2003 as a result of a higher percentage of the SG&A costs being classified as costs of revenue due to the higher level of funded prototype development contract work in SuperMachines. Pro forma SG&A expenses, which include amounts classified as costs of revenue and amounts offset by cost sharing funding, increased to \$4,256,000 for the three months ended June 30, 2003, compared to \$3,823,000 for the same period last year. This increase was primarily the result of a higher percentage of the rent and occupancy costs associated with our Westborough, MA headquarters now being classified as general and administrative expense rather than in costs of revenue — product sales and prototype development contracts and research and development expense. We have completed the relocation of our manufacturing workforce to Devens from Westborough, which is now partially unoccupied. A portion of the SG&A expenditures related to externally funded development contracts has been classified as costs of revenue (rather than as SG&A expenses). Additionally, a portion of SG&A expenses was offset by cost sharing funding.

We present pro forma R&D and pro forma SG&A expenses, which are non-GAAP financial measures, because we believe this presentation provides useful information on our aggregate R&D and SG&A spending.

[Table of Contents](#)

Non-operating expenses/Interest income

Interest income decreased to \$35,000 in the three months ended June 30, 2003 from \$371,000 in the same period of the prior year. This decrease in interest income reflects the lower cash balances available for investment as a result of cash being used to fund our operations and to purchase property, plant and equipment, as well as lower interest rates available on our investments. Other income (expense), net of \$29,000 in the three months ended June 30, 2003 consisted primarily of gains from the sale of certain pieces of surplus equipment. Other income (expense), net of (\$20,000) in the three months ended June 30, 2002 reflected taxes on investment income.

We expect to continue to incur operating losses until at least the end of the fiscal year ending March 31, 2005 as we continue to devote significant financial resources to our research and development activities and commercialization efforts.

Please refer to the “Future Operating Results” section below for a discussion of certain factors that may affect our future results of operations and financial condition.

Liquidity and Capital Resources

At June 30, 2003, we had cash, cash equivalents and long-term marketable securities of \$12,101,000 compared to \$20,049,000 at March 31, 2003. The principal uses of cash during the three months ended June 30, 2003 were \$6,964,000 for the funding of our operations and \$890,000 for the acquisition of equipment, primarily for our 2G wire process equipment.

We have potential funding commitments (excluding amounts included in accounts receivable) of approximately \$87,440,000 to be received after June 30, 2003 from government and commercial customers, compared to \$78,336,000 at March 31, 2003 and \$10,891,000 at June 30, 2002. However, these current funding commitments, including \$78,816,000 on U.S. government contracts, are subject to certain standard cancellation provisions. Additionally, several of our government contracts are being funded incrementally, and as such, are subject to the future authorization and appropriation of government funding on an annual basis. We have a history of successful performance under incrementally-funded contracts with the U. S. government.

[Table of Contents](#)

Included in our current potential funding commitment amount is \$60,548,000 relating to the Navy 36.5 MW motor contract, which represents the total base program value (excluding certain potential performance-based incentive fees) of \$66,611,000, less the \$6,063,000 of revenue recognized for the program through June 30, 2003.

Of the current commitment amount of \$87,440,000 as of June 30, 2003, approximately 43% is billable to and potentially collectable from our customers within the next 12 months.

The possibility exists that we may pursue acquisition and joint venture opportunities in the future that may affect liquidity and capital resource requirements.

To date, inflation and foreign exchange have not had a material impact on our financial results.

We have generated operating losses since our inception in 1987 and expect to continue incurring losses until at least the end of fiscal 2005. Operating losses for the fiscal years ended March 31, 2003, 2002 and 2001 have contributed to net cash used by operating activities of \$39,604,957, \$26,456,387 and \$26,424,059, respectively, for these periods. For the three months ended June 30, 2003, net cash used by operating activities was \$6,964,107. Our average annual use of cash over this period is greater than our balance of cash, cash equivalents and long-term marketable securities at June 30, 2003 of \$12,101,885.

In July 2003, we implemented approximately \$5,000,000 of reductions in our operating and capital budgets for fiscal 2004, primarily through the elimination of 34 positions, including a reduction in force of 23 employees, or 8% of our workforce. Cuts were also made in controllable expenses and capital equipment purchase plans.

The cash savings from the aforementioned cost reduction actions combined with an increasing level of revenues for the remainder of the fiscal year are expected to lower our quarterly cash usage beginning in the second quarter of fiscal 2004. The revenue increase is supported by our receipt in March 2003 of the three-year 36.5 MW motor contract from the Office of Naval Research as well as our selection in April 2003 by the Department of Energy (DOE) as the prime contractor for an HTS cable project with LIPA.

To supplement our anticipated cash needs for operations as well as our investment in the second generation wire development program, we have been examining a number of options for raising additional capital. Based on these efforts over the last year, we signed in June 2003 non-binding letters of intent with three groups of investors to provide up to \$50,000,000 in financing. These letters of intent are subject to satisfactory due diligence by these investors, the completion of formal legal documentation and approval of the financings by our shareholders. The \$50,000,000 financing is expected to be comprised of a five-year term loan of up to \$30,000,000 to be provided by a corporate finance company and several institutional investors with these amounts secured by our existing assets and additional assets projected to be acquired, excluding accounts receivable and inventory. In addition, three institutional investors have also signed a non-binding letter of intent to provide \$10,000,000 in the form of subordinated notes that are convertible into our common stock. We have also signed a non-binding letter of intent with a

[Table of Contents](#)

commercial bank to provide up to \$10,000,000 in the form of a working capital credit facility that is to be secured by our accounts receivable and inventory.

Each of the investor groups will also be issued warrants to acquire shares of our common stock. The conversion feature of the subordinated convertible notes combined with the warrants will trigger the NASDAQ requirement that our shareholders approve this \$50,000,000 financing transaction prior to its closing. Consequently, should we be able to close this transaction, the earliest this would occur would be the end of September 2003. We expect that all of the contemplated financings will be required to close simultaneously. While we believe we will be able to complete the \$50,000,000 financing transaction, we can make no assurance that such funds will be available, or available under terms acceptable to us, or that our shareholders will approve this financing transaction. In the event that this transaction cannot be completed, we are confident that we could obtain conventional mortgage financing on our Devens, MA manufacturing facility that, combined with our available cash, cash equivalents and long-term marketable securities, would be sufficient to satisfy our anticipated cash requirements for at least the next 12 months.

New Accounting Pronouncements

In January 2003, the FASB issued FASB Interpretation No. 46 (FIN 46), "Consolidation of Variable Interest Entities." In general, a variable interest entity is a corporation, partnership, trust or any other legal structure used for business purposes that either (a) does not have equity investors with voting rights or (b) has equity investors that do not provide sufficient financial resources for the entity to support its activities. A variable interest entity often holds financial assets, including loans or receivables, real estate or other property. Variable interest entities have been commonly referred to as special-purpose entities or off-balance sheet structures. This Interpretation requires a variable interest entity to be consolidated by a company if that company is subject to a majority of the risk of loss from the variable interest entity's activities or entitled to receive a majority of the entity's residual returns or both. The Company does not expect that this Interpretation will have a material impact on its financial position or results of operations.

In May 2003, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity (SFAS No. 150). This accounting standard establishes standards for classifying and measuring certain financial instruments with characteristics of both liabilities and equity. It requires that certain financial instruments that were previously classified as equity now be classified as a liability. This accounting standard is effective for financial instruments entered into or modified after May 31, 2003, and otherwise at the beginning of the first interim period beginning after June 15, 2003. The Company does not expect the adoption of SFAS No. 150 will have an impact on its financial position or results of operations.

FUTURE OPERATING RESULTS

Various statements included herein, as well as other statements made from time to time by our representatives, which relate to future matters (including but not limited to statements concerning our future commercial success) constitute forward looking statements and are made under the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. There are a number of important factors which could cause our actual results of operations and financial condition in the future to vary from that indicated in such forward looking statements. Factors that may cause such differences include, without limitation, the risks, uncertainties and other information set forth below.

We have a history of operating losses, and we expect to continue to incur losses in the future.

We have been principally engaged in research and development activities. We have incurred net losses in each year since our inception. Our net loss for the first three months of fiscal 2004 was \$8,356,000 and for fiscal 2003, fiscal 2002, and fiscal 2001 was \$87,633,000, \$56,985,000, and \$21,676,000, respectively. Our accumulated deficit as of June 30, 2003 was \$281,466,000.

We expect to continue to incur operating losses until at least the end of fiscal 2005, and there can be no assurance that we will ever achieve profitability.

We believe, based upon our current business plan, that our existing capital resources will be sufficient to fund our operations until the end of fiscal 2004. However, recognizing that we may need additional funds sooner than anticipated to fund current operations and to accelerate our investment in our second generation wire development program, we are currently pursuing financing transactions to raise additional capital to strengthen our cash position. There can be no assurance that such funds will be available, or available under terms acceptable to us. Please see the discussion under “Liquidity and Capital Resources” above.

There are a number of technological challenges that must be successfully addressed before our superconductor products can gain widespread commercial acceptance.

Many of our products are in the early stages of commercialization and testing, while others are still under development. We do not believe any company has yet successfully developed and commercialized significant quantities of HTS wire or wire products. There are a number of technological challenges that we must successfully address to complete our development and commercialization efforts. We also believe that several years of further development in the cable and motor industries will be necessary before a substantial number of additional commercial applications for our HTS wire in these industries can be developed and proven. We may also need to improve the performance and/or reduce the cost of our HTS wire to expand the number of commercial applications for it. We may be unable to meet such technological challenges. Delays in development, as a result of technological challenges or other factors, may result in the introduction or commercial acceptance of our products later than anticipated.

The commercial uses of superconductor products are very limited today, and a widespread commercial market for our products may not develop.

To date, there has been no widespread commercial use of HTS products. Commercial acceptance of low temperature superconductor (LTS) products, other than for medical magnetic resonance imaging and superconductor magnetic energy storage products, has been significantly limited by the cooling requirements of LTS materials. Even if the technological hurdles currently limiting commercial uses of HTS and LTS products are overcome, it is uncertain whether a robust commercial market for those new and unproven products will ever develop. It is possible that the market demands we currently anticipate for our HTS and LTS products will not develop and that superconductor products will never achieve widespread commercial acceptance.

We have limited experience manufacturing our HTS products in commercial quantities.

To be financially successful, we will have to manufacture our products in commercial quantities at acceptable costs while also preserving the quality levels we have achieved in manufacturing these products in limited quantities. This presents a number of technological and engineering challenges for us. We cannot make assurances that we will be successful in developing product designs and manufacturing processes that permit us to manufacture our HTS products in commercial quantities at commercially acceptable costs while preserving quality. In addition, we may incur significant unforeseen expenses in our product design and manufacturing efforts.

We have limited experience in marketing and selling our products.

Our management team has limited experience directing our commercialization efforts, which are essential to our future success. To date, we have only limited experience marketing and selling our products, and there are very few people anywhere who have significant experience marketing or selling superconductor products. Once our products are ready for commercial use, we will have to develop a marketing and sales organization that will effectively demonstrate the advantages of our products over both more traditional products and competing superconductor products or other technologies. We may not be successful in our efforts to market this new and unfamiliar technology, and we may not be able to establish an effective sales and distribution organization.

We may decide to enter into arrangements with third parties for the marketing or distribution of our products, including arrangements in which our products, such as HTS wire, are included as a component of a larger product, such as a motor. For example, we have a marketing and sales alliance with GE Industrial Systems giving GE the exclusive right to offer our Distributed-SMES (D-SMES) and D-VAR[™] product lines in the United States and South America to utilities and the right to sell industrial Power Quality-Industrial Voltage Restorers (PQ-IVR[™]) to one of GE's global industrial accounts. We also have a distribution agreement with Bridex Technologies Pte, Ltd., a power system solution integrator and technology company in

[Table of Contents](#)

Singapore, whereby Bridex markets and sells our integrated power electronic systems within Asia Pacific markets. By entering into marketing and sales alliances, the financial benefits to us of commercializing our products are dependent on the efforts of others. We may not be able to enter into marketing or distribution arrangements with third parties on financially acceptable terms, and third parties may not be successful in selling our products or applications incorporating our products.

Our products face intense competition both from superconductor products developed by others and from traditional, non-superconductor products and alternative technologies.

As we begin to market and sell our superconductor products, we will face intense competition both from competitors in the superconductor field and from vendors of traditional products and new technologies. There are many companies in the United States, Europe, Japan and China engaged in the development of HTS products, including Sumitomo Electric Industries, Intermagnetics General, European Advanced Superconductors GmbH, Fujikura, Furukawa Electric, and Innova Superconductor Technology. The superconductor industry is characterized by rapidly changing and advancing technology. Our future success will depend in large part upon our ability to keep pace with advancing HTS and LTS technology and developing industry standards. Our SMES products and integrated power electronic products, such as D-VAR™, compete with a variety of other products such as dynamic voltage restorers (“DVRs”), static VAR compensators (“SVCs”), static compensators (“STATCOMS”), flywheels, power electronic converters and battery-based power supply systems. Competition for our PowerModules™ includes products from Ecostar, Inverpower, SatCon, Semikron and Trace. The HTS motor and generator products that we are developing face competition from copper wire-based motors and generators, and from permanent magnet motors that are being developed. Research efforts and technological advances made by others in the superconductor field or in other areas with applications to the power quality and reliability markets may render our development efforts obsolete. Many of our competitors have substantially greater financial resources, research and development, manufacturing and marketing capabilities than we have. In addition, as the HTS wire, HTS electric motors and generators, and power electronic systems markets develop, other large industrial companies may enter those fields and compete with us.

Third parties have or may acquire patents that cover the high temperature superconductor materials we use or may use in the future to manufacture our products.

We expect that some or all of the HTS materials and technologies we use in designing and manufacturing our products are or will become covered by patents issued to other parties, including our competitors. If that is the case, we will need either to acquire licenses to these patents or to successfully contest the validity of these patents. The owners of these patents may refuse to grant licenses to us, or may be willing to do so only on terms that we find commercially unreasonable. If we are unable to obtain these licenses, we may have to contest the validity or scope of those patents to avoid infringement claims by the owners of these patents. It is possible that we will not be successful in contesting the validity or scope of a patent, or that we will not prevail in a patent infringement claim brought against us. Even if we are successful in such a

proceeding, we could incur substantial costs and diversion of management resources in prosecuting or defending such a proceeding.

There are numerous patents issued in the field of superconductor materials and our patents may not provide meaningful protection for our technology.

We own or have licensing rights under many patents and pending patent applications. However, the patents that we own or license may not provide us with meaningful protection of our technologies and may not prevent our competitors from using similar technologies, for a variety of reasons, such as:

- the patent applications that we or our licensors file may not result in patents being issued;
- any patents issued may be challenged by third parties; and
- others may independently develop similar technologies not protected by our patents or design around the patented aspects of any technologies we develop.

Moreover, we could incur substantial litigation costs in defending the validity of our own patents. We also rely on trade secrets and proprietary know-how to protect our intellectual property. However, our non-disclosure agreements and other safeguards may not provide meaningful protection for our trade secrets and other proprietary information.

Our success is dependent upon attracting and retaining qualified personnel.

Our success will depend in large part upon our ability to attract and retain highly qualified research and development, management, manufacturing, marketing and sales personnel. Hiring those persons may be especially difficult due to the specialized nature of our business.

We are particularly dependent upon the services of Dr. Gregory J. Yurek, our co-founder and our Chairman of the Board, President and Chief Executive Officer, and Dr. Alexis P. Malozemoff, our Chief Technical Officer. The loss of the services of either of those individuals could significantly damage our business and prospects.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market risk through financial instruments, such as investments in marketable securities, is not material.

Item 4. Controls and Procedures

The Company's management, with the participation of the Company's chief executive officer and chief financial officer, evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of June 30, 2003. In designing and evaluating the Company's disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applied its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, the Company's chief executive officer and chief financial officer concluded that, as of June 30, 2003, the Company's disclosure controls and procedures were (1) designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's chief executive officer and chief financial officer by others within those entities, particularly during the period in which this report was being prepared and (2) effective, in that they provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

No change in the Company's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the fiscal quarter ended June 30, 2003 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II
OTHER INFORMATION

Item 1. Legal Proceedings

Not Applicable

Item 2. Changes in Securities and Use of Proceeds

Not Applicable

Item 3. Defaults Upon Senior Securities

Not Applicable

Item 4. Submission of Matters to a Vote of Security Holders

Not Applicable

Item 5. Other Information

Not Applicable

Item 6. Exhibits and Reports on Form 8-K

a) Exhibits

See the Exhibit Index on the page immediately preceding the exhibits for a list of exhibits filed as part of this quarterly report, which Exhibit Index is incorporated herein by this reference.

b) Reports on Form 8-K

On May 14, 2003, we furnished a Current Report on Form 8-K, dated May 14, 2003, to report under Item 9 the information required by Item 12 with respect to financial results for the fiscal year ended March 31, 2003.

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 thereunto duly authorized.

AMERICAN SUPERCONDUCTOR CORPORATION

August 14, 2003

Date

/s/ GREGORY J. YUREK

Gregory J. Yurek
Chairman of the Board, President and
Chief Executive Officer

August 14, 2003

Date

/s/ KEVIN M. BISSON

Kevin M. Bisson
Senior Vice President and Chief Financial
Officer (Principal Financial Officer)

August 14, 2003

Date

/s/ THOMAS M. ROSA

Thomas M. Rosa
Vice President of Finance and Accounting
(Principal Accounting Officer)

Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
†10.1	License Agreement, dated as of June 10, 2003, between the Registrant and Sumitomo Electric Industries, Ltd.
†10.2	Agreement, dated as of February 28, 2003, between the Registrant and the U.S. Office of Naval Research
†10.3	Fifth Amendment dated as of April 18, 2003 between the Registrant and the Massachusetts Institute of Technology (“M.I.T.”) amending the License Agreement dated as of July 6, 1987 between the Registrant and M.I.T.
31.1	Chief Executive Officer—Certification pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Chief Financial Officer—Certification pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Chief Executive Officer—Certification pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Chief Financial Officer—Certification pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

† Confidential treatment has been requested with respect to certain portions of this exhibit, which portions have been filed separately with the Securities and Exchange Commission.

**Confidential Materials omitted and filed separately with the
Securities and Exchange Commission. Asterisks denote omissions.**

LICENSE AGREEMENT

This License Agreement (“Agreement”) is made June 10, 2003 between Sumitomo Electric Industries, Ltd. (“SEI”), a Japanese corporation having its principal place of business at 5-33 Kitahama, 4-chome, Chuo-ku, Osaka Japan, and American Superconductor Corporation (“AMSC”), a Delaware corporation having its principal place of business at Two Technology Drive, Westborough, MA 01581-1727.

WITNESSETH:

WHEREAS, SEI has been engaged in the development of Bi Based Superconductor products and has acquired a substantial number of patents in respect thereof;

WHEREAS, AMSC desires to obtain, and SEI is willing to grant a license with respect to AMSC making, using, or selling Products hereinafter defined under certain such patents owned by SEI in accordance with the terms and conditions herein;

WHEREAS, AMSC has been engaged in the development of Bi Based Superconductor products and has acquired a substantial number of patents in respect thereof;

WHEREAS, SEI desires to obtain, and AMSC is willing to grant a license with respect to SEI making, using, or selling Products hereinafter defined under certain such patents owned by AMSC in accordance with the terms and conditions herein; and

WHEREAS, SEI and AMSC desire to avoid patent related disputes and seek opportunities to work on cable opportunities in the United States and in Europe in good faith;

NOW, THEREFORE, the Parties agree as follows:

ARTICLE 1

In this Agreement, including Exhibits, unless the context otherwise requires:

- a) words denoting the singular shall include the plural and vice versa;
- b) words denoting persons shall include corporations and vice versa;
- c) words denoting any gender shall include all genders; and
- d) headings are for convenience only and shall not affect interpretation.

ARTICLE 2 (DEFINITIONS)

In this Agreement, the following words and phrases shall have the following meanings, unless the context clearly requires otherwise:

2.1 Assignment Date

“Assignment Date” shall mean the date when AMSC assigns this Agreement to a third party as described in Article 16.

2.2 Competitor

“Competitor” means a manufacturer of electric power transmission and/or distribution cables.

2.3 Consideration Territory

“Consideration Territory” is the United States of America, Canada, Germany, United Kingdom, France, Italy, Australia and New Zealand.

2.4 Effective Date

“Effective Date” shall mean October 1, 2002.

2.5 Existing Patents

“Existing Patents” shall mean all the Patents listed in Exhibit A and their continuations, continuations-in-part, and divisionals.

2.6 Fair Market Value

“Fair Market Value” shall mean, with respect to any Product or Wire Product sold, leased or put into use, the selling price of the Product or Wire Product, or, in the case of a Product or Wire Product embedded as a component of a larger product, the equivalent selling price which a seller would realize from an unaffiliated buyer in an arm’s length sale of the most nearly identical Product or Wire Product in the same quantity and at the same time and place as such sale, lease or putting into use.

In determining selling price, the following may be excluded:

- (a) packaging costs;
- (b) costs of insurance and transportation;
- (c) import, export, excise, sales and value-added taxes, and customs duties;
- (d) royalties owed to third parties.

2.7 Future Patents

“Future Patents” shall mean all existing and future Patents:

- (a) which directly or indirectly claim priority from a date on or before the Last Priority Date,
- (b) which are owned by a Party or Affiliate or under which a Party has a right to grant a license or sublicense without the need to receive the approval of a third party, and
- (c) which are not included in Exhibit A or Exhibit B.

For avoidance of doubt, Future Patents include patents filed by third parties but later owned by a Party, or for which a Party was later granted a license with the right to grant a royalty-free sublicense to others, including at least the other Party herein.

Any Patents filed by third parties for which a Party is later granted a license with the right to grant a royalty-bearing sublicense to others, including at least the other Party herein shall be excluded from the Future Patents. However, each Party hereto grants to the other Party hereto an option to sublicense any patent directed to the design and/or manufacture of wires, coils, and/or current leads per se with respect to which it may obtain a license with the right to grant royalty-bearing sublicenses, at any time subsequent to the execution of this Agreement. The terms and conditions of such royalty-bearing sublicense later granted by one Party to the other Party hereto shall be subject to the terms of the patent license to the one Party but otherwise consistent with the terms and conditions of the Future Patent license granted hereunder, and the royalty terms and conditions shall be no less favorable than the sublicensing royalty terms and conditions of the patent license to the one Party.

2.8 Have Made Right

“Have Made Right” shall mean the right, under a license granted to a Party under this Agreement, to have a third party make for the Party (i) portions of Wire Products that have in total a Fair Market Value less than [**]% of that of the Wire Product of which such portions are to become a part and (ii) Products or portions of Products, other than Wire Products, if the Wire Products used in such Products are a Party’s Wire Products.

2.9 Last Priority Date

“Last Priority Date” is December 31, 2007.

2.10 Licensed Equipment

“Licensed Equipment” shall mean equipment or products sold by a Manufacturing Customer which contain Products purchased directly or indirectly from AMSC or its Affiliates and for which Manufacturing Customer’s sales price, from which packaging, insurance, transportation, and duties and taxes are subtracted, of such equipment or product is at least [**] times higher than the Fair Market Value of the Products contained therein. In the case AMSC’s existing SuperMachines Business Unit (“SuperMachines BU”) or SuperMachines Subsidiary (defined below) intend to export its products to Japan, Licensed Equipment shall also mean Rotating Machinery Products exported by SuperMachines BU or SuperMachines Subsidiary to Japan, provided that the Fair Market Value of such Rotating Machinery Products is at least [**] times higher than the Fair Market Value of the Wire Products contained in such Rotating Machinery Products. Licensed Equipment excludes Wire Products and electric power cables per se.

2.11 Manufacturing Customer

“Manufacturing Customer” shall mean a non-Japanese manufacturer outside Japan, including any Future AMSC Subsidiary but excluding AMSC itself, AMSC’s Subsidiaries and Affiliates, except for the Future AMSC Subsidiaries, who directly or indirectly purchase Products from AMSC or its Affiliates and use such Products to produce Licensed Equipment. Notwithstanding the foregoing, SuperMachines BU and SuperMachines Subsidiary may be considered as a Manufacturing Customer with respect

to and solely to the extent that Rotating Machinery Products shipped by it to Japan constitute Licensed Equipment pursuant to Article 2.10.

2.12 Party and Related Entities

The word "Party" shall mean SEI or AMSC, as the case may be.

"Affiliate" of a Party shall mean (i) any Subsidiary of such Party, or (ii) the Parent Company of such Party.

"Subsidiary" or "Subsidiaries" of a Party shall mean a corporation, limited liability company, partnership or other legal entity (a) fifty percent (50%) or more of whose shares or other securities entitled to vote for election of directors (or other managing authority) is now or hereafter controlled by such Party either directly or indirectly; or (b) in cases in which the entity does not have outstanding shares or securities, fifty percent (50%) or more of whose ownership interest representing the right to manage such entity is now or hereafter owned and controlled by such Party either directly or indirectly; provided that any such corporation or other legal entity shall be deemed to be a "Subsidiary" of such Party only as long as such control or ownership exists.

"Parent Company" of a Party shall mean a corporation or other legal entity of which such Party is a Subsidiary.

Notwithstanding the foregoing, [**] corporation having its principal place of business at [**] shall be excluded from being a Subsidiary of SEI.

Irrespective of the above limitations on the meaning of Subsidiary, a Subsidiary of AMSC shall include any separate legal entity incorporating substantially all of the assets of AMSC's SuperMachines BU (such separate legal entity shall be referred to herein as the "SuperMachines Subsidiary"), provided that the sublicense or waiver granted to it under Article 3 shall be limited to the field of rotating machinery and provided that such entity is not a Competitor of SEI and is not majority owned by a Competitor of SEI and provided further that AMSC shall cause the SuperMachines Subsidiary, to the extent it can do so, not to sue SEI in any forum for infringement by Products of any of the SuperMachines Subsidiary's Existing Patents or Future Patents. If the SuperMachines Subsidiary sues SEI in any forum for infringement by Products of any of the SuperMachines Subsidiary's Existing Patents or Future Patents, any sublicense and waiver of suit granted to the SuperMachines Subsidiary, pursuant to Articles 3.1, 3.2 or 3.5 of this Agreement, shall cease immediately.

"Future AMSC Subsidiary" shall mean an AMSC Subsidiary who becomes an AMSC Subsidiary during the term of this Agreement by means of the acquisition of the stock or ownership interest of such Manufacturing Customer and who was a Manufacturing Customer prior to such acquisition.

2.13 Patents

"Patents" or "Patent" shall mean any and all patents worldwide issuing from patent applications directly or indirectly claiming priority to a date before the Last Priority Date, and further including design patents and utility models directly or indirectly claiming priority to a date before the last Priority Date.

2.14 Pirelli

“Pirelli” shall mean Pirelli S.p.A., an Italian corporation having its principal place of business at Viale Sarca, 222-20126 Milano Italy.

2.15 License Fee for Pirelli

“License Fee for Pirelli” shall mean [**] US dollars (US\$[**]) which is paid by Pirelli to SEI in consideration of the license to Pirelli as described in Article 3.6.

2.16 Products and Wire Products

“Products” shall mean Bi-based superconducting wires, and magnets, coils and current leads including Bi-based superconducting wires. For clarity, Products do not include other products which incorporate Bi-based wires, magnets, coils or current leads as a component of a larger system.

“Wire Products” shall mean Bi-based superconducting wires. For clarity, Wire Products exclude magnets, coils, current leads and other products, but include the Wire Products contained in any magnet, coil, current lead or other product.

“Rotating Machinery Products” shall mean superconducting rotating machines, including but not limited to motors, generators and dynamic synchronous condensers. Rotating Machinery Products shall also mean superconducting coils per se, intended for use in rotating machinery applications.

2.17 Sub-Contractor

“Sub-Contractor” shall mean a subcontractor of a Manufacturing Customer.

2.18 Then Current Future Patents

“Then Current Future Patents” shall mean only Future Patents which directly or indirectly claim priority from a date on or before the Assignment Date.

2.19 Territory

“SEI’s Territory” shall mean worldwide.

“AMSC’s Territory” shall mean worldwide except Japan.

“Territory” shall mean “SEI’s Territory” or “AMSC’s Territory” as the case may be.

ARTICLE 3 (GRANT FROM SEI TO AMSC)

3.1 SEI hereby grants to AMSC a royalty-bearing license under the Existing Patents of SEI to make, use, sell and offer to sell Products and Products contained in products in AMSC’s Territory, with the right of AMSC to grant sub-licenses under that license only to its Subsidiaries. AMSC shall write notes in the terms and conditions of sale of the Products “This product is not licensed for sale, or lease in Japan,” and notify its customers that the Products may not be exported to Japan except in the form of Licensed Equipment. A Have Made Right for Products under the Existing Patents of SEI is also granted to AMSC.

3.2 SEI hereby grants to AMSC a worldwide, non-exclusive, royalty-free license under the Future Patents of SEI to make, use, sell and offer to sell Products and Products contained in products, with the right of AMSC to grant sub-licenses under that license only to its

Subsidiaries. A Have Made Right for Products under the Future Patents of SEI is also granted to AMSC. For the avoidance of doubt, the license to make, use, sell and offer to sell Products contained in products is limited to the Products themselves and does not include a license to a combination of the Products with the products in which they are contained.

- 3.3 Any sub-license granted by AMSC pursuant to this Article will become effective only after notification to SEI of the sublicense, providing in that notification the name of the sublicensee and information to establish that it is a Subsidiary of AMSC.
- 3.4 SEI will not sue in any forum a Manufacturing Customer, or its direct or indirect customers, for infringement by Products under Patents listed in Exhibit B, Existing Patents, or Future Patents of SEI, with respect to Licensed Equipment sold by a Manufacturing Customer worldwide including Japan. In addition to the foregoing, SEI will not sue in Japan a Manufacturing Customer who brings Products sold by AMSC or its Affiliates outside of Japan into Japan to have a Sub-Contractor in Japan assemble Licensed Equipment, provided that the Licensed Equipment sold in Japan is sold by such Manufacturing Customer under such Manufacturing Customer's name. For avoidance of doubt, SEI may sue a Manufacturing Customer or Sub-Contractor for infringement by products for a reason other than that such products include Products.
- 3.5 During the period beginning with the Effective Date and ending with the expiration of all the Existing Patents and Future Patents of SEI, SEI will not sue AMSC or its Affiliates in any forum for infringement by Products of any of its Existing Patents, Future Patents or co-owned Patents, whether covered by grants hereunder or not, for making, using, selling, and offering to sell Products or equipment containing Products in AMSC's Territory except to the extent that SEI has a now existing obligation to cooperate with a co-owner or licensor of any such patents and such co-owner or licensor requires SEI to sue AMSC or to assist such co-owner or licensor to exercise its patent rights against AMSC. Exhibit C lists the co-owned Existing Patents in respect of which SEI has such obligation. Further SEI shall notify from time to time AMSC of any co-owned Future Patents in respect of which SEI will have such obligation. The agreement not to sue under this paragraph shall extend to third parties to the extent that the activities of such third parties are exercising a Have Made Right for AMSC or its Affiliates. For the avoidance of doubt, SEI may sue AMSC or its Affiliates for infringement by equipment for a reason other than that such equipment includes Products.
- 3.6 SEI hereby agrees to grant to Pirelli a Patent license as set forth in Exhibit D, which shall be executed by SEI and Pirelli prior to or on the same day of this Agreement and effective as of the Effective Date; provided any such grant to Pirelli will not become exercisable until a License Fee for Pirelli is paid by Pirelli to SEI.
- 3.7 SEI shall cooperate with AMSC in good faith to register the non-exclusive license of any of the Patents granted herein in any country, provided that AMSC bears the cost of such registration.

ARTICLE 4 (GRANT FROM AMSC TO SEI)

- 4.1 AMSC hereby grants to SEI a royalty-bearing license under the Existing Patents of AMSC to make, use, sell and offer to sell Products and Products contained in products in

SEI's Territory, with the right of SEI to grant sub-licenses under that license only to its Subsidiaries. A Have Made Right for Products under the Existing Patents of AMSC is also granted to SEI.

- 4.2 AMSC hereby grants to SEI a worldwide, non-exclusive, royalty-free license under the Future Patents of AMSC to make, use, sell and offer to sell Products and Products contained in products, with the right of SO to grant sub-licenses under that license only to its Subsidiaries. A Have Made Right for Products under the Future Patents of AMSC is also granted to SEI. For the avoidance of doubt, the license to make, use, sell and offer to sell Products contained in products is limited to the Products themselves and does not include a license to a combination of the Products with the products in which they are contained.
- 4.3 Any sub-license granted by SEI pursuant to this Article will become effective only after notification to AMSC of the sublicense, providing in such notification the name of the sublicensee and information to establish that it is a Subsidiary of SEI.
- 4.4 During the period beginning with the Effective Date and ending with the expiration of all the Existing Patents and Future Patents of AMSC, AMSC will not sue SEI or its Affiliates in any forum for the infringement by Products of any of its Existing Patents, Future Patents or co-owned Patents, whether covered by grants hereunder or not, for making, using, selling and offering to sell Products or equipment containing Products in SEI's Territory except to the extent that AMSC has a now existing obligation to cooperate with a co-owner or licensor of any such patent and such co-owner or licensor requires AMSC to sue SEI or to assist such co-owner or licensor to exercise its patent rights against SEI. Exhibit C lists the co-owned Existing Patents in respect of which AMSC has such obligation. Further AMSC shall notify from time to time SO of any co-owned Future Patents in respect of which AMSC will have such obligation. The agreement not to sue under this paragraph shall extend to third parties to the extent that the activities of such third parties are exercising a Have Made Right for SO or its Affiliates. For the avoidance of doubt, AMSC may sue SEI or its Affiliates for infringement by equipment for a reason other than that such equipment includes Products.
- 4.5 AMSC shall cooperate with SEI in good faith to register the non-exclusive license of any of the Patents granted herein by AMSC in any country, provided that SEI bears the cost of such registration.
- 4.6 Certain of AMSC's Existing Patents are Patents which it exclusively licenses from the Massachusetts Institute of Technology (MIT) pursuant to an AMSC and MIT License Agreement effective as of July 6, 1987 and attached hereto as Exhibit E. The exclusivity period extends until the expiration of the last to expire of the MIT Patents listed in Exhibit A. AMSC has the right to sublicense such Patents to SEI provided SEI agrees to the sublicensing obligations AMSC has to MIT under the AMSC and MIT License Agreement. Therefore, SEI agrees that in order for the sublicense to become and remain effective it agrees to all of the terms and conditions of the AMSC and MIT License Agreement applicable to it as if it were a party to that Agreement. Notwithstanding the above, a) AMSC agrees that it will pay to MIT any royalties or other amounts due to MIT as a result of the sublicense granted to SEI, and SEI has no obligation to pay these

royalties, and b) reporting requirements shall be those specified in the present Agreement between SEI and AMSC.

ARTICLE 5 (TERM OF AGREEMENT)

This Agreement shall become effective on the Effective Date, and, unless sooner terminated as provided in this Agreement, shall be in full force until all of the Existing Patents and Future Patents of both Parties expire.

ARTICLE 6 (SECRECY)

- 6.1 Nothing in this Agreement shall be construed as conferring upon either Party or its Subsidiaries any right to include in advertising, packaging or other commercial activities related to Products, any reference to the other Party (or any of its Subsidiaries), its trade names, trademarks or service marks in a manner which would be likely to cause confusion or to indicate that such Products are in any way endorsed or certified by the other Party hereto or its Subsidiaries.
- 6.2 The Parties hereto shall not disclose the contents of this Agreement to any third party, except as required by law, government regulation or court order, or as required to meet requirements of AMSC's exclusive license agreements with MIT and Industrial Research Limited/Superlink and AMSC's agreements with Pirelli. In addition, AMSC and its Affiliates may disclose the contents of this Agreement to their distributors and Manufacturing Customers, but only to the extent required to convey to distributors and Manufacturing Customers their rights and obligations as set forth in Articles 2.10, 2.11, 3.1 and 3.4, provided that such distributors and Manufacturing Customers agree in writing to be bound by confidential obligations and shall not disclose the contents of this Agreement to any third parties except for SEI or AMSC and their Affiliates, and in the case of distributors to their manufacturing customers under written confidentiality agreements.

ARTICLE 7 (CONSIDERATION)

- 7.1 In consideration of the license under Existing Patents of SEI granted under Article 3 herein to AMSC, AMSC shall pay to SEI an amount equal to [**] percent of the Fair Market Value of Wire Products, and of Wire Products contained in Products, made, sold, or leased by AMSC, and AMSC's sublicensees under Article 3.1 or 3.2, in the Consideration Territory. Only one royalty shall be due with respect to any given Wire Product or Wire Product contained in a Product, irrespective of the number of different countries in the Consideration Territory where such Wire Product or Product is made, sold or leased, and irrespective of the value of the product of which the Product may be a part. When all of the Existing Patents expire in all of the countries of the Consideration Territory where a given Product is made, sold, or leased, then no payment set forth above for that Product will be required, but the payment obligation in other countries in the Consideration Territory where unexpired Existing Patents exist shall remain for Products made, sold, or leased in those other countries. No payment obligation will be required on any Product outside the Consideration Territory. The payments due hereunder for Products made, sold, or leased during the period from January 1 to June 30 of any year

shall be made by September 1 of that year, and the payments for Products made, sold, or leased during the period from July 1 to December 31 of any year shall be made by March 1 of the next year. At the time of each payment AMSC shall furnish SEI with a detailed report setting forth the basis for the payment.

- 7.2 In consideration of the license under Existing Patents of AMSC granted under Article 3 herein to SEI, SEI shall pay to AMSC an amount equal to [**] percent of the Fair Market Value of Wire Product, and Wire Products contained in Products, made, sold or leased by SEI and SEI's sublicensees under Article 4.1 or 4.2 in the Consideration Territory. Only one royalty shall be due with respect to any given Wire Product or Wire Product contained in a Product, irrespective of the number of different countries in the Consideration Territory where such Wire Product or Product is made, sold, or leased, and irrespective of the value of the product of which the Product may be a part. When all of the Existing Patents expire in all of the countries of the Consideration Territory where a given Product is made, sold, or leased, then no payment set forth above for that Product will be required, but the payment obligation in other countries in the Consideration Territory where unexpired Existing Patents exist shall remain for other Products made, sold, or leased in those other countries. No payment obligation will be required on any Product outside the Consideration Territory. The payments due hereunder for Wire Products made, sold, or leased during the period from January 1 to June 30 of any year shall be made by September 1 of that year, and the payments for Products made, sold, or leased during the period from July 1 to December 31 of any year shall be made by March 1 of the next year. At the time of each payment SEI shall furnish AMSC with a detailed report setting forth the basis for the payment.
- 7.3 In consideration of the license under the Existing and Future Patents of SEI granted to AMSC under Article 3, AMSC shall pay to SEI an amount of [**] US dollars (US\$[**]) on or before ten (10) business days after the last signature date of this Agreement (the "Signature Date"). Further, on or before July 11, 2003, AMSC shall pay to SEI an additional [**] US dollars (US\$[**]). Also, on or before ten (10) business days after Signature Date, each Party shall pay to the other Party all royalties due, if any, pursuant to Articles 7.1 and 7.2 from the Effective date through the Signature Date. AMSC shall pay SEI an additional amount of [**] US dollars (US\$[**]) by the later of April 10, 2004 or within ten (10) business days after an Agreement between AMSC and SEI sublicensing to AMSC Bi-based superconductor patents which includes the patents [**] is signed by both Parties ("The Third Payment"). This Agreement will continue in full force and effect, subject to the termination provisions of Article 9, and all royalty payments due pursuant to Articles 7.1 and 7.2 shall continue to be due irrespective of whether [**] has been signed by the Parties. If the [**] is not and will not be signed by the Parties, then AMSC shall have no obligation to pay The Third Payment to SEI pursuant to this Article.
- 7.4 All payments due to AMSC under this Agreement shall be non-refundable and shall be remitted in US dollars at the then current rate of exchange, by telegraphic transfer to the following account of AMSC:

Fleet National Bank
One Federal Street
Boston, MA 02110
USA

011-000-138 (ABA #)

[**] (Account #)

American Superconductor Corporation (Account Name)

- 7.5 All payments due to SEI under this Agreement shall be non-refundable and shall be remitted by telegraphic transfer in United States Dollars to the following account of SEI:

Sumitomo Mitsui Banking Corporation

Osaka Head Office

6-5, Kitahama 4-chome, Chuo-ku,

Osaka, 541-0041, Japan

Account No.: [**]

- 7.6 All taxes payable as a result of the payment of the monies due to SEI in accordance with this Article 7 shall be borne by SEI. If required to deduct tax at source from any payments made to SEI, AMSC shall provide SEI with a statement or certificate showing the amount of tax so paid in respect of the said monies duly signed by an appropriate tax official.
- 7.7 All taxes payable as a result of the payment of the monies due to AMSC in accordance with this Article 7 shall be borne by AMSC. If required to deduct tax at source from any payments made to AMSC, SEI shall provide AMSC with a statement or certificate showing the amount of tax so paid in respect of the said monies duly signed by an appropriate tax official.

ARTICLE 8 (NO LICENSE EXCEPT FOR PRODUCTS)

AMSC and SEI hereby agree that the licenses contemplated herein shall not constitute or imply any license or agreement with respect to any products other than Products, nor a license with respect to any other patents except the Existing Patents and Future Patents, nor any agreement with respect to any other patents except the Existing Patents and Future Patents.

ARTICLE 9 (TERMINATION)

- 9.1 Either Party (the "Initiating Party") may terminate the license and waiver of suit granted to the other Party (the "Breaching Party") by written notice to the Breaching Party on or at any time after one of the following events occur. The license and waiver granted the Breaching Party is automatically terminated at the time of the occurrence of any of the events set forth in section (b), (c) or (d):
- (a) the Breaching Party committing a remediable breach under this License Agreement and failing to remedy the breach within two (2) months starting on the day after receipt of written notice from the Initiating Party giving details of the breach and requiring the Breaching Party to remedy the breach;

- (b) the Breaching Party passing a resolution for its winding-up, a court of competent jurisdiction making an order for the Breaching Party's winding-up or the presentation of a petition for the Breaching Party's winding-up (other than, in each case, for the purposes of solvent amalgamation or reconstruction and in such manner that the entity resulting from the amalgamation or reconstruction effectively agrees to be bound by or assume the Breaching Party's obligations under this Agreement);
 - (c) the making of an administrative order in relation to the Breaching Party or the appointment of a receiver over, or an encumbrancer taking possession of or selling an asset of the Breaching Party;
 - (d) the Breaching Party making an arrangement or composition with its creditors generally or making an application to a court of competent jurisdiction for protection from its creditors generally (including, without limitation, proceedings under chapter 11 of the US Bankruptcy Code);
 - (e) the direct or indirect control of [**]% or more of the Breaching Party's voting shares by any person, firm, corporation or organization (including persons or parties acting in concert), which is a Competitor of the non-Breaching Party.
- 9.2 In the event of termination of the license and waiver as set forth in Article 9.1, the license and waiver granted to the Initiating Party survives for the term set forth in Article 5, whether or not the Breaching Party retains ownership of the Existing Patents or Future Patents, provided that the Initiating Party continues to satisfy all of its obligations under this Agreement.

ARTICLE 10 (ARBITRATION)

- 10.1 The Parties shall attempt to settle all disputes, differences or claims between the Parties arising from this Agreement in an amicable fashion. Should, however, a mutually agreed solution to any such dispute, difference or claim not be found possible, the Parties shall submit the matter to arbitration. The arbitration shall be conducted by three (3) arbitrators, one to be appointed by each Party and a third being nominated by the two arbitrators so selected or, if they cannot agree on a third arbitrator, appointed in accordance with the Commercial Arbitration Rules of the London Court of International Arbitration. The arbitration will be conducted in English and in accordance with the Commercial Arbitration Rules of the London Court of International Arbitration, which shall administer the arbitration and act as appointing authority. The arbitration, including the rendering of the award, shall take place in London, England, and shall be the exclusive forum for resolving such dispute, controversy or claim. For the purposes of any arbitration, the provisions of this Agreement and all rights and obligations thereunder shall be construed in accordance with the laws of England. The decision or decisions resulting from any such arbitration shall be binding upon the Parties, and the expense of the arbitration (including without limitation the award of attorneys' fees to the prevailing party) shall be paid as the arbitrators determine. The decision of the arbitrators shall be executory and judgment thereon may be entered in any court of competent jurisdiction.

10.2 Until a decision is made by the arbitrators both Parties agree to take no action which may upset the status quo or prejudice the respective positions of the Parties in respect of the matter in controversy except for such actions as may otherwise be permitted by the terms of this Agreement.

ARTICLE 11 (NOTICES)

Any notice given under this Agreement (“Notice”) shall be deemed to have been duly and sufficiently given for all purposes, if made initially by facsimile, and then also sent by registered or certified air mail, postage prepaid, addressed to the Party to whom the Notice is to be sent at the address for the Party set forth below. Each Party may change its address for receipt of notices by Notice to the other Party in accordance with this Article 11. Notice becomes effective upon mailing by registered or certified mail. If, however, such Notice is not initially sent by facsimile, such Notice does not become effective until the date the registered or certified mail is actually received.

If addressed to AMSC:

Director of Intellectual Property
American Superconductor Corporation
Two Technology Drive, Westborough, MA 01581-1727
U.S.A.

If addressed to SEI:

General Manager
Legal Department
Sumitomo Electric Industries, Ltd.
5-33 Kitahama, 4-chome, Chuo-ku, Osaka
Japan

ARTICLE 12 (CONTINUING OBLIGATIONS)

The obligations to keep information confidential and to submit disputes to arbitration as set out in Articles 6 (Secrecy) and 10 (Arbitration) respectively shall continue indefinitely, unless and until such information is no longer secret or there are no outstanding claims between the Parties.

ARTICLE 13 (FORCE MAJEURE)

- 13.1 Either Party shall be relieved of its obligations hereunder to the extent that it is hindered or prevented from carrying them out by reason of force majeure.
- 13.2 For the purpose of this Agreement, force majeure signifies any event or circumstance and its direct consequence which is beyond the reasonable control of the Party invoking this Article 13. Such events or circumstances include but are not limited to: fire, floods, earthquake, war, industrial disputes, strikes, lockouts, explosions, acts of God and actions of the government(s).

- 13.3 The Party invoking this Article 13 shall without delay advise the other Party of the force majeure event or circumstance preventing or hindering it from carrying out its obligations under this Agreement and shall also notify the other Party as soon as possible of all the facts and obligations it is able to meet only with delay, indicating the period of delay to be expected.
- 13.4 If the event or circumstance of force majeure results in delay of less than six (6) months, the Parties are obliged to adhere to this Agreement subject however to reasonable extensions of time for contract obligations to be met and the period of payment called for in this Agreement shall be extended appropriately to take account of any stoppages caused by reasons of force majeure. If force majeure results in an extension of due date for payment under Article 7 for more than six (6) months, the Parties shall consult together on the action to be taken. If they fail to reach agreement, then recourse will be had to arbitration in accordance with Article 10 hereof for liquidation of the contractual relations between the Parties.

ARTICLE 14 (GOVERNING LAW)

This Agreement shall be interpreted in accordance with the laws of England.

ARTICLE 15 (INTERPRETATION)

- 15.1 This Agreement shall be executed in the English language. No translation, if any, of this Agreement into any other language shall be of any force or effect in the interpretation of this Agreement or in determination of the intent of either of the Parties.
- 15.2 This Agreement may only be amended in writing signed by the duly authorized representatives of the Parties and this Agreement constitutes the entire agreement of the Parties on the matter to which it relates and there are no understandings, representations or warranties of any kind between the Parties except as expressly set forth herein.
- 15.3 Should any of the provisions of this Agreement be void for whatever reason, the validity of the remaining provisions shall thereby not be affected. In such case the Parties shall upon mutual consent replace the ineffective provisions by another provision which is as close in meaning as possible.

ARTICLE 16 (ASSIGNMENT)

- 16.1 This Agreement is personal to each of the Parties and may not be assigned by either Party without the prior written consent of the other Party which consent will not be unreasonably withheld. Notwithstanding the foregoing, without the consent of the other Party, either Party may assign this Agreement and all of its rights and obligations in connection with the sale or assignment of substantially all of the business and assets of the assigning Party to which this Agreement relates. However, no such assignment of this Agreement and all of the rights and obligations hereunder in connection with the assignment of substantially all of the business and assets of the assigning Party to which this Agreement relates may be made to any third party ("Assignee") unless, such Assignee agrees in writing effective as of the Assignment Date, that all of Assignee's existing and future patents and applications which have an earliest priority date on or

**Solely Owned
Wire and Process**

**Exhibit A
SEI Patents**

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
1	US	1986/6/17	07/063228	1987/6/17			5006289	1991/4/9
	US	1986/6/17	07/606850	1990/10/31			5114641	1992/5/19
	US	1986/6/17	07/883368	1992/5/15			5252288	1993/10/12
	US	1986/6/17	08/355814	1994/12/14			5480601	1996/1/2/
2	AU	1987/2/5	11422/88	1988/2/5		1988/8/11	597148	1990/9/11
	DE	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/5
	DE	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	EP	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	EP	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/6
	FR	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/5
	FR	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	GB	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/5
	GB	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	IT	1987/2/5	91119826.5	1988/2/5	47566	1992/3/18	475466	2002/6/5
	IT	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	LI	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	[**]	[**]	[**]	[**]	[**]			
US	1987/2/5	08/851312	1997/5/5			5981444	1999/11/9	
3	DE	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	EP	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	FR	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	GB	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	US	1987/2/28	08/056615	1993/5/4			5786305	1998/7/28
4	US	1987/4/17	07/438986	1989/11/20			5100865	1992/3/31
5	US	1987/4/2	07/942481	1991/9/9			5550102	1996/8/27
6	DE	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	EP	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	FR	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	GB	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	US	1987/5/1	07/189366	1988/5/2			5122507	1992/6/16
	US	1987/5/1	07/884137	1992/5/18			5338721	1994/8/16
	US	1987/5/1	08/906855	1997/8/6			6301774	2001/10/16
	US	1987/5/1	08/906855	1997/8/6			6301774	2001/10/16
	US	1987/5/1	08/200540	1994/2/22			5424282	1995/6/13
7	US	1987/7/28	07/225207	1988/7/28			5030616	1991/7/9
8	US	1987/8/3	08/122178	1993/9/17			5409890	1995/4/25
9	AU	1988/8/29	39596/89	1989/8/15		1990/3/1	611051	1991/9/25
	DE	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
	EP	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	FR	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	GB	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	IT	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	LI	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	US	1988/8/29	08/459624	1995/6/2			5639714	1997/6/17
	US	1988/8/29	08/747133	1996/11/12			6276048	2001/8/21
10	DE	1989/1/26	90101530.5	1990/1/25			380115	1994/9/21
	EP	1989/1/26	90101530.5	1990/1/25	380115	1990/8/1	380115	1994/9/21
	FR	1989/1/26	90101530.5	1990/1/25			380115	1994/9/21
	GB	1989/1/26	90101530.5	1990/1/25			380115	1994/9/21
	[**]	[**]	[**]	[**]				
	US	1989/1/26	08/999675	1997/10/14			6357105	2002/3/19
11	AU	1989/12/28	68479/90	1990/12/24		1991/7/4	646419	1994/6/10
	DE	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	EP	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	FR	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	GB	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	IT	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	[**]	[**]	[**]	[**]				
	US	1989/12/28	08/955323	1997/10/20			6311384	2001/11/6
12	US	1990/3/16	08/283498	1994/8/1			5670459	1997/9/23
	US	1990/3/16	08/858842	1997/5/19			5910222	1999/6/8
13	DE	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	EP	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	FR	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	GB	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	IT	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	LI	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	US	1990/3/26	08/385240	1995/2/8			5610123	1997/3/11
14	US	1990/3/30	08/747881	1996/11/13			6205345	2001/3/20
	[**]	[**]	[**]	∪				
15	US	1990/7/16	08/291237	1994/8/16			5508254	1996/4/16
16	AU	1990/7/16	80310/91	1991/7/10		1992/1/16	647801	1994/7/19
	DE	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	EP	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	FR	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	GB	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	IT	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	LI	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	US	1990/7/16	08/376461	1995/1/20			5877125	1999/3/2
17	DE	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
	EP	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	FR	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	GB	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	IT	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	LI	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	US	1990/8/8	07/742255	1991/8/8			5236891	1993/8/17
18	DE	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	EP	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	FR	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	GB	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	IT	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	LI	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	US	1990/9/10	07/757103	1991/9/10			5378684	1995/1/3
	US	1990/9/10	08/316262	1994/9/29			5663120	1997/9/2
19	AU	1991/1/19	10229/92	1992/1/14		1992/7/23	646538	1994/6/10
	DE	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	EP	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	FR	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	GB	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	IT	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	LI	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	US	1991/1/19	08/167581	1993/12/15	2002-0050053	2002/5/2		
20	AU	1991/2/25	11018/92	1992/2/18		1992/8/27	653983	1995/2/15
	DE	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	EP	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	FR	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	GB	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	IT	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	LI	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	US	1991/2/25	08/446349	1995/5/22			5949131	1999/9/7
	US	1991/2/25	09/112970	1998/7/9			6194226	2001/2/27
21	US	1991/3/20	08/186219	1994/1/25			5434130	1995/7/18
22	AU	1991/3/20	13053/92	1992/3/19		1992/9/24	654529	1995/2/28
	US	1991/3/20	08/479898	1995/6/7			5869430	1999/2/9
23	AU	1991/3/20	13034/92	1992/3/19		1992/9/24	650956	1994/10/25
	DE	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	EP	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	FR	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	GB	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	IT	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	US	1991/3/20	07/854127	1992/3/19			5369088	1994/11/29

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
	US	1991/3/20	08/295297	1994/8/24			5462920	1995/10/31
24	AU	1992/2/20	33148/93	1993/2/19		1993/8/26	663355	1996/1/23
	DE	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	EP	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	FR	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	GB	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	IT	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	US	1992/2/20	08/019976	1993/2/19			5358929	1994/10/25
25	DE	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	DK	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	EP	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	FR	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	GB	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	IT	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	US	1995/4/7	08/627281	1996/4/4			6305069	2001/10/23
	US	1995/4/7	09/954577	2001/9/18	2002-0028749	2002/3/7		
26	EP	1996/3/26	97105031.5	1997/3/25	798749	1997/10/1		
	US	1996/3/26	08/823907	1997/3/25			5929000	1999/7/27
	US	1996/3/26	09/055287	1998/4/6			6192573	2001/2/27
27	AU	1996/5/13	19090/97	1997/4/24		1997/11/20	727324	2001/3/22
	EP	1996/5/13	97106381.3	1997/4/17	807994	1997/11/19	807994	2002/8/14
	[**]	[**]	[**]	[**]				
	US	1996/5/13	09/941104	2001/8/28	2002-0020546	2002/2/21	6414244	
28	EP	1997/2/25	98103197.4	1998/2/24	860705	1998/8/26		
	US	1997/2/25	09/028929	1998/2/24			5936394	
29	EP	1997/2/27	98905635.3	1998/2/25	1018748	200/7/12		
	[**]	[**]	[**]	[**]				
	WO	1997/2/27	PTC/JP98/00754	1998/2/27	WO98/38650	1998/9/3		
30	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	US	1998/4/28	09/264570	1999/3/8			6311385	
31	EP	1998/7/30	99114300.9	1999/7/30	977282	2000/2/2		
	US	1998/7/30	09/363816	1999/7/30	US-2001-0017220	2001/8/30	6337307	
	[**]	[**]	[**]	[**]				
32	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	WO	1999/2/26	PCT/JP00/00952	2000/2/18	WO00/52781	2000/9/8		

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
33	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
34	[**]	[**]	[**]	[**]				
	EP	1999/12/28	403701.6	2000/12/28	1113508	2001/7/4		
	[**]	[**]	[**]	[**]				
35	[**]	[**]	[**]	[**]				
	EP	1999/12/28	403702.4	2000/12/28	EP111350 7A2	2001/7/4		
	[**]	[**]	[**]	[**]				
36	[**]	[**]	[**]	[**]				
	EP	1999/11/4	971734.9	2000/11/1	1158543	2001/11/28		
	HK	1999/11/4	1109218.6	2000/11/1	1039396A	2002/4/19		
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
37	EP	2000/4/25	1401033.4	2001/4/24	1150362	2001/10/31		
	HK	2000/4/25	1108327.6	2001/11/27	1037784A	2002/2/15		
	US	2000/4/25	09/820870	2001/3/30	2001- 0044385	2001/11/22		
38	[**]	[**]	[**]	[**]				
	EP	2000/2/22	1400472.5	2001/2/22	1128447	2001/8/29		
	HK	2000/2/22	1108125.0	2001/11/17	1037274A	2002/2/1		
	[**]	[**]	[**]	[**]				
39	[**]	[**]	[**]	[**]				
	EP	2000/7/14	1401877.4	2001/7/13	1172868	2002/1/16		
	[**]	[**]	[**]	[**]				
	TW	2000/7/14	90116220	2001/7/3			157041	2002/9/27
	US	2000/7/14	09/903622	2001/7/13	2002- 0022576	2002/2/21		
40	[**]	[**]	[**]	[**]				
	EP	2000/8/29	1402252.9	2001/8/29	1187233	2002/3/13		
	US	2000/8/29	09/920947	2001/8/3	2002- 0073298	2002/4/18		
41	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
42	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				

Magnet Application

<u>No.</u>	<u>Country</u>	<u>Priority Date</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	AU	1989/11/14	66627/90	1990/11/14		1991/5/23	642681	1994/2/22
	DE	1989/11/14	90121806.5	1990/11/14	428993	1991/5/29	428993	1995/5/10
	EP	1989/11/14	90121806.5	1990/11/14	428993	1991/5/29	428993	1995/5/10
	FR	1989/11/14	90121806.5	1990/11/14	428993	1991/5/29	428993	1995/5/10
	GB	1989/11/14	90121806.5	1990/11/14	428993	1991/5/29	428993	1995/5/10
	IT	1989/11/14	90121806.5	1990/11/14	428993	1991/5/29	428993	1995/5/10
	LI	1989/11/14	90121806.5	1990/11/14	428993	1991/5/29	428993	1995/5/10
	US	1989/11/14	07/612023	1990/11/13			5340943	1994/8/23
2	DE	1990/8/24	91114090.3	1991/8/22	472197	1992/2/26	472197	1994/12/21
	EP	1990/8/24	91114090.3	1991/8/22	472197	1992/2/26	472197	1994/12/21
	FR	1990/8/24	91114090.3	1991/8/22	472197	1992/2/26	472197	1994/12/21
	GB	1990/8/24	91114090.3	1991/8/22	472197	1992/2/26	472197	1994/12/21
	US	1990/8/24	08/301923	1994/9/6			5506198	1996/4/9
3	AU	1991/4/2	13948/92	1992/3/31		1992/10/8	654339	1995/2/21
	US	1991/4/2	08/385571	1995/2/8			5512867	1996/4/30
4	DE	1996/5/13	97107591.6	1997/5/7	807939	1997/11/19	807939	2001/10/17
	EP	1996/5/13	97107591.6	1997/5/7	807939	1997/11/19	807939	2001/10/17
	FR	1996/5/13	97107591.6	1997/5/7	807939	1997/11/19	807939	2001/10/17
	GB	1996/5/13	97107591.6	1997/5/7	807939	1997/11/19	807939	2001/10/17
	US	1996/5/13	08/848464	1997/5/8			5861788	1999/1/19
5	EP	1996/7/19	97112288.2	1997/7/17	820071	1998/1/21	820071	2002/1/9
	US	1996/7/19	08/897605	1997/7/21			5787714	1998/8/4
6	EP	1997/5/8	98108366	1998/5/7	877395	1998/11/11		
	US	1997/5/8	09/073953	1998/5/7			6081179	2000/6/27
7	EP	1997/10/24	98119952.4	1998/10/21	911839	1999/4/28		
	US	1997/10/24	09/176327	1998/10/22			6094333	2000/7/25

Current Lead

<u>No.</u>	<u>Country</u>	<u>Priority Date</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	DE	1987/3/31	88105209.6	1988/3/30	285147	1988/10/5	285147	1993/3/31
	EP	1987/3/31	88105209.6	1988/3/30	285147	1988/10/5	285147	1993/3/31
	FR	1987/3/31	88105209.6	1988/3/30	285147	1988/10/5	285147	1993/3/31
	GB	1987/3/31	88105209.6	1988/3/30	285147	1988/10/5	285147	1993/3/31
	US	1987/3/31	07/174468	1988/3/28			4965247	1990/10/23
2	US	1989/8/9	07/564217	1990/8/7			5114908	1992/5/19
3	US	1990/4/13	07/935664	1992/8/24			5276281	1994/1/4

**Exhibit A
AMSC Patents**

**Solely Owned/Exclusively Licensed
BSCCO/PIT Wire and Process**

<u>No.</u>	<u>Country</u>	<u>Priority Date</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	AU	03/27/1987	74273/91	03/01/1988			642,229	03/01/1988
	AU	03/27/1987	12529/88	03/01/1988			605,251	04/29/1991
	CA	03/27/1987	562311	02/24/1988			1,340,849	12/14/1999
	JP	03/27/1987	236643/93	03/22/1988			2-691126	01/29/1997
	US	03/27/1987	07/031,407	03/27/1987			4,826,808	05/12/1989
	US	03/27/1987	07/061,233	06/10/1987			5,204,318	04/20/1993
	US	03/27/1987	07/879,155	04/30/1992			5,189,009	02/23/1993
	US	03/27/1987	08/056,605	05/03/1993			5,439,880	08/08/1995
	US	03/27/1987	08/273,408	07/11/1994			5,545,613	08/14/1996
	US	03/27/1987	08/414,288	03/31/1995			5,643,856	07/01/1997
	US	03/27/1987	08/819,285	03/18/1997			5,883,052	03/16/1999
2	US	10/16/1989	07/422,227	10/16/1989			5,116,810	03/02/1992
3					DE			
	DE	06/30/1992	P69331631.4	06/24/1993	69331631	02/06/2003		
	EP	06/30/1992	93916729.2	06/24/1993	648,379	04/19/1995	648,379	01/17/2002
	FR	06/30/1992	93916729.2	06/24/1993	648,379	04/19/1995	648,379	01/17/2002
	GB	06/30/1992	93916729.2	06/24/1993	648,379	04/19/1995	648,379	01/17/2002
	IT	06/30/1992	93916729.2	06/24/1993	648,379	04/19/1995	648,379	01/17/2002
	US	06/30/1992	08/462,130	06/05/1995			6,218,340	04/17/2001
					2001-			
US	06/30/1992	09/797,487	03/01/2001	0009888	07/26/2001	6,495,765	12/17/2002	
4	Japan	06/24/1993	503095/95	06/23/1994	500351/97	01/14/1997		
	US	06/24/1993	08/082,093	06/24/1993			5,472,527	12/05/1995
	US	06/24/1993	08/469,438	06/06/1995			6,066,599	05/23/2000
5	DE	04/10/1989	89106332.3	04/10/1989			336,450	10/16/1996
	EP	04/10/1989	89106332.3	04/10/1989	336,450	10/11/1989	336,450	10/16/1996
	EP	04/10/1989	96103591.2	04/10/1989	721,923	07/17/1996		
	FR	04/10/1989	89106332.3	04/10/1989			336,450	10/16/1996
	GB	04/10/1989	89106332.3	04/10/1989			336,450	10/16/1996
	NL	04/10/1989	89106332.3	04/10/1989			336,450	10/16/1996
	NZ	04/10/1989	224205	04/08/1988			224205/228132	04/11/1989

	[**]	[**]	[**]	[**]				
	US	04/10/1989	09/260,292	03/02/1999			6,121,207	09/19/2000
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
6	US	05/28/1991	08/324,456	10/17/1994			5,618,776	04/08/1997
7	AU	04/01/1993	66640/94	04/01/1994	696,752	08/26/1997	696,752	01/07/1999
	DE	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	DK	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	EP	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	FR	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	GB	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	IT	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	JP	04/01/1993	522398/94	04/01/1994	505265/97	05/27/1997		
	NL	04/01/1993	94915352.2	04/01/1994	692,147	01/17/1996	692,147	08/02/2000
	NZ	04/01/1993	266058	04/01/1994	692,147	05/26/1997	266,058	12/03/1997
	US	04/01/1993	08/041,822	04/01/1993			5,635,456	06/03/1997
8	US	02/24/1993	08/021,768	02/24/1993			5,455,223	10/03/1995
9	US	05/12/1992	08/744,278	11/06/1996			6,219,901	04/24/2001
10	US	04/28/1995	08/431,705	04/28/1995			5,758,405	06/02/1998
11	US	04/01/1993	08/198,912	02/17/1994			5,661,114	08/26/1997
	US	04/01/1993	08/779,808	1/8/1997			5,994,275	11/30/1999
	US	04/01/1993	09/451,742	11/30/1999			6,284,712	09/04/2001
	US	04/01/1993	09/861,248	05/18/2001			6,436,876	08/20/2002
12	US	04/29/1994	08/235,560	04/29/1994			5,952,270	09/14/1999
	US	04/29/1994	09/309,220	05/10/1999			6,400,970	06/04/2002
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
13	US	10/28/1994	08/331,184	10/28/1994			6,295,716	10/02/2001
	US	10/28/1994	09/960,189	09/21/2001	2002-0016265	02/07/2002		
14	DE	09/08/1994	95303044.0	09/08/1995	780,024	06/25/1997	780,024	02/27/2002
	EP	09/08/1994	95303044.0	09/08/1994	780,024	06/25/1997	780,024	02/27/2002
	FR	09/08/1994	95303044.0	09/08/1995	780,024	06/25/1997	780,024	02/27/2002
	GB	09/08/1994	95303044.0	09/08/1995	780,024	06/25/1997	780,024	02/27/2002
	IT	09/08/1994	95303044.0	09/08/1995	780,024	06/25/1997	780,024	02/27/2002

	US	09/08/1994	08/302,601	09/08/1994			6,360,425	03/26/2002
15	AU	06/06/1995	60419/96	07/07/1996			710,960	01/20/2000
	[**]	[**]	[**]	[**]				
	EP	06/06/1995	96918065.2	06/05/1996	832,050	04/01/1998		
	JP	06/06/1995	09-501291	06/05/1996	11-506866	06/15/1999		
	NZ	06/06/1995	310093	06/05/1996			310,093	02/08/2000
	US	06/06/1995	08/468,089	06/06/1995			6,247,224	06/19/2001
	US	06/06/1995	08/843,041	04/11/1997			6,331,675	12/18/2001
	[**]	[**]	[**]	[**]				
16	AU	01/28/1994	11575/97	11/07/1996			729,277	05/17/2001
	[**]	[**]	[**]	[**]				
	EP	01/28/1994	96942731.9	11/07/1996	860,030	08/26/1998		
	NZ	01/28/1994	324499	11/07/1996			324,499	02/08/2000
	US	01/28/1994	08/553,184	11/07/1995			6,194,352	02/27/2001
17	AU	10/28/1994	62532/96	06/05/1996			697,410	01/21/1999
	[**]	[**]	[**]	[**]				
	DE	10/28/1994	96921276.0	06/05/1996			836,752	03/05/2003
	EP	10/28/1994	96921276.0	06/05/1996	836,752	04/22/1998	836,752	03/05/2003
	FR	10/28/1994	96921276.0	06/05/1996			836,752	03/05/2003
	IT	10/28/1994	96921276.0	06/05/1996			836,752	03/05/2003
	GB	10/28/1994	96921276.0	06/05/1996			836,752	03/05/2003
	NZ	10/28/1994	311254	06/05/1996			311,254	11/09/2000
	US	10/28/1994	08/467,033	06/06/1995			5,942,466	08/24/1999
	US	10/28/1994	09/358,245	07/21/1999			6,311,386	11/06/2001
					2002-			
	US	10/28/1994	10/061,440	10/25/2001	0111276	08/15/2002		
18	AU	05/19/1995	57956/96	05/16/1996			709,214	12/09/1999
	CN	05/19/1995	96195325.X	05/17/1996	1190366	08/12/1998	99,008	12/25/2002
	EP	05/19/1995	96914661.2	05/17/1996	828,606	03/18/1998		
	JP	05/19/1995	8-535057	05/17/1996	11-505365	05/18/1999		
	US	05/19/1995	08/862,016	05/22/1997			6,038,462	03/14/2000
	US	05/19/1995	09/358,167	07/20/1999			6,393,690	05/28/2002
19	DE	11/07/1995	69609289.1-08	10/25/1996	799,593	05/14/1997	779,593	07/12/2000
	EP	11/07/1995	96307753.2	10/25/1996	799,593	05/14/1997	779,593	07/12/2000
	US	11/07/1995	08/554,693	11/07/1995			5,885,938	03/23/1999
	US	11/07/1995	09/274,184	03/23/1999			6,271,475	08/07/2001
20	US	05/21/1996	08/651,688	05/21/1996			6,370,762	04/16/2002
	[**]	[**]	[**]	[**]				

21	EP	08/30/1996	97938157.1	08/06/1997	979,519	02/16/2000		
	US	08/30/1996	08/701,333	08/30/1996			5,801,124	09/01/1998
22	EP	08/30/1996	97937022.8	08/06/1997	979,518	08/06/1997		
	US	08/30/1996	08/705,811	08/30/1996			5,987,342	11/16/1999
	US	08/30/1996	09/401,764	09/23/1999			6,230,033	05/08/2001
23	AU	11/07/1995	11165/97	11/06/1996			729,033	05/10/2001
	EP	11/07/1995	96941963.9	11/06/1996	860,012	08/28/1998		
	[**]	[**]	[**]	[**]				
	NZ	11/07/1995	324089	11/06/1996			324,089	03/09/2000
	US	11/07/1995	08/554,814	11/07/1995			6,247,225	06/19/2001
	US	11/07/1995	09/769,705	01/25/2001	2001-0027166	10/04/2001		
24	EP	10/15/1996	97308179.7	10/15/1997	837,512	04/22/1998		
	US	10/15/1996	08/731,302	10/15/1996			6,305,070	10/23/2001
	US	10/15/1996	09/815,063	03/22/2001			6,436,875	08/20/2002
25	JP	07/29/1997	98937939.1	05/27/1998	2001-512282	08/21/2001		
	US	07/29/1997	08/902,421	07/29/1997			6,370,405	04/09/2002
26	AU	05/21/1996	34732/97	05/21/1997	727,912	01/04/2001	727,912	04/19/2001
	[**]	[**]	[**]	[**]				
	EP	05/21/1996	97930987.9	05/21/1997	902,984	03/24/1999		
	[**]	[**]	[**]	[**]				
	US	05/21/1996	08/651,169	05/21/1996			5,798,318	08/25/1998
	US	05/21/1996	09/137,733	08/21/1998			6,188,920	02/13/2001
27	US	05/21/1996	08/652,624	05/21/1996			6,205,645	03/27/2001
28	US	03/31/1997	08/831,504	03/31/1997			6,294,738	09/25/2001
29	[**]	[**]	[**]	[**]				
	US	09/25/1996	08/719,987	09/25/1996			6,397,454	06/04/2002
30	EP	08/30/1996	97938039.1	08/06/1997	951,588	10/27/1999		
	US	08/30/1996	08/701,375	08/30/1996			6,110,606	08/29/2000
31	EP	06/02/1999	00964889.0	06/02/2000	1,188,191	03/20/2002		
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				

	US	06/02/1999	09/324,229	06/02/1999			6,159,905	12/12/2000
32	EP	02/01/1999	99910945.7	02/01/1999	1,055,258	11/29/2000		
	[**]	[**]	[**]	[**]				
	US	02/01/1999	09/240,998	02/01/1999			6,188,921	02/13/2001
33	US	07/29/1997	08/902,588	07/29/1997			6,001,777	12/14/1999
34	AU	09/10/1997	10607/99	03/07/2000	735,543	07/12/2001	735,543	10/25/2001
	EP	09/10/1997	98953164.5	09/08/1998	1,021,842	07/26/2000		
	US	09/10/1997	08/927,006	09/10/1997			6,069,116	05/30/2000
	[**]	[**]	[**]	[**]				
35	US	09/15/2000	09/953,813	09/17/2001	2002-0111277	08/15/2002		
36	[**]	[**]	[**]	[**]				
37	WO	06/18/1998	PCT/NZ99/00095	06/18/1999				entered national phase
	EP	06/18/1998	99931620.2	06/18/1999	1,090,398			
	JP	06/18/1998		06/18/1999	2002-518287			
	[**]	[**]	[**]	[**]				
38	US	04/29/1994	09/548,258	04/12/2000			6,365,554	04/02/2002
39	US	01/20/2000	09/488,740	01/20/2000			6,339,047	01/15/2002
40	[**]	[**]	[**]	[**]				
41	[**]	[**]	[**]	[**]				
42	US	09/15/2000	09/954,123	09/17/2001	2003-0024730	02/06/2003		
43	AU	03/25/1997	66127798	09/28/2000			727,072	03/15/2001
	[**]	[**]	[**]	[**]				
	EP	03/25/1997	98907923.1	03/25/1998	970,483	01/12/2000		
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	RU	03/25/1997	99121644	03/25/1998			2,183,875	06/20/2002
	US	03/25/1997	09/380,115	09/30/1999			6,223,418	05/01/2002
44	EP	07/16/1998	99932685.3	07/15/1999	1,105,744	06/13/2001	1,105,744	09/18/2002
	DE	07/16/1998	DE 69903047	07/15/1999			DE	09/18/2002

					69903047	
	FR	07/16/1998	99932685.3	07/15/1999	1,105,744	09/18/2002
	IT	07/16/1998	99932685.3	07/15/1999	1,105,744	09/18/2002
	GB	07/18/1998	99932685.3	07/15/1999	1,105,744	09/18/2002
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
45	[**]	[**]	[**]	[**]		
	EP	12/22/1998	99973171.4	11/29/1999	1,135,811	
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
46	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
47	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
48	EP	09/14/1999	00960365.5	09/14/2000	1,218,948	07/03/2002
	[**]	[**]	[**]	[**]		
	[**]	[**]	[**]	[**]		
					WO	
49	PCT	11/21/2000	PCT/DK01/00777	11/21/2000	02/43161	05/30/2002

Coils

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
1	AU	01/28/1994	15558/95	12/27/1994			683,133	02/19/1998
	AU	01/28/1994	2861/98	01/30/1998			709,072	12/02/1999
	EP	01/28/1994	95907268.7	12/27/1994	741,912	11/13/1996		
	JP	01/28/1994	7520047	12/27/1994	09-511099	11/04/1997		
	US	01/28/1994	08/188,220	01/28/1994			5,531,015	07/02/1996
	US	01/28/1994	08/674,111	07/01/1996			5,798,678	08/25/1998
	[**]	[**]	[**]	[**]	[**]			
2	AU	01/24/1994	15614/95	01/09/1995			696,169	12/17/1998
	AU	01/24/1994	95220/98	02/03/1998			739,105	01/17/2002
	CA	01/24/1994	2180738	01/09/1995				
							DE	
	DE	01/24/1994	69520939.6	01/09/1995			69520939	05/16/2001
	EP	01/24/1994	95907349.5	01/09/1995			741,905	05/16/2001
	FR	01/24/1994	95907349.5	01/09/1995			741,905	05/16/2001
	IT	01/24/1994	95907349.5	01/09/1995			741,905	05/16/2001
	GB	01/24/1994	95907349.5	01/09/1995			741,905	05/16/2001
	JP	01/24/1994	7519578	01/09/1995	09-511098	11/04/1997		
	NZ	01/24/1994	279091	01/09/1995			279,091	06/12/1997
	US	01/24/1994	08/192,724	02/07/1994			5,525,583	06/11/1996
	US	01/24/1994	08/615,532	03/12/1996			5,914,647	06/22/1999
	3	DE	09/07/1994	69517186.0-08	08/23/1995			DE69517186
EP		09/07/1994	95932332	08/23/1995			781,452	05/24/2000
FR		09/07/1994	95932332	08/23/1995			781,452	05/24/2000
IT		09/07/1994	95932332	08/23/1995			781,452	05/24/2000
GB		09/07/1994	95932332	08/23/1995			781,452	05/24/2000
US		09/07/1994	08/302,358	09/07/1994			5,659,277	08/19/1997
[**]		[**]	[**]	[**]				
4	AU	10/13/1994	41314/96	10/13/1995			694,296	11/05/1998
	[**]	[**]	[**]	[**]				
	CN	10/13/1994	95195573.X	10/13/1995			89,973	07/24/2002
	EP	10/13/1994	95939529.4	10/13/1995	786,141	07/30/1997		
	JP	10/13/1994	8-513436	10/13/1995	10-507589	04/21/1998		
	US	10/13/1994	08/323,494	10/13/1994			5,604,473	02/18/1997
5	US	10/13/1994	08/541,639	10/10/1995			5,581,220	12/03/1996

HTS Leads

<u>No.</u>	<u>Country</u>	<u>Priority Date</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	US	10/18/1996	08/730,870	10/18/1996			5,880,068	03/09/1999
2	US	07/29/1996	08/681,840	07/29/1996			5,991,647	11/23/1999

**Exhibit B
SEI Patents**

Jointly Owned with JST

Wire & Process

<u>No.</u>	<u>Country</u>	<u>Priority Date</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Co Owner</u>
1	AU	1989/12/7	67804/90	1990/12/6		1991/6/13	653321	1995/1/31	JST
	US	1989/12/7	07/960307	1992/10/13			5288699	1994/2/22	JST
2	AU	1991/7/24	23459/92	1992/7/22		1993/2/23	646971	1994/6/23	JST&NIMS
	CA	1991/7/24	2092180	1992/7/22		1993/1/25	2092180	1996/12/3	JST&NIMS
	CH	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	DE	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	EP	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	FR	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	GB	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	IT	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	LI	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	NL	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
US	1991/7/24	08/345920	1994/11/28				5552376	1996/3/6	JST&NIMS
	[**]	[**]	[**]	[**]					JST&NIMS
3	CH	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	DE	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	EP	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	FR	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	GB	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	IT	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	SE	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	US	1993/5/10	08/955322	1997/10/20			5902774	1999/5/11	JST
4	DE	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	EP	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	FR	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	GB	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	IT	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	US	1993/8/2	08/739908	1996/10/30			6158106	2000/12/12	JST
	US	1993/8/2	09/640527	2000/8/17			6272732	2001/8/14	JST
5	DE	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	EP	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	FR	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	GB	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	IT	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	US	1993/12/28	08/365521	1994/12/27			5516753	1996/5/14	JST
6	CH	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	DE	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST

	EP	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	FR	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	GB	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	IT	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	SE	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
7	EP	1995/10/17	96105964.9	1996/4/16	769819	1997/4/23			JST
	[**]	[**]	[**]	[**]					JST

NIMS Owned**Material**

<u>No.</u>	<u>Country</u>	<u>Priority Date</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Co Owner</u>
	[**]	[**]	[**]	[**]					NIMS
	DE	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	EP	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	FR	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	GB	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	IT	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	NL	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	US	1988/1/20	07/293465	1989/1/4					NIMS

**Exhibit B
SEI Patents**

Solely Owned
Wire & Process

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publicate Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	JP	S62148368	6/15/1987	S63310903	12/19/1988	2707524	10/17/1997
2	JP	H08322313	11/18/1996	H09185915	7/15/1997	2996340	10/29/1999
3	JP	S63109325	5/2/1988	H01163910	6/28/1989	2754564	3/6/1998
4	JP	S63193635	8/3/1988	H01152007	6/14/1989	2108366	11/6/1996
5	JP	H01209325	8/12/1989	H03138820	6/13/1991	2636049	4/25/1997
6	JP	H02013092	1/22/1990	H03015116	1/23/1991	3158408	2/16/2001
7	JP	H01341391	12/28/1989	H03204131	9/5/1991	2775946	5/1/1998
8	JP	H02067934	3/16/1990	H03265523	11/26/1991	3089641	7/21/2000
9	JP	H02080421	3/27/1990	H03280308	12/11/1991	3044732	3/17/2000
10	JP	H03051332	3/15/1991	H04212215	8/3/1992	3074753	6/9/2000
11	JP	H03067068	3/29/1991	H04212212	8/3/1992	3248190	11/9/2001
12	JP	H02188496	7/16/1990	H04073822	3/9/1992	3008453	12/3/1999
13	JP	H02211365	8/8/1990	H04094019	3/26/1992	2567505	10/3/1996
14	JP	H03019405	1/19/1991	H04237910	8/26/1992	3149441	1/19/2001
15	JP	H03030398	2/25/1991	H04269471	9/25/1992	3143932	1/5/2001
16	JP	H03056698	3/20/1991	H04292809	10/16/1992	3350935	9/20/2002
17	JP	H04033421	2/20/1992	H05234626	9/10/1993	2998398	11/5/1999
18	JP	H08059184	3/15/1996	H08335414	12/17/1996		
19	JP	H08070098	3/26/1996	H09259660	10/3/1997		
20	JP	H08117913	5/13/1996	H09306565	11/28/1997		
21	JP	H09040887	2/25/1997	H10239260	9/11/1998	3171131	3/23/2001
22	JP	H10119093	4/28/1998	H11312420	11/9/1999		
23	JP	2000-019713	1/28/2000	2000-311526	11/7/2000		
24	JP	H11127886	5/10/1999	2000-322957	11/24/2000		
25	JP	H11185789	6/30/1999	2001-014961	1/19/2001		
26	JP	H11373238	12/28/1999	2001-184956	7/6/2001		
27	JP	H11373239	12/28/1999	2001-184957	7/6/2001		
28	JP	2000-123522	4/25/2000	2001-307566	11/2/2001		
29	JP	2000-044291	2/22/2000	2001-236835	8/31/2001		
30	JP	2001-038367	2/15/2001	2002-093252	3/29/2002		

31	JP	2000-258841	8/29/2000	2002-075091	3/15/2002		
32	JP	2000-258753	8/29/2000	2002-075080	3/15/2002		
33	***	***	***				
34	JP	S63109327	5/2/1988	S64071022	3/16/1989	2514690	4/30/1996
35	JP	S62073284	3/26/1987	S63239147	10/5/1988	2565894	10/3/1996
36	JP	S62095861	4/18/1987	S63261617	10/28/1988	2590096	12/5/1996
37	JP	H01026096	2/4/1989	H02207416	8/17/1990	2844632	10/30/1998
38	JP	H03056687	3/20/1991	H04292812	10/16/1992	2855869	11/27/1998
39	JP	S63025108	2/5/1988	H01140520	6/1/1989	2877149	1/22/1999
40	JP	H02104305	4/18/1990	H04001002	1/6/1992	2995796	10/29/1999
41	JP	H10369802	12/25/1998	2000-195348	7/14/2000	2998757	11/5/1999
42	JP	H02113058	4/28/1990	H04012413	1/17/1992	3008440	12/3/1999
43	JP	H02003990	1/10/1990	H03208211	9/11/1991	3109076	9/14/2000
44	JP	H01289788	11/7/1989	H03152810	6/28/1991	3143903	1/5/2001
45	JP	H01343487	12/27/1989	H03201319	9/3/1991	3149170	1/19/2001
46	JP	H02009459	1/17/1990	H03214516	9/19/1991	3149429	1/19/2001
47	JP	H05174800	6/21/1993	H07086026	3/31/1995		
48	JP	H06135395	6/17/1994	H08007675	1/12/1996		
49	JP	H07078629	4/4/1995	H08273451	10/18/1996		
50	JP	H08026474	2/14/1996	H09223426	8/26/1997		
51	JP	H08274811	10/17/1996	H10125147	5/15/1998		
52	JP	H09096126	4/14/1997	H10289623	10/27/1998		
53	JP	H09133619	5/23/1997	H10321065	12/4/1998		
54	JP	H09133620	5/23/1997	H10321066	12/4/1998		
55	JP	H09290574	10/23/1997	H11126523	5/11/1999		
56	JP	H10051619	3/4/1998	H11250746	9/17/1999		
57	JP	H10277433	9/30/1998	2000-106042	4/11/2000		
58	JP	H11025852	2/3/1999	2000-222956	8/11/2000		
59	JP	H11213457	7/28/1999	2000-200518	7/18/2000		
60	***	***	***				
61	***	***	***				
62	***	***	***				
63	***	***	***				

Exhibit BJointly Owned with JST
Wire & Process

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publicate Date</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Co Owner</u>
1	JP	H01318251	12/7/1989	H03179619	8/5/1991	2997808	11/5/1999	JST
	JP	H02022855	1/31/1990	H03226923	10/7/1991	3109077	9/14/2000	JST
2	JP	H05108395	5/10/1993	H06243745	9/2/1994			JST
3	JP	H05336852	12/28/1993	H07105753	4/21/1995			JST
4	JP	H05336853	12/28/1993	H07201232	8/4/1995	3253440	11/22/2001	JST
5	JP	H06069183	4/7/1994	H07282659	10/27/1995			JST
6	JP	H07268810	10/17/1995	H08171822	7/2/1996			JST
7	JP	H05091197	4/19/1993	H06302235	10/28/1994	3051867	4/7/2000	JST
8	JP	H03161947	7/3/1991	H05012940	1/22/1993	3253318	11/22/2001	JST
9	JP	H04288735	10/27/1992	H06139848	5/20/1994			JST
10	JP	H05125835	5/27/1993	H06338230	12/6/1994			JST
11	JP	H05130221	6/1/1993	H06342607	12/13/1994			JST
12	JP	H05140641	6/11/1993	H06349358	12/22/1994			JST
13	JP	H06200476	8/25/1994	H08064044	3/8/1996			JST&NIMS
14	JP	H06239891	10/4/1994	H07249328	9/26/1995			JST
15	JP	H07078629	4/4/1995	H08273451	10/18/1996			JST&NIMS
16	JP	H07236986	9/14/1995	H09082153	3/28/1997			JST
17	JP	H05104219	4/30/1993	H06316417	11/15/1994			JST&NIMS

Magnet Application

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publicate Date</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Co Owner</u>
1	JP	H07272602	10/20/1995	H09115356	5/2/1997			JST

Exhibit BJointly Owned with Others
Wire & Process

No.	Country	Application No.	File Date	Publication No.	Publicate Date	Patent No.	Issue Date	Co Owner
1	JP	H05056600	3/17/1993	H06267352	9/22/1994			Kansai Electric Power Co
2	JP	H05002548	1/11/1993	H06208809	7/26/1994			Japan Atomic Energy Research Institute
3	JP	H09191266	7/16/1997	H11039963	2/12/1999			Tokyo Electric Power Co
4	JP	H09210886	8/5/1997	H11053960	2/26/1999			Tokyo Electric Power Co
5	JP	H10318063	11/9/1998	2000-149676	5/30/2000			Tokyo Electric Power Co
6	JP	H08349504	12/27/1996	H10194744	7/28/1998			Hiroshi Maeda
7	JP	H10133330	5/15/1998	H11322340	11/24/1999			Hiroshi Maeda
8	/**]	/**]	/**]					/**]
9	JP	H09015148	1/29/1997	H10212123	8/11/1998			Mikio Takano et.al.

Current Lead

No.	Country	Application No.	File Date	Publication No.	Publicate Date	Patent No.	Issue Date	Co Owner
1	JP	H08350078	12/27/1996	H10188691	7/21/1998	3151159	1/19/2001	Fuji Electric Co.Ltd & Japan Atomic Energy Research Institute
2	JP	H05078119	4/5/1993	H06295625	10/21/1994	3098887	8/11/2000	Japan Atomic Energy Research Institute
3	JP	H05002548	1/11/1993	H06208809	7/26/1994			Japan Atomic Energy Research Institute

**Exhibit C
SEI Patents**

Jointly Owned with JST

Wire & Process

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date	Co Owner
1	AU	1989/12/7	67804/90	1990/12/6		1991/6/13	653321	1995/1/31	JST
	US	1989/12/7	07/960307	1992/10/13			5288699	1994/2/22	JST
2	AU	1991/7/24	23459/92	1992/7/22		1993/2/23	646971	1994/6/23	JST&NIMS
	CA	1991/7/24	2092180	1992/7/22		1993/1/25	2092180	1996/12/3	JST&NIMS
	CH	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	DE	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	EP	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	FR	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	GB	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	IT	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	LI	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	NL	1991/7/24	92916222	1992/7/22	551523	1993/7/21	551523	1996/3/6	JST&NIMS
	US	1991/7/24	08/345920	1994/11/28			5552376	1996/3/6	JST&NIMS
	[**]	[**]	[**]	[**]					JST&NIMS
3	CH	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	DE	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	EP	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	FR	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	GB	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	IT	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	SE	1993/5/10	94106899.1	1994/5/3	631331	1994/12/28	631331	1998/3/11	JST
	US	1993/5/10	08/955322	1997/10/20			5902774	1999/5/11	JST
4	DE	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	EP	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	FR	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	GB	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	IT	1993/8/2	94112038.8	1994/8/2	638942	1995/2/15	638942	2001/6/13	JST
	US	1993/8/2	08/739908	1996/10/30			6158106	2000/12/12	JST
	US	1993/8/2	09/640527	2000/8/17			6272732	2001/8/14	JST
5	DE	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	EP	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	FR	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	GB	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	IT	1993/12/28	94120753.2	1994/12/27	661762	1995/7/5	661762	1997/3/19	JST
	US	1993/12/28	08/365521	1994/12/27			5516753	1996/5/14	JST
6	CH	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST

	DE	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	EP	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	FR	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	GB	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	IT	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
	SE	1994/4/7	95105193.7	1995/4/6	676817	1995/10/11	676817	1998/9/9	JST
7	EP	1995/10/17	96105964.9	1996/4/16	769819	1997/4/23			JST
	[**]	[**]	[**]	[**]					JST

NIMS Owned

Material

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date	Co Owner
	[**]	[**]	[**]	[**]					NIMS
	DE	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	EP	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	FR	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	GB	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	IT	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	NL	1988/1/20	89300523.1	1989/1/19	330305	1989/8/230	330305	1995/6/7	NIMS
	[**]	[**]	[**]	[**]					NIMS

Jointly Owned with Others

Wire & Process

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
1	[**]	[**]	[**]	[**]				
	EP	1999/ 11/8	970226.7	2000/10/30	1156494	2001/11/21		
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
2	EP	1997/1/29	98901014.5	1999/8/12	1022255	2000/7/26		
	US	1997/1/29	09/355301	1999/8/12			6482775	2002/11/19
	[**]	[**]	[**]	[**]				

Current Lead

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
1	US	1996/12/27	08/998434	1997/12/26			6153825	2000/11/28

**Jointly Owned with JST
Wire & Process**

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	JP	H01318251	1989/12/7	H03179619	1991/8/5	2997808	1999/11/5
	JP	H02022855	1990/1/31	H03226823	1991/10/7	3109077	2000/9/14
2	JP	H05108395	1993/5/10	H06243745	1994/9/2		
3	JP	H05336852	1993/12/28	H07105753	1995/4/21		
4	JP	H05336853	1993/12/28	H07201232	1995/8/4	3253440	2001/11/22
5	JP	H06069183	1994/4/7	H07282659	1995/10/27		
6	JP	H07268810	1995/10/17	H08171822	1996/7/2		
7	JP	H05091197	1993/4/19	H06302235	1994/10/28	3051867	2000/4/7
8	JP	H03161947	1991/7/3	H05012940	1993/1/22	3253318	2001/11/22
9	JP	H04288735	1992/10/27	H06139848	1994/5/20		
10	JP	H05125835	1993/5/27	H06338230	1994/12/6		
11	JP	H05130221	1993/6/1	H06342607	1994/12/13		
12	JP	H05140641	1993/6/11	H06349358	1994/12/22		
13	JP	H06200476	1994/8/25	H08064044	1996/3/8		
14	JP	H06239891	1994/10/4	H07249328	1995/9/26		
15	JP	H07078629	1995/4/4	H08273451	1996/10/18		
16	JP	H07236986	1995/9/14	H09082153	1997/3/28		
17	JP	H05104219	1993/4/30	H06316417	1994/11/15		

Magnet Application

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	JP	H07272602	1995/10/20	H09115356	1997/5/2		

Jointly Owned with Others
Wire & Process

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	JP	H05056600	1993/3/17	H06267352	1994/9/22		
2	JP	H05002548	1993/1/11	H06208809	1994/7/26		
3	JP	H09191266	1997/7/16	H11039963	1999/2/12		
4	JP	H09210886	1997/8/5	H11053960	1999/2/26		
5	JP	H10318063	1998/11/9	2000-149676	2000/5/30		
6	JP	H08349504	1996/12/27	H10194744	1998/7/28		
7	JP	H10133330	1998/5/15	H11322340	1999/11/24		
8	[**]	[**]	[**]				
9	JP	H09015148	1997/1/29	H10212123	1998/8/11		

Current Lead

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publication Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	JP	H08350078	1996/12/27	H10188691	1998/7/21	3151159	2001/1/19
2	JP	H05078119	1993/4/5	H06295625	1994/10/21	3098887	2000/8/11
3	JP	H05002548	1993/1/11	H06208809	1994/7/26		

**Exhibit C
AMSC Patents**

**Jointly Owned
BSCCO/PIT Wire and
Process**

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date	Co-Owner
1	US	02/05/1996	08/597,061	02/05/1996			5,908,812	06/01/1999	Los Alamos National Laboratory
2	US	07/28/1995	08/814,306	03/10/1997			6,300,285	10/09/2001	Los Alamos National Laboratory
3	US	09/23/1996	08/717,986	09/23/1996			6,122,534	09/19/2000	Los Alamos National Laboratory
4	US	09/21/1999	09/665,882	09/20/2000			6,555,503	04/29/2003	University of Wisconsin
5	[**]	[**]	[**]	[**]					[**]
	[**]	[**]	[**]	[**]					[**]
	[**]	[**]	[**]	[**]					[**]
	EP	07/23/1999	00976538.9	07/20/2000	1,203,415	05/08/2002			Pirelli
	[**]	[**]	[**]	[**]					[**]
	[**]	[**]	[**]	[**]					[**]
	US	07/23/1999	09/360,318	07/23/1999			6,444,917	09/03/2002	Pirelli
6	[**]	[**]	[**]	[**]					[**]
	[**]	[**]	[**]	[**]					[**]
7	[**]	[**]	[**]	[**]					[**]

LICENSE AGREEMENT

This License Agreement (“Agreement”) is made June 10, 2003 between Sumitomo Electric Industries, Ltd. (“SEI”), a Japanese corporation having its principal place of business at 5-33 Kitahama, 4-chome, Chuo-ku, Osaka Japan, and Pirelli S.p.A. (“Pirelli”), an Italian corporation having its principal place of business at Viale Sarca222, 20126 Milano Italy.

WITNESSETH:

WHEREAS, SEI has been engaged in the development of Bi Based Superconductor products and has acquired a substantial number of patents in respect thereof;

WHEREAS, Pirelli desires to obtain, and SEI is willing to grant a license with respect to Pirelli making, using, or selling Wire Products hereinafter defined under certain such patents owned by SEI in accordance with the terms and conditions herein;

NOW, THEREFORE, the Parties agree as follows:

ARTICLE 1

In this Agreement, including Exhibits, unless the context otherwise requires:

- a) words denoting the singular shall include the plural and vice versa;
- b) words denoting persons shall include corporations and vice versa;
- c) words denoting any gender shall include all genders; and
- d) headings are for convenience only and shall not affect interpretation.

ARTICLE 2 (DEFINITIONS)

In this Agreement, the following words and phrases shall have the following meanings, unless the context clearly requires otherwise:

2.1 AMSC

“AMSC” shall mean American Superconductor Corporation, a Delaware corporation having its principal place of business at Two Technology Drive, Westborough, MA 01581-1727

2.2 Assignment Date

“Assignment Date” shall mean the date when Pirelli or SEI assigns this Agreement to a third party as described in Article 15.

2.3 Consideration Territory

“Consideration Territory” is the United States of America, Canada, Germany, United Kingdom, France, Italy, Australia and New Zealand.

2.4 Effective Date

“Effective Date” shall mean the date on which the license agreement between SEI and AMSC related to Existing Patents and Future Patents becomes effective, or the date on which this agreement is executed by both of the Parties, whichever is later.

2.5 Existing Patents

“Existing Patents” shall mean the SEI Patents listed in Exhibit A and their continuations, continuations-in-part, and divisionals.

2.6 Fair Market Value

“Fair Market Value” shall mean, with respect to any Wire Product per se or Wire Product contained in another product either of which is sold, leased or put into use, the selling price of such Wire Product if such Wire Product is sold per se, or if the Wire Product is sold as part of a product or leased or put into use alone or as part of a product, a sum equivalent to the quantity of such Wire Product multiplied by the weighted average of the unit price derived from the sales for substantially the same Wire Product sold per se during the preceding six (6) month period.

In determining selling price, the following shall be excluded:

- (a) packaging costs;
- (b) costs of insurance and transportation;
- (c) import, export, excise, sales and value-added taxes, and customs duties; and
- (d) royalties owed to third parties

2.7 Future Patents

“Future Patents” shall mean all existing and future SEI Patents:

- (a) which directly or indirectly claim priority from a date on or before the Last Priority Date,
- (b) which are owned by SEI or an Affiliate or under which SEI has a right to grant a royalty-free license or sublicense without the need to receive the approval of a third party, and
- (c) which are not included in Exhibit A or Exhibit B.

For avoidance of doubt, Future Patents include patents filed by third parties but later owned by SEI, or for which SEI was later granted a license with the right to grant a royalty-free sublicense to others, including at least Pirelli.

Any Patents filed by third parties for which SEI is later granted a license with the right to grant a royalty-bearing sublicense to others, including at least Pirelli, shall be excluded from Future Patents. However, SEI grants to Pirelli an option to sublicense any patent directed to the design and/or manufacture of Bismuth-based Superconductor Wire with respect to which SEI may obtain a license with the right to grant royalty-bearing sublicenses, at any time subsequent to the execution of this Agreement. The terms and conditions of such royalty bearing sublicense later granted by SEI to Pirelli shall be

subject to the terms of the patent license to SEI but otherwise consistent with the terms and conditions of the Future Patent license granted hereunder, and the royalty terms and conditions shall be no less favorable than the sublicensing royalty terms and conditions of the patent license to SEI.

2.8 Last Priority Date

“Last Priority Date” is December 31, 2007.

2.9 License Fee for Pirelli

“License Fee for Pirelli” shall mean [**] US dollars (US\$[**]) to make the grant exercisable as described in Article 3.1. If this Agreement is assigned to the Assignee pursuant to the Article 15.1, and License Fee for Pirelli has already been paid by Pirelli to SEI then no additional License Fee for Pirelli will be due by Assignee. If, however, License Fee for Pirelli has not already been paid by Pirelli to SEI then License Fee for Pirelli will be due by Assignee. In no event shall the License Fee for Pirelli be refunded after the payment of License Fee for Pirelli to SEI.

2.10 Party and Related Entities

The word “Party” shall mean SEI or Pirelli, as the case may be.

“Affiliate” of a Party shall mean (i) any Subsidiary of such Party, (ii) the Parent Company of such Party, or (iii) any Subsidiary of any such Parent Company.

“Subsidiary” or “Subsidiaries” of a Party shall mean a corporation, limited liability company, partnership or other legal entity (a) fifty percent (50%) or more of whose shares or other securities entitled to vote for election of directors (or other managing authority) is now or hereafter controlled by such Party either directly or indirectly; or (b) in cases in which the entity does not have outstanding shares or securities, fifty percent (50%) or more of whose ownership interest representing the right to manage such entity is now or hereafter owned and controlled by such Party either directly or indirectly; provided that any such corporation or other legal entity shall be deemed to be a “Subsidiary” of such Party only as long as such control or ownership exists.

“Parent-Company” of a Party shall mean a corporation or other legal entity of which such Party is a Subsidiary.

Notwithstanding the foregoing, [**] corporation having its principal place of business at [**], shall be excluded from being a Subsidiary of SEI.

2.11 Patents

“Patents” or “Patent” shall mean any and all patents worldwide issuing from patent applications directly or indirectly claiming priority to a date before the Last Priority Date, and further including design patents and utility models directly or indirectly claiming priority to a date before the Last Priority Date.

2.12 “Pirelli’s Territory” shall mean worldwide except Japan.

2.13 Then Current Future Patents

“Then Current Future Patents” shall mean only Future Patents which directly or indirectly claim priority from a date on or before the Assignment Date.

2.14 Wire Products

“Wire Products” shall mean Bismuth-based Superconductor Wire per se in the Cable Field.

Superconductor Wire is a length of wire or tape containing superconductor materials which is designed to transmit either direct or alternating current in the superconducting state.

The Cable Field is defined as the field of Line Transmission and Distribution of (i) electrical power from at least one point to another and (ii) electrical control signals, where “Line Transmission and Distribution” means transmission and distribution by cable, wire or the like physical link in the form of an elongated conductor which is used to transport electrons. The Cable Field does not include other superconductor products such as current leads, magnet wire, magnet cables, current limiters, transformers, power electronic devices, energy storage devices, coils and other devices when used for the generation of magnetic fields.

ARTICLE 3 (GRANT FROM SEI TO PIRELLI)

- 3.1 SEI grants to Pirelli, with the right to sublicense solely to its Affiliates, for the period from the Effective Date a royalty-bearing license under the SEI’s Patent Rights in Existing Patents and Future Patents to make, use, sell and offer to sell in Pirelli’s Territory Wire Products and Wire Products contained in products in the Cable Field until the last of the Future Patents expire, provided such grant to Pirelli will not become exercisable until a License Fee for Pirelli is paid by Pirelli to SEI. For the avoidance of doubt, the license to make, use, sell and offer to sell Wire Products contained in products is limited to the Wire Products themselves and does not include a license to a combination of the Wire Products with the products in which they are contained.
- 3.2 Pirelli’s license to make, use, sell and offer to sell Wire Products and Wire Products contained in products under Article 3.1, and the waiver contained in section 3.3, shall cease immediately upon Pirelli, directly or indirectly, contesting, by way of litigation or an interference (only if actively instituted by Pirelli) or opposition proceeding or requesting reexamination, the validity of any of SEI’s Existing or Future Patents directed to the design and/or manufacture of Bismuth-based Superconductor Wires, or upon Pirelli exercising any of its rights under any of its Patents or co-owned Patents for infringement by Wire Products or Wire Products contained in products against SEI or its Subsidiaries, or upon Pirelli suing or claiming for infringement by Wire Products or Wire Products contained in products against SEI or its Subsidiaries under its right under any of its Patents in any forum.
- 3.3 Subject to the payment of the License Fee for Pirelli, during the period beginning with the Effective Date and ending with the expiration of all the Existing Patents and Future Patents of SEI, SEI will not sue Pirelli or its Affiliates in any forum for infringement by Wire Products or Wire Products contained in products of any of its Existing Patents,

Future Patents or co-owned Patents, whether covered by grants hereunder or not, for making, using, selling, offering to sell Wire Products and Wire Products contained in products in Pirelli's Territory, unless SEI has an obligation to cooperate with a co-owner or licensor of any such co-owned Patents and such co-owner or licensor requires SEI to sue Pirelli or to assist such co-owner or licensor to exercise its patent rights against Pirelli. Exhibit C lists the co-owned Patents in respect of which SEI has such obligation. Further, SEI shall notify from time to time Pirelli of any co-owned Future Patent in respect of which SEI will have such obligation. For the avoidance of doubt, SEI may sue Pirelli or its Affiliates for infringement by products for a reason other than that such products include Wire Products.

- 3.4 SEI shall cooperate with Pirelli in good faith to register the nonexclusive license of any of the Patents granted herein in any country, provided that Pirelli bears, the cost of such registration.

ARTICLE 4 (TERM OF AGREEMENT)

This Agreement shall become effective on the Effective Date, and, unless sooner terminated as provided in this Agreement, shall be in full force until all of the Existing Patents and Future Patents of both Parties expire.

ARTICLE 5 (SECRECY)

- 5.1 Nothing in this Agreement shall be construed as conferring upon Pirelli or its Subsidiaries any right to include in advertising, packaging or other commercial activities related to Wire Products, any reference to SEI (or any of its Subsidiaries), its trade names, trademarks or service marks in a manner which would be likely to cause confusion or to indicate that such Wire Products are in any way endorsed or certified by SEI or its Subsidiaries.
- 5.2 The Parties hereto shall not disclose the existence or the contents of this Agreement to any third party, with the exception of AMSC, until all of the Existing and Future Patents expire.

ARTICLE 6 (CONSIDERATION)

- 6.1 In consideration of the licenses granted under Article 3 herein to Pirelli, Pirelli shall pay to SEI an amount equal to [**] percent of the Fair Market Value of Wire Products and Wire Products contained in products made, sold, or leased by Pirelli and its sublicensed Affiliates in the Consideration Territory. Only one royalty shall be due with respect to any given Wire Product or Wire Product contained in a product, irrespective of the number of different countries in the Consideration Territory where such Wire Product or Wire Product contained in a product is made, sold or leased, and irrespective of the value of the product of which the Wire Product may be a part. When all of the Existing Patents expire in all of the countries of the Consideration Territory where a given Wire Product or Wire Product contained in a product is made, sold, or leased, then payment of royalty shall be due only if Pirelli makes use of any Future Patent in making, selling or leasing of Wire Products and Wire Products contained in products in the Consideration Territory.

Except for royalties due for Pirelli's use of any Future Patents, when all Existing Patents expire in any of the countries of the Consideration Territory where a given Wire Product or Wire Product contained in a product is made, sold, or leased, then no payment of royalty shall be due for Wire Products and Wire Products contained in products made, sold, or leased by Pirelli in such country, but the payment obligation in other countries in the Consideration Territory where unexpired Existing Patents exist shall remain for Wire Products and Wire Products contained in products made, sold, or leased in those other countries. No payment obligation will be required on any Wire Product or Wire Products contained in products outside of the Consideration Territory. The payments due hereunder for Wire Products and Wire Products contained in products made, sold, or leased during the period from January 1 to June 30 of any year shall be made by September 1 of that year, and the payments for Wire Products and Wire Products contained in products made, sold, or leased during the period from July 1 to December 31 of any year shall be made by March 1 of the next year. At the time of each payment Pirelli shall furnish SEI with a detailed report setting forth the basis for the payment.

- 6.2 All payments due to SEI under this Agreement shall be nonrefundable and shall be remitted by telegraphic transfer in Italian Lire to the following account of SEI:

Sumitomo Mitsui Banking Corporation

Osaka Head Office

6-5, Kitahama 4-chome, Chuo-ku,

Osaka, 541-0041, Japan

Account No.: [**]

- 6.3 All taxes payable as a result of the payment of the monies due to SEI in accordance with this Article 6 shall be borne by SEI. If required to deduct tax at source from any payments made to SEI, Pirelli shall provide SEI with a statement or certificate showing the amount of tax so paid in respect of the said monies duly signed by an appropriate tax official.

ARTICLE 7 (NO LICENSE EXCEPT FOR WIRE PRODUCTS)

Pirelli hereby agrees that the licenses to Pirelli contemplated herein shall not constitute or imply any license or agreement with respect to any products other than Wire Products and Wire Products contained in products, nor a license to Pirelli with respect to any patents except the Existing Patents and Future Patents, nor any agreement with respect to any patents except the Existing Patents and Future Patents.

ARTICLE 8 (TERMINATION)

- 8.1 Either Party (the "Initiating Party") may terminate this Agreement (the "Breaching Party") by written notice to the Breaching Party on or at any time after one of the following events occur. This Agreement and the license and waiver granted Pirelli is automatically terminated at the time of the occurrence of any of the events set forth in sections (b), (c) or (d) with respect to Pirelli:

- (a) the Breaching Party committing a remediable breach under this License Agreement and failing to remedy the breach within two (2) months starting on the day after receipt of written notice from the Initiating Party giving details of the breach and requiring the Breaching Party to remedy the breach;
- (b) the Breaching Party passing a resolution for its winding-up, a court of competent jurisdiction making an order for the Breaching Party's winding-up or the presentation of a petition for the Breaching Party's winding-up (other than, in each case, for the purposes of solvent amalgamation or reconstruction and in such manner that the entity resulting from the amalgamation or reconstruction effectively agrees to be bound by or assume the Breaching Party's obligations under this Agreement);
- (c) the making of an administrative order in relation to the Breaching Party or the appointment of a receiver over, or an encumbrancer taking possession of or selling an asset of the Breaching Party;
- (d) the Breaching Party making an arrangement or composition with its creditors generally or making an application to a court of competent jurisdiction for protection from its creditors generally;
- (e) Pirelli's failure to pay the License Fee for Pirelli specified in Article 3.1 and not cured within sixty (60) days starting on the day of Pirelli's making the Wire Products or the using, offering to sell, selling or exporting such Wire Products or Wire Products contained in products in Pirelli's Territory.

ARTICLE 9 (ARBITRATION)

- 9.1 The Parties shall attempt to settle all disputes and differences between the Parties arising from this Agreement in an amicable fashion. Should, however, a mutually agreed solution to any such dispute not be found possible, the Parties shall submit the matter under dispute to arbitration by the International Chamber of Commerce, at the office located in Washington D.C., the United States of America, under and in accordance with the rules of Arbitration and Conciliation of the International Chamber of Commerce. The arbitration will be conducted in English. The decision or decisions resulting from any such arbitration shall be final and binding and conclusive upon the Parties, not subject to any challenge in any forum or court, and may be enforced in any court of competent jurisdiction.
- 9.2 Until a decision is made by the arbitrators both Parties agree to take no action which may upset the status quo or prejudice the respective positions of the Parties in respect of the matter in controversy except for such actions as may otherwise be permitted by the terms of this Agreement.

ARTICLE 10 (NOTICES)

Any notice given under this Agreement ("Notice") shall be deemed to have been duly and sufficiently given for all purposes, if made initially by facsimile, and then also sent by registered or certified air mail, postage prepaid, addressed to the Party to whom the Notice is to be sent at the address for the Party set forth below. Each Party may change its address for receipt of

notices by Notice to the other Party in accordance with this Article 10. Notice becomes effective-upon mailing by registered or certified mail. If, however, such Notice is not initially sent by facsimile, such Notice does not become effective until the date the registered or certified mail is actually received.

If addressed to Pirelli:

General Manager
Industrial Property Department
Pirelli S.p.A.
Viale Sarca 222
2016 Milan
Italy

If addressed to SEI:

General Manager
Legal Department
Sumitomo Electric Industries, Ltd.
5-33 Kitahama, 4-chome, Chuo-ku, Osaka
Japan

ARTICLE 11 (CONTINUING OBLIGATIONS)

The obligations to keep information confidential and to submit disputes to arbitration as set out in Articles 5 (Secrecy) and 9 (Arbitration) respectively shall continue indefinitely, unless and until such information is no longer secret or there are no outstanding claims between the Parties.

ARTICLE 12 (FORCE MAJEURE)

- 12.1 Either Party shall be relieved of its obligations hereunder to the extent that it is hindered or prevented from carrying them out by reason of force majeure.
- 12.2 For the purpose of this Agreement, force majeure signifies any event or circumstance and its direct consequence which is beyond the reasonable control of the Party invoking this Article 12. Such events or circumstances include but are not limited to: fire, floods, earthquake, war, industrial disputes, strikes, lockouts, explosions, acts of God and actions of the government(s).
- 12.3 The Party invoking this Article 12 shall without delay advise the other Party of the force majeure event or circumstance preventing or hindering it from carrying out its obligations under this Agreement and shall also notify the other Party as soon as possible of all the facts and obligations it is able to meet only with delay, indicating the period of delay to be expected.
- 12.4 If the event or circumstance of force majeure results in delay of less than six (6) months, the Parties are obliged to adhere to this Agreement subject however to reasonable extensions of time for contract obligations to be met and the period of payment called for in this Agreement shall be extended appropriately to take account of any stoppages

caused by reasons of force majeure. If force majeure results in an extension of due date for more than six (6) months, the Parties shall consult together on the action to be taken. If they fail to reach agreement, then recourse will be had to arbitration in accordance with Article 9 hereof for liquidation of the contractual relations between the Parties.

ARTICLE 13 (GOVERNING LAW)

This Agreement shall be interpreted in accordance with the laws of the State of New York.

ARTICLE 14 (INTERPRETATION)

- 14.1 This Agreement shall be executed in the English language. No translation, if any, of this Agreement into any other language shall be of any force or effect in the interpretation of this Agreement or in determination of the intent of either of the Parties.
- 14.2 This Agreement may only be amended in writing signed by the duly authorized representatives of the Parties and this Agreement constitutes the entire agreement of the Parties on the matter to which it relates and there are no understandings, representations or warranties of any kind between the Parties except as expressly set forth herein.
- 14.3 Should any of the provisions of this Agreement be void for whatever reason, the validity of the remaining provisions shall thereby not be affected. In such case the Parties shall upon mutual consent replace the ineffective provisions by another provision which is as close in meaning as possible.

ARTICLE 15 (ASSIGNMENT)

- 15.1 This Agreement is personal to each of the Parties and may not be assigned by either Party without the prior written consent of the other Party which consent will not be unreasonably withheld. Notwithstanding the foregoing, without the consent of the other Party, either Party may assign this Agreement and all of its rights and obligations in connection with the sale or assignment of the business and assets of the assigning Party's in the Cable Field or a portion of such business and assets. However, no such assignment of this Agreement and all of the rights and obligations hereunder in connection with the sale or assignment of the business and assets of the assigning Party's in the Cable Field or a portion of such business and assets may be made to any third party ("Assignee"), unless, effective as of the Assignment Date, if Pirelli is the assigning Party, such Assignee (i) pays to SEI a sum of [**]USD as consideration for the assignment of this Agreement and (ii) agrees in writing that all of the Assignee's patents and applications which have an earliest priority date on or before the Assignment Date and which are directed to Bismuth-based wire are licensed, on a non-exclusive, non-transferable, worldwide, royalty-free basis, to SEI and its Subsidiaries to make, use, sell and offer for sale Wire Products and Wire Products contained in products in the Cable Field, and agrees further that as of the Assignment Date any and all license rights and promises not to sue with respect to Future Patents of SEI as described in Article 3 of this Agreement shall be limited to Then Current Future Patents.

**Solely Owned
Wire and Process**

**Exhibit A
SEI Patents**

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
1	US	1986/6/17	07/063228	1987/6/17			5006289	1991/4/9
	US	1986/6/17	07/606850	1990/10/31			5114641	1992/5/19
	US	1986/6/17	07/883368	1992/5/15			5252288	1993/10/12
	US	1986/6/17	08/355814	1994/12/14			5480601	1996/1/2/
2	AU	1987/2/5	11422/88	1988/2/5		1988/8/11	597148	1990/9/11
	DE	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/5
	DE	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	EP	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	EP	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/6
	FR	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/5
	FR	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	GB	1987/2/5	91119826.5	1988/2/5	475466	1992/3/18	475466	2002/6/5
	GB	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	IT	1987/2/5	91119826.5	1988/2/5	47566	1992/3/18	475466	2002/6/5
	IT	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	LI	1987/2/5	88400267.6	1988/2/5	281444	1988/9/7	281444	1992/12/30
	[**]	[**]	[**]	[**]				
US	1987/2/5	08/851312	1997/5/5			5981444	1999/11/9	
3	DE	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	EP	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	FR	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	GB	1987/2/28	88400466.4	1988/2/29	281474	1988/9/7	281474	1994/8/17
	US	1987/2/28	08/056615	1993/5/4			5786305	1998/7/28
4	US	1987/4/17	07/438986	1989/11/20			5100865	1992/3/31
5	US	1987/4/2	07/942481	1991/9/9			5550102	1996/8/27
6	DE	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	EP	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	FR	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	GB	1987/5/1	88401064.6	1988/5/2	290331	1988/11/9	290331	1997/3/5
	US	1987/5/1	07/189366	1988/5/2			5122507	1992/6/16
	US	1987/5/1	07/884137	1992/5/18			5338721	1994/8/16
	US	1987/5/1	08/906855	1997/8/6			6301774	2001/10/16
	US	1987/5/1	08/906855	1997/8/6			6301774	2001/10/16
	US	1987/5/1	08/200540	1994/2/22			5424282	1995/6/13
7	US	1987/7/28	07/225207	1988/7/28			5030616	1991/7/9
8	US	1987/8/3	08/122178	1993/9/17			5409890	1995/4/25
9	AU	1988/8/29	39596/89	1989/8/15		1990/3/1	611051	1991/9/25
	DE	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
	EP	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	FR	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	GB	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	IT	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	LI	1988/8/29	89115862.8	1989/8/28	356969	1990/3/7	356969	1994/12/28
	US	1988/8/29	08/459624	1995/6/2			5639714	1997/6/17
	US	1988/8/29	08/747133	1996/11/12			6276048	2001/8/21
10	DE	1989/1/26	90101530.5	1990/1/25			380115	1994/9/21
	EP	1989/1/26	90101530.5	1990/1/25	380115	1990/8/1	380115	1994/9/21
	FR	1989/1/26	90101530.5	1990/1/25			380115	1994/9/21
	GB	1989/1/26	90101530.5	1990/1/25			380115	1994/9/21
	[**]	[**]	[**]	[**]				
	US	1989/1/26	08/999675	1997/10/14			6357105	2002/3/19
11	AU	1989/12/28	68479/90	1990/12/24		1991/7/4	646419	1994/6/10
	DE	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	EP	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	FR	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	GB	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	IT	1989/12/28	90125575.2	1990/12/27	435286	1991/7/3	435286	1997/3/19
	[**]	[**]	[**]	[**]				
	US	1989/12/28	08/955323	1997/10/20			6311384	2001/11/6
12	US	1990/3/16	08/283498	1994/8/1			5670459	1997/9/23
	US	1990/3/16	08/858842	1997/5/19			5910222	1999/6/8
13	DE	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	EP	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	FR	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	GB	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	IT	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	LI	1990/3/26	91104628.2	1991/2/23	449161	1991/10/2	449161	1995/12/6
	US	1990/3/26	08/385240	1995/2/8			5610123	1997/3/11
14	US	1990/3/30	08/747881	1996/11/13			6205345	2001/3/20
	[**]	[**]	[**]	[**]				
15	US	1990/7/16	08/291237	1994/8/16			5508254	1996/4/16
16	AU	1990/7/16	80310/91	1991/7/10		1992/1/16	647801	1994/7/19
	DE	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	EP	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	FR	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	GB	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	IT	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	LI	1990/7/16	91111685.3	1991/7/12	467238	1992/1/22	467238	1994/11/2
	US	1990/7/16	08/376461	1995/1/20			5877125	1999/3/2
17	DE	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
	EP	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	FR	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	GB	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	IT	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	LI	1990/8/8	911113271	1991/8/7	470595	1992/2/12	470595	1995/5/24
	US	1990/8/8	07/742255	1991/8/8			5236891	1993/8/17
18	DE	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	EP	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	FR	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	GB	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	IT	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	LI	1990/9/10	91115196.7	1991/9/9	475315	1992/3/18	475315	1995/12/13
	US	1990/9/10	07/757103	1991/9/10			5378684	1995/1/3
	US	1990/9/10	08/316262	1994/9/29			5663120	1997/9/2
19	AU	1991/1/19	10229/92	1992/1/14		1992/7/23	646538	1994/6/10
	DE	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	EP	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	FR	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	GB	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	IT	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	LI	1991/1/19	92100672.2	1992/1/16	496281	1992/7/29	496281	1995/12/6
	US	1991/1/19	08/167581	1993/12/15	2002-0050053	2002/5/2		
20	AU	1991/2/25	11018/92	1992/2/18		1992/8/27	653983	1995/2/15
	DE	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	EP	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	FR	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	GB	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	IT	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	LI	1991/2/25	92103099.5	1992/2/24	501394	1992/9/2	501394	1995/5/3
	US	1991/2/25	08/446349	1995/5/22			5949131	1999/9/7
	US	1991/2/25	09/112970	1998/7/9			6194226	2001/2/27
21	US	1991/3/20	08/186219	1994/1/25			5434130	1995/7/18
22	AU	1991/3/20	13053/92	1992/3/19		1992/9/24	654529	1995/2/28
	US	1991/3/20	08/479898	1995/6/7			5869430	1999/2/9
23	AU	1991/3/20	13034/92	1992/3/19		1992/9/24	650956	1994/10/25
	DE	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	EP	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	FR	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	GB	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	IT	1991/3/20	92104806.2	1992/3/19	504894	1992/9/23	504894	1994/12/28
	US	1991/3/20	07/854127	1992/3/19			5369088	1994/11/29

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
	US	1991/3/20	08/295297	1994/8/24			5462920	1995/10/31
24	AU	1992/2/20	33148/93	1993/2/19		1993/8/26	663355	1996/1/23
	DE	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	EP	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	FR	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	GB	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	IT	1992/2/20	93102579.5	1993/2/18	556837	1993/8/25	556837	1997/9/17
	US	1992/2/20	08/019976	1993/2/19			5358929	1994/10/25
25	DE	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	DK	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	EP	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	FR	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	GB	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	IT	1995/4/7	96105592.8	1996/4/9	736914	1996/10/9	736914	2002/5/15
	US	1995/4/7	08/627281	1996/4/4			6305069	2001/10/23
	US	1995/4/7	09/954577	2001/9/18	2002-0028749	2002/3/7		
26	EP	1996/3/26	97105031.5	1997/3/25	798749	1997/10/1		
	US	1996/3/26	08/823907	1997/3/25			5929000	1999/7/27
	US	1996/3/26	09/055287	1998/4/6			6192573	2001/2/27
27	AU	1996/5/13	19090/97	1997/4/24		1997/11/20	727324	2001/3/22
	EP	1996/5/13	97106381.3	1997/4/17	807994	1997/11/19	807994	2002/8/14
	[**]	[**]	[**]	[**]				
	US	1996/5/13	09/941104	2001/8/28	2002-0020546	2002/2/21	6414244	
28	EP	1997/2/25	98103197.4	1998/2/24	860705	1998/8/26		
	US	1997/2/25	09/028929	1998/2/24			5936394	
29	EP	1997/2/27	98905635.3	1998/2/25	1018748	200/7/12		
	[**]	[**]	[**]	[**]				
	WO	1997/2/27	PTC/JP98/00754	1998/2/27	WO98/386 50	1998/9/3		
30	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	US	1998/4/28	09/264570	1999/3/8			6311385	
31	EP	1998/7/30	99114300.9	1999/7/30	977282	2000/2/2		
	US	1998/7/30	09/363816	1999/7/30	US-2001-0017220	2001/8/30	6337307	
	[**]	[**]	[**]	[**]				
32	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	WO	1999/2/26	PCT/JP00/00952	2000/2/18	WO00/527 81	2000/9/8		

No.	Country	Priority Date	Application No.	File Date	Publication No.	Publication Date	Patent No.	Issue Date
33	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
34	[**]	[**]	[**]	[**]				
	EP	1999/12/28	403701.6	2000/12/28	1113508	2001/7/4		
	[**]	[**]	[**]	[**]				
35	[**]	[**]	[**]	[**]				
	EP	1999/12/28	403702.4	2000/12/28	EP111350 7A2	2001/7/4		
	[**]	[**]	[**]	[**]				
36	[**]	[**]	[**]	[**]				
	EP	1999/11/4	971734.9	2000/11/1	1158543	2001/11/28		
	HK	1999/11/4	1109218.6	2000/11/1	1039396A	2002/4/19		
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
37	EP	2000/4/25	1401033.4	2001/4/24	1150362	2001/10/31		
	HK	2000/4/25	1108327.6	2001/11/27	1037784A	2002/2/15		
	US	2000/4/25	09/820870	2001/3/30	2001- 0044385	2001/11/22		
38	[**]	[**]	[**]	[**]				
	EP	2000/2/22	1400472.5	2001/2/22	1128447	2001/8/29		
	HK	2000/2/22	1108125.0	2001/11/17	1037274A	2002/2/1		
	[**]	[**]	[**]	[**]				
39	[**]	[**]	[**]	[**]				
	EP	2000/7/14	1401877.4	2001/7/13	1172868	2002/1/16		
	[**]	[**]	[**]	[**]				
	TW	2000/7/14	90116220	2001/7/3			157041	2002/9/27
	US	2000/7/14	09/903622	2001/7/13	2002- 0022576	2002/2/21		
40	[**]	[**]	[**]	[**]				
	EP	2000/8/29	1402252.9	2001/8/29	1187233	2002/3/13		
	US	2000/8/29	09/920947	2001/8/3	2002- 0073298	2002/4/18		
41	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				
42	[**]	[**]	[**]	[**]				
	[**]	[**]	[**]	[**]				

**Exhibit B
SEI Patents**

Solely Owned
Wire & Process

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publicate Date</u>	<u>Patent No.</u>	<u>Issue Date</u>
1	JP	S62148368	6/15/1987	S63310903	12/19/1988	2707524	10/17/1997
2	JP	H08322313	11/18/1996	H09185915	7/15/1997	2996340	10/29/1999
3	JP	S63109325	5/2/1988	H01163910	6/28/1989	2754564	3/6/1998
4	JP	S63193635	8/3/1988	H01152007	6/14/1989	2108366	11/6/1996
5	JP	H01209325	8/12/1989	H03138820	6/13/1991	2636049	4/25/1997
6	JP	H02013092	1/22/1990	H03015116	1/23/1991	3158408	2/16/2001
7	JP	H01341391	12/28/1989	H03204131	9/5/1991	2775946	5/1/1998
8	JP	H02067934	3/16/1990	H03265523	11/26/1991	3089641	7/21/2000
9	JP	H02080421	3/27/1990	H03280308	12/11/1991	3044732	3/17/2000
10	JP	H03051332	3/15/1991	H04212215	8/3/1992	3074753	6/9/2000
11	JP	H03067068	3/29/1991	H04212212	8/3/1992	3248190	11/9/2001
12	JP	H02188496	7/16/1990	H04073822	3/9/1992	3008453	12/3/1999
13	JP	H02211365	8/8/1990	H04094019	3/26/1992	2567505	10/3/1996
14	JP	H03019405	1/19/1991	H04237910	8/26/1992	3149441	1/19/2001
15	JP	H03030398	2/25/1991	H04269471	9/25/1992	3143932	1/5/2001
16	JP	H03056698	3/20/1991	H04292809	10/16/1992	3350935	9/20/2002
17	JP	H04033421	2/20/1992	H05234626	9/10/1993	2998398	11/5/1999
18	JP	H08059184	3/15/1996	H08335414	12/17/1996		
19	JP	H08070098	3/26/1996	H09259660	10/3/1997		
20	JP	H08117913	5/13/1996	H09306565	11/28/1997		
21	JP	H09040887	2/25/1997	H10239260	9/11/1998	3171131	3/23/2001
22	JP	H10119093	4/28/1998	H11312420	11/9/1999		
23	JP	2000-019713	1/28/2000	2000-311526	11/7/2000		
24	JP	H11127886	5/10/1999	2000-322957	11/24/2000		
25	JP	H11185789	6/30/1999	2001-014961	1/19/2001		
26	JP	H11373238	12/28/1999	2001-184956	7/6/2001		
27	JP	H11373239	12/28/1999	2001-184957	7/6/2001		
28	JP	2000-123522	4/25/2000	2001-307566	11/2/2001		
29	JP	2000-044291	2/22/2000	2001-236835	8/31/2001		
30	JP	2001-038367	2/15/2001	2002-093252	3/29/2002		

31	JP	2000-258841	8/29/2000	2002-075091	3/15/2002		
32	JP	2000-258753	8/29/2000	2002-075080	3/15/2002		
33	[**]	[**]	[**]				
34	JP	S63109327	5/2/1988	S64071022	3/16/1989	2514690	4/30/1996
35	JP	S62073284	3/26/1987	S63239147	10/5/1988	2565894	10/3/1996
36	JP	S62095861	4/18/1987	S63261617	10/28/1988	2590096	12/5/1996
37	JP	H01026096	2/4/1989	H02207416	8/17/1990	2844632	10/30/1998
38	JP	H03056687	3/20/1991	H04292812	10/16/1992	2855869	11/27/1998
39	JP	S63025108	2/5/1988	H01140520	6/1/1989	2877149	1/22/1999
40	JP	H02104305	4/18/1990	H04001002	1/6/1992	2995796	10/29/1999
41	JP	H10369802	12/25/1998	2000-195348	7/14/2000	2998757	11/5/1999
42	JP	H02113058	4/28/1990	H04012413	1/17/1992	3008440	12/3/1999
43	JP	H02003990	1/10/1990	H03208211	9/11/1991	3109076	9/14/2000
44	JP	H01289788	11/7/1989	H03152810	6/28/1991	3143903	1/5/2001
45	JP	H01343487	12/27/1989	H03201319	9/3/1991	3149170	1/19/2001
46	JP	H02009459	1/17/1990	H03214516	9/19/1991	3149429	1/19/2001
47	JP	H05174800	6/21/1993	H07086026	3/31/1995		
48	JP	H06135395	6/17/1994	H08007675	1/12/1996		
49	JP	H07078629	4/4/1995	H08273451	10/18/1996		
50	JP	H08026474	2/14/1996	H09223426	8/26/1997		
51	JP	H08274811	10/17/1996	H10125147	5/15/1998		
52	JP	H09096126	4/14/1997	H10289623	10/27/1998		
53	JP	H09133619	5/23/1997	H10321065	12/4/1998		
54	JP	H09133620	5/23/1997	H10321066	12/4/1998		
55	JP	H09290574	10/23/1997	H11126523	5/11/1999		
56	JP	H10051619	3/4/1998	H11250746	9/17/1999		
57	JP	H10277433	9/30/1998	2000-106042	4/11/2000		
58	JP	H11025852	2/3/1999	2000-222956	8/11/2000		
59	JP	H11213457	7/28/1999	2000-200518	7/18/2000		
60	[**]	[**]	[**]				
61	[**]	[**]	[**]				
62	[**]	[**]	[**]				
63	[**]	[**]	[**]				

Exhibit BJointly Owned with Others
Wire & Process

<u>No.</u>	<u>Country</u>	<u>Application No.</u>	<u>File Date</u>	<u>Publication No.</u>	<u>Publicate Date</u>	<u>Patent No.</u>	<u>Issue Date</u>	<u>Co Owner</u>
1	JP	H05056600	3/17/1993	H06267352	9/22/1994			Kansai Electric Power Co
2	JP	H05002548	1/11/1993	H06208809	7/26/1994			Japan Atomic Energy Research Institute
3	JP	H09191266	7/16/1997	H11039963	2/12/1999			Tokyo Electric Power Co
4	JP	H09210886	8/5/1997	H11053960	2/26/1999			Tokyo Electric Power Co
5	JP	H10318063	11/9/1998	2000-149676	5/30/2000			Tokyo Electric Power Co
6	JP	H08349504	12/27/1996	H10194744	7/28/1998			Hiroshi Maeda
7	JP	H10133330	5/15/1998	H11322340	11/24/1999			Hiroshi Maeda
8	[**]	[**]	[**]					[**]
9	JP	H09015148	1/29/1997	H10212123	8/11/1998			Mikio Takano et.al.

EXHIBIT E

LICENSE AGREEMENT
(EXCLUSIVE)

This Agreement, made and entered into this 6th day of July, 1987, (the Effective Date) by and between MASSACHUSETTS INSTITUTE OF TECHNOLOGY, a corporation duly organized and existing under the laws of the Commonwealth of Massachusetts and having its principal office at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139 U.S.A. (hereinafter referred to as M.I.T.), and AMERICAN SUPERCONDUCTOR CORPORATION, a corporation duly organized under the laws of Delaware and having its principal office c/o American Research and Development Inc., 45 Milk Street, Boston, Massachusetts 02109 (hereinafter referred to as LICENSEE).

WITNESSETH

WHEREAS, M.I.T. is the owner of certain "Patent Rights" (as later defined herein) relating to M.I.T. Case No. 4405, "Process for Making Super Conducting Oxides (in usable form) by Oxidation of Alloys of the Metallic Constituent's", by John B. VanderSande and Gregory J. Yurek, and has the right to grant licenses under said Patent Rights;

WHEREAS, M.I.T. desires to have the Patent Rights utilized in the public interest and is willing to grant a license thereunder;

WHEREAS, LICENSEE has represented to M.I.T., to induce M.I.T. to enter into this Agreement, that the LICENSEE is willing to commit itself to a thorough, vigorous and diligent program of exploiting the Patent Rights so that public utilization shall result therefrom; and

WHEREAS, LICENSEE desires to obtain a license under the Patent Rights upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

ARTICLE I—DEFINITIONS

For the purposes of this Agreement, the following words and phrases shall have the following meanings:

1.1 “LICENSEE” shall mean American Superconductor Corporation and any subsidiary of American Superconductor Corporation.

1.2 “Subsidiary” shall mean any corporation, company or other entity more than fifty percent (50%) of whose voting stock is owned or controlled directly or indirectly by American Superconductor Corporation.

1.3 “Patent Rights” shall mean the United States and Foreign patent applications set forth in Appendix A attached hereto and made a part hereof (hereinafter referred to as the “Patent Rights Patent Application(s)”), and the United States patents and Foreign patents issuing from said pending Patent Rights Patent Application(s) or later-filed foreign applications based upon any of said United States patents and applications (hereinafter referred to as the “Patent Rights Patent (s)”) and any continuations, continuations-in-part, divisions, reissues and extensions of any of the foregoing.

1.4 “Improvements” shall mean any and all modifications, refinements, etc. dominated by the Patent Rights claims and conceived or reduced to practice over the next three (3) years by Yurek or VanderSande or under the direction of Yurek or VanderSande where Yurek or VanderSande are the principal investigators, provided, however, that any rights to such Improvements granted herein are subject to M.I.T. contractual commitments to third party sponsors of research under which Improvements are made.

1.5 A “Licensed Product” shall mean any product or part thereof which:

- (a) is covered in whole or in part by (i) a pending claim contained in a Patent Rights Patent Application in the country in which any Licensed Product is made, used or sold or (ii) a valid and unexpired claim contained in a Patent Rights Patent in the country in which any Licensed Product is made, used or sold; or
- (b) is manufactured by using a process which is covered in whole or in part by (i) a pending claim contained in a Patent Rights Patent Application in the

country in which any Licensed Process is used or (ii) a valid or unexpired claim contained in a Patent Rights Patent in the country in which any Licensed Process is used.

1.6 A "Licensed Process" shall mean any process for making Licensed Products which is covered in whole or in part by:

- (a) a pending claim contained in a Patent Rights Patent Application; or
- (b) a valid and unexpired claim contained in a Patent Rights Patent.

1.7 "Net Sales Price" shall mean LICENSEE's billings for Licensed Products produced hereunder less the sum of the following:

- (a) Discounts allowed in amounts customary in the trade;
- (b) Sales, tariff duties and/or use taxes directly imposed and with reference to particular sales;
- (c) Outbound transportation prepaid or allowed; and
- (d) Amounts allowed or credited on returns.

No deductions shall be made for commissions paid to individuals whether they be with independent sales agencies or regularly employed by LICENSEE and on its payroll, or for cost of collections. Licensed Products shall be considered "sold" when LICENSEE receives payment.

ARTICLE II—GRANT

2.1 M.I.T. hereby grants to LICENSEE the right and license to make, have made, use, lease and sell the Licensed Products, and to practice the Licensed Processes worldwide for all fields of use to the end of the term for which the Patent Rights are granted unless sooner terminated as hereinafter provided.

2.2 In order to establish a period of exclusivity for LICENSEE, M.I.T. hereby agrees that it shall not grant any other license to make, have made, use, lease and sell Licensed Products or to utilize Licensed Processes during the period of time commencing with the Effective Date of this Agreement and terminating with the first to occur of:

- (a) The expiration of eight (8) years after the first commercial sale of a Licensed Product or first commercial use of a Licensed Process; or
- (b) The expiration of eleven (11) years after the Effective Date of this Agreement.

2.3 At the end of the exclusive period, the license granted hereunder shall become nonexclusive and shall extend to the end of the term or terms for which any Patent Rights are issued, unless sooner terminated as hereinafter provided.

2.4 LICENSEE shall have the right to sublicense any of the rights, privileges and license granted hereunder. However, in no event may LICENSEE sublicense the Patent Rights at rates lower than those set forth in Article IV, without the prior written consent of M.I.T.

2.5 LICENSEE hereby agrees that every sublicensing agreement to which it shall be a party and which shall relate to the rights, privileges and license granted hereunder shall contain a statement setting forth the date upon which LICENSEE's exclusive rights, privileges and license hereunder shall terminate.

2.6 LICENSEE agrees that any sublicenses granted by it shall provide that the obligations of this Agreement shall be binding upon the sublicensee as if At were a party to this Agreement. LICENSEE further agrees to attach copies of Articles II, V, VII, IX, X, XII, XIII, and XV of this Agreement to all sublicense agreements.

2.7 LICENSEE agrees to forward to M.I.T. a copy of any and all fully executed sublicense agreements, and further agrees to forward to M.I.T. annually a copy of such reports received by LICENSEE from its sublicensees during the preceding twelve (12) month period under the sublicenses as shall be pertinent to a royalty accounting under said sublicense agreements. If requested by LICENSEE, M.I.T. agrees to keep the names of sublicensees confidential.

2.8 LICENSEE shall not receive from sublicensees anything of value in lieu of cash payments based upon payment obligations of any sublicense under this Agreement, without the express prior written permission of M.I.T.

2.9 M.I.T. also grants the right to LICENSEE, upon LICENSEE's election, to add to the Patent Rights of Appendix A patents filed or granted to Improvements, for the sum of [**] (\$[**]) Dollars per Improvement patent.

2.10 The license granted hereunder shall not be construed to confer any rights upon LICENSEE by implication, estoppel or otherwise as to any technology not specifically set forth in Appendix A hereof.

ARTICLE III—DUE DILIGENCE

3.1 LICENSEE shall use reasonable efforts to bring one or more Licensed Products or Licensed Processes to market through a thorough, vigorous and diligent program for exploitation of the Patent Rights.

3.2 In addition, LICENSEE shall adhere to the following milestones:

- (a) LICENSEE shall deliver to M.I.T. on or before six (6) months from the Effective Date a business plan showing the amount of money, number and kind of personnel and time budgeted and planned for each phase of development of the Licensed Products and Licensed Processes and shall provide financial summary reports to M.I.T. on an annual basis on or before the 90th day following the end of LICENSEE's fiscal year.
- (b) LICENSEE shall commercialize the Licensed Products or Licensed Processes within three (3) years as demonstrated by [**] Dollars (\$[**]) in the combination of licensing, sales or contract research revenue and firm third party commitments for licensing, orders or contract research.
- (c) LICENSEE shall raise at least [**] (\$[**]) Dollars in equity investment within one (1) year of the Effective Date of this Agreement.

3.3 LICENSEE's failure to perform in accordance with Paragraphs 3.1 and 3.2 above shall be grounds for M.I.T. to terminate this Agreement pursuant to Paragraph 7.3 hereof.

ARTICLE IV—COMPENSATION

4.1 For the rights, privileges and license granted hereunder, LICENSEE shall pay to M.I.T. in the manner hereinafter provided to the end of the term of the Patent Rights or until this Agreement shall be terminated as hereinafter provided:

- (a) A license issue royalty fee of [**] Dollars (\$[**]), which said license issue fee shall be deemed earned and due within five (5) days following the execution of this Agreement.
- (b) A royalty in an amount equal to t[**] ([**]%) percent of the Net Sales Price of the Licensed Products leased or sold by or for LICENSEE or its sublicensees. In the event that LICENSEE is required to pay third parties royalties in excess of [**]% of Net Sales Price, M.I.T.'s royalty rate shall be lowered by half of the royalties paid in excess of [**]% to such third

parties; provided, however, that in no event shall M.I.T.'s royalty hereunder be less than [**]% of Net Sales Price.

- (c) In the event that LICENSEE'S royalty payment to M.I.T. pursuant to Paragraph 4.1(b), during the third year after the [**] Dollars, LICENSEE shall, with its last report for said years, pay to M.I.T. the difference between said sum and the total royalties due M.I.T. for said year under 4.1(b) above.

4.2 No multiple royalties shall be payable because any Licensed Product, its manufacture, lease or sale are or shall be covered by more than one patent application or patent licensed under this Agreement.

4.3 Royalty payments shall be paid in United States dollars in Cambridge, Massachusetts, or at such other place as M.I.T. may reasonably designate consistent with the laws and regulations controlling in any foreign country. If any currency conversion shall be required in connection with the payment of royalties hereunder, such conversion shall be made by using the exchange rate prevailing at the Chase Manhattan Bank (N.A.) on the last business day of the calendar quarterly reporting period to which such royalty payments relate.

4.4 M.I.T. shall receive Common Stock, \$.01 par value, from LICENSEE in an amount equal to [**]% of LICENSEE's existing shares of all types following a \$[**] financing of LICENSEE. In connection with the issuance of the stock, LICENSEE shall grant to M.I.T. a right of first refusal to participate, to the extent of its percentage interest in LICENSEE at such time, in future financings by LICENSEE. M.I.T. shall, at the time the stock is issued, designate one officer of M.I.T. who shall be empowered to vote, consent or otherwise take all actions relating to approvals by stockholders with respect to all stock of LICENSEE owned or to be acquired by M.I.T.

ARTICLE V—REPORTS AND RECORDS

5.1 LICENSEE shall keep full, true and accurate books of account containing all particulars that may be necessary for the purpose of showing the amounts payable to M.I.T. hereunder. Said books of account shall be kept at LICENSEE'S principal place of business or the principal place of business of the appropriate Division of LICENSEE to which this Agreement relates. Said books and the supporting data shall be open at all reasonable times for five (5) years following the end of the calendar year to which they pertain, to the inspection of

M.I.T. or its agents for the purpose of verifying LICENSEE's royalty statement or compliance in other respects with this Agreement.

5.2 LICENSEE, within thirty (30) days after March 31, June 30, September 30 and December 31, of each year, shall deliver to M.I.T. true and accurate reports, giving such particulars of the business conducted by LICENSEE and its sublicensees during the preceding three-month period under this Agreement as shall be pertinent to a royalty accounting hereunder. These shall include at least the following:

- (a) All Licensed Products manufactured and sold.
- (b) Total billings and collections for Licensed Products sold.
- (c) Accounting for all Licensed Processes used or sold.
- (d) Deductions applicable as provided in Paragraph 1.7.
- (e) Total royalties due.
- (f) Names and addresses of all sublicensees of LICENSEE.

5.3 With each such report submitted, LICENSEE shall pay to M.I.T. the royalties due and payable under this Agreement. If no royalties shall be due, LICENSEE shall so report.

5.4 On or before the 90th day following the close of LICENSEE's fiscal year, LICENSEE shall provide M.I.T. LICENSEE's certified financial statements for the preceding fiscal year including, at a minimum, a Balance Sheet and an operating

5.5 The royalty payments set forth in this Agreement shall, if overdue, bear interest until payment at a per annum rate four percent (4%) above the prime rate in effect at the Chase Manhattan Bank (N.A.) on the due date. The payment of such interest shall not foreclose M.I.T. from exercising any other rights it may have as a consequence of the lateness of any payment.

ARTICLE VI—PATENT PROSECUTION

6.1 M.I.T. shall apply for, seek prompt issuance of, and maintain during the term of this Agreement the Patent Rights set forth in Appendix A. The prosecution and maintenance of all Patent Rights Patents and Applications shall be the primary responsibility of M.I.T.; provided, however, LICENSEE shall have reasonable opportunities to advise M.I.T. and shall cooperate with M.I.T. in such prosecution and maintenance.

6.2 Payment of all fees and costs relating to the filing, prosecution, and maintenance of the Patent Rights shall be the responsibility of LICENSEE.

ARTICLE VII—TERMINATION

7.1 If LICENSEE shall cease to carry on its business, this Agreement shall terminate upon notice by M.I.T.

7.2 Should LICENSEE fail to pay M.I.T. royalties due and payable hereunder, M.I.T. shall have the right to terminate this Agreement on thirty (30) days notice, unless LICENSEE shall pay M.I.T., within the thirty (30) day period, all such royalties and interest due and payable. Upon the expiration of the thirty (30) day period, if LICENSEE shall not have paid all such royalties and interest due and payable, the rights, privileges and license granted hereunder shall terminate.

7.3 Upon any material breach or default of this Agreement by LICENSEE, other than those occurrences set out in Paragraphs 7.1 and 7.2 hereinabove, which shall always take precedence in that order over any material breach or default referred to in this Paragraph 7.3, M.I.T. shall have the right to terminate this Agreement and the rights, privileges and license granted hereunder by ninety (90) days' notice to LICENSEE. Such termination shall become effective unless LICENSEE shall have cured any such breach or default prior to the expiration of the ninety (90) day period.

7.4 LICENSEE shall have the right to terminate this Agreement at any time on six (6) months' notice to M.I.T., and upon payment of all amounts due M.I.T.

7.5 Upon termination of this Agreement for any reason, nothing herein shall be construed to release either party from any obligation that matured prior to the effective date of such termination. LICENSEE and any sublicensee thereof may, however, after the effective date of such termination, sell all Licensed Products, and complete Licensed Products in the process of manufacture at the time of such termination and sell the same, provided that LICENSEE shall pay to M.I.T. the royalties thereon as required by Article IV of this Agreement and shall submit the reports required by Article V hereof on the sales of Licensed Products.

7.6 Upon termination of this Agreement for any reason during the exclusive period, any sublicensee not then in default shall have the right to obtain an, equivalent license from M.I.T.

ARTICLE VIII—ARBITRATION

8.1 Except as to issues relating to the validity, construction or effect of any patent licensed hereunder, any and all claims, disputes or controversies arising under, out of, or in connection with this Agreement, which have not been resolved by good faith negotiations between the parties, shall be resolved by final and binding arbitration in Boston, Massachusetts under the rules of the American Arbitration Association then obtaining. The arbitrators shall have no power to add to, subtract from or modify any of the terms or conditions of this Agreement. Any award rendered in such arbitration may be enforced by either party in either the courts of the commonwealth of Massachusetts or in the United States District Court for the District of Massachusetts, to whose jurisdiction for such purposes M.I.T. and LICENSEE each hereby irrevocably consents and submits. Each party agrees to pay its own expenses incurred in connection with such arbitration.

8.2 Claims, disputes or controversies concerning the validity, construction or effect of any patent licensed hereunder shall be resolved in any court having jurisdiction thereof.

8.3 In the event that, in any arbitration proceeding, any issue shall arise concerning the validity, construction or effect of any patent licensed hereunder, the arbitrators shall assume the validity of all claims as set forth in such patent; in any event the arbitrators shall not delay the arbitration proceeding for the Purpose of obtaining or permitting either party to obtain judicial resolution of such issue, unless an order staying such arbitration proceeding shall be entered by a court of competent jurisdiction. Neither party shall raise any issue concerning the validity, construction or effect of any patent licensed hereunder in any proceeding to enforce any arbitration award hereunder or in any proceeding otherwise arising out of any such arbitration award.

8.4 Notwithstanding the foregoing, nothing in this Article shall be construed to waive any rights or timely performance of any obligations existing under this Agreement.

ARTICLE IX—INFRINGEMENT

9.1 LICENSEE shall inform M.I.T. promptly in writing of any alleged infringement and of any available evidence of infringement by a third party of any patents within the Patent Rights.

9.2 During the term of this Agreement, LICENSEE shall have the right, but shall not be obligated, to prosecute at its own expense any such infringements of the patent Rights and, in furtherance of such right, LICENSEE hereby agrees that M.I.T. may join LICENSEE as a party plaintiff in any such suit, without expense to M.I.T., provided, however, that such right to bring an infringement action shall remain in effect only for so long as the license granted herein remains exclusive. No settlement, consent judgment or other voluntary final disposition of the suit may be entered into without the consent of M.I.T., which consent shall not unreasonably be withheld. LICENSEE shall indemnify M.I.T. against any order for costs that may be made against M.I.T. in such proceedings. The total cost of any such infringement action commenced or defended solely by LICENSEE shall be borne by LICENSEE, and LICENSEE shall keep any recovery or damages for past infringement derived therefrom, after the payment to M.I.T. of royalties on the infringing products or processes at a royalty rate equal to that of Paragraph 4.1(b).

9.3 If within six (6) months after having been notified of any alleged infringement, LICENSEE shall have been unsuccessful in persuading the alleged infringer to desist and shall not have brought and shall not be diligently prosecuting an infringement action, or if LICENSEE shall notify M.I.T. at any time prior thereto of its intention not to bring suit against any alleged infringer, then, and in those events only, M.I.T. shall have the right, but shall not be obligated, to prosecute at its own expense any infringement of the Patent Rights, and M.I.T. may, for such purposes, use the name of LICENSEE as party plaintiff without expense to LICENSEE, and M.I.T. shall keep any recovery or damages derived therefrom.

9.4 In the event that LICENSEE shall undertake the enforcement and/or defense of the Patent Rights by litigation, LICENSEE may withhold up to fifty, percent (50%) of the royalties otherwise thereafter due M.I.T. hereunder and apply the same toward reimbursement of its expenses, including reasonable attorneys' fees, in connection therewith. Any recovery of damages by LICENSEE for any such suit shall be applied first in satisfaction of any unreimbursed expenses and legal fees of LICENSEE relating to the suit, and next toward reimbursement of M.I.T. for any royalties past due or withheld and applied pursuant to this Article IX.

9.5 In the event that a declaratory judgment action alleging invalidity or noninfringement of any of the Patent Rights shall be brought against LICENSEE, M.I.T., at its

option, shall have the right, within thirty (30) days after commencement of such action, to intervene and take over the sole defense of the action at its own expense.

9.6 In any infringement suit as either party may institute to enforce the Patent Rights pursuant to this Agreement, the other party hereto shall, at the request and expense of the party initiating such suit, cooperate in all respects and, to the extent possible, have its employees testify when requested and make available relevant records, papers, information, samples, specimens, and the like.

9.7 LICENSEE, during the exclusive period of this Agreement, shall have the sole right in accordance with the terms and conditions herein to sublicense any alleged infringer under the Patent Rights for future infringements.

ARTICLE X—PRODUCT LIABILITY

10.1 LICENSEE shall at all times during the term of this Agreement and thereafter, indemnify, defend and hold M.I.T., its trustees, officers, employees and affiliates, harmless against all claims and expenses, including legal expenses and reasonable attorneys, fees, arising out of the death of or injury to any person or persons or out of any damage to property and against any other claim, proceeding, demand, expense and liability of any kind whatsoever resulting from the production, manufacture, sales, use, lease, consumption or advertisement of the Licensed Product(s) and/or Licensed Process(es) or arising from any obligation of LICENSEE hereunder.

10.2 LICENSEE shall use reasonable efforts to obtain and carry in full force and effect liability insurance which shall protect LICENSEE and M.I.T. in regard to events covered by Paragraph 10.1 above.

10.3 Except as otherwise expressly set forth in this Agreement, M.I.T. makes no representations and extends no warranties of any kind, either express or implied, including but not limited to warranties of merchantability, fitness for a particular purpose, and validity of Patent Rights claims issued or pending.

ARTICLE XI—ASSIGNMENT

This Agreement may not be assigned except in conjunction with the sale or transfer of substantially all of LICENSEE'S assets.

ARTICLE XII—NON-USE OF NAMES

LICENSEE shall not use the names of the Massachusetts Institute of Technology nor of any of its employees, nor any adaptation thereof, in any advertising, promotional or sales literature without prior written consent obtained from M.I.T. in each case, except that LICENSEE may state that it is licensed by M.I.T. under one or more of the patents and/or applications comprising the Patent Rights.

ARTICLE XIII—EXPORT CONTROLS

It is understood that M.I.T. is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended, and the Export Administration Act of 1979), and that its obligations hereunder are contingent on compliance with applicable United States export laws and regulations. The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by LICENSEE that LICENSEE shall not export data or commodities to certain foreign countries without prior approval of such agency. M.I.T. neither represents that a license shall not be required nor that, if required, it shall be issued.

ARTICLE XIV—PAYMENTS, NOTICES
AND OTHER COMMUNICATIONS

Any payment, notice or other communication pursuant to this Agreement shall be sufficiently made or given on the date of mailing if sent to such party by certified first class mail, postage prepaid, addressed to it at its address below or as it shall designate by written notice given to the other party:

In the case of M.I.T.:

Director
Technology Licensing Office
Massachusetts Institute of Technology
77 Massachusetts Avenue, Room E32-300
Cambridge, Massachusetts 02139

In the case of LICENSEE:

President
American Superconductor Corporation
c/o American Research and Development Inc.
45 Milk Street
Boston, Massachusetts 02109

ARTICLE XV—MISCELLANEOUS PROVISIONS

15.1 This Agreement shall be construed, governed, interpreted and applied in accordance with the laws of the Commonwealth of Massachusetts, U.S.A., except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

15.2 The parties hereto acknowledge that this Agreement sets forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

15.3 The provisions of this Agreement are severable, and in the event that any provision of this Agreement shall be determined to be invalid or unenforceable under any controlling body of law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof.

15.4 LICENSEE agrees to mark the Licensed Products sold in the United States with all applicable United States patent numbers. All Licensed Products shipped to or sold in other countries shall be marked in such a manner as to conform with the patent laws and practice of the country of manufacture or sale.

15.5 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

Appendix A

M.I.T. Case No. 4405

“Process for Making Super Conducting Oxides (in usable form) by oxidation of Alloys of the Metallic Constituents”

By John B. VanderSande and Gregory J. Yurek

A-1

Confidential Materials omitted and filed separately with the
Securities and Exchange Commission. Asterisks denote omissions.

ONR

CONTRACT NO. N00014-03-C0284

Contract Number N00014-03-C-0284

AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DFAS (15 CFR RATING DO-C9(U) PAGE OF PAGES
350) 1 24

2. CONTRACT (Proc. Int'l Ident.) No.
N00014-03-C-0284

3. EFFECTIVE DATE
SEE BLOCK 20C.

4. REQUISITION/PURCHASE REQUEST/PROJECT NO.
PR Number 03PR08747-00

5. ISSUED BY CODE N00014
OFFICE OF NAVAL RESEARCH
ONR 254: REGINA A. WILLIAMS (703) 696-2583
BALLSTON CENTRE TOWER ONE
800 NORTH QUINCY STREET
ARLINGTON, VA 22217-5660

6. ADMINISTERED BY (If other than Item 5) CODE S2206A
DCM BOSTON
495 SUMMER STREET
BOSTON, MA 02210-2138

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP Code.)
AMERICAN SUPERCONDUCTOR CORPORATION
TWO TECHNOLOGY DRIVE
WESTBOROUGH, MA 01581

8. DELIVERY
See SECTION F of Schedule
 FOB ORIGIN OTHER (See below)

9. DISCOUNT FOR PROMPT PAYMENT

CODE 0D9R6 FACILITY CODE N/A
11. SHIP TO/MARK FOR CODE N99914

10. SUBMIT INVOICE (4 copies unless otherwise specified) TO THE ADDRESS SHOW IN N.A. ITEM
SEE SECTION G.1.
12. PAYMENT WILL BE MADE BY CODE HQ0337
DFAS COLUMBUS CENTER
DFAS CO NORTH ENTITLEMENT OPERATIONS
P. O. BOX 182266
COLUMBUS, OH 43218-2266

PROGRAM OFFICER
OFFICE OF NAVAL RESEARCH
BCT #3, ROOM 1229
800 NORTH QUINCY STREET
ARLINGTON, VA 22217-5660

13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:
 10 U.S.C. 2304(C) (N/A) 41 U.S.C. 253(c) (N/A)

14. ACCOUNTING AND APPROPRIATION DATA
See Attached Financial Accounting Data Sheet(s)

15A. ITEMNO. 15B. SUPPLIES/SERVICES 15C. QUANTITY 15D. UNIT 15E. UNITPRICE 15F. AMOUNT
See SECTION B of Schedule

15G. TOTAL AMOUNT OF CONTRACT See SECTION B of Schedule

16. TABLE OF CONTENTS			
(T)	SEC	DESCRIPTION	PAGE(S)
		PART I – THE SCHEDULE	
T	A	SOLICITATION/CONTRACT FORM	1
T	B	SUPPLIES OR SERVICES AND PRICES/COSTS	2-3
T	C	DESCRIPTION/SPECS/WORK STATEMENT	3
T	D	PACKAGING AND MARKING	3
T	E	INSPECTION AND ACCEPTANCE	3
T	F	DELIVERIES OR PERFORMANCE	3-4
T	G	CONTRACT ADMINISTRATION DATA	4-7
T	H	SPECIAL CONTRACT REQUIREMENTS	7-14
		PART II – CONTRACT CLAUSES	
T	I	CONTRACT CLAUSES	15-23
		PART III – LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH	
T	J	LIST OF ATTACHMENTS	24
		PART IV – REPRESENTATIONS AND INSTRUCTIONS	
T	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	24
		PART V – EVALUATION FACTORS FOR AWRAD	
T	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	N/A
T	M	EVALUATION FACTORS FOR AWRAD	N/A

CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 2 copies to Issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)

18. AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER (Type or print)
DAVID PARATORE VI CE-PRESIDENT

20A. NAME OF CONTRACTING OFFICER
LEE ANN BOYER
Contracting Officer

19B. NAME OF CONTRACTOR
AMERICAN SUPERCONDUCTOR
By: /s/ DAVID PARATORE
(Signature of person authorised to sign)

19C. DATE SIGNED
2/27/03

20B. UNITED STATES OF AMERICA
By: /s/ LEE ANN BOYER
(Signature of Contracting Officer)

20C. DATE SIGNED
2/28/03

SECTION B—SUPPLIES OR SERVICES AND PRICES/COSTS

<u>ITEM NO.</u>	<u>SUPPLIES/SERVICES</u>	<u>TARGET COST</u>	<u>TARGET FEE</u>	<u>TOTAL ESTIMATED COST PLUS INCENTIVE FEE</u>
0001	The Contractor shall provide the necessary personnel and facilities to develop, manufacture and test a Full Scale, High Power Density, Lightweight, Advanced 36.5 MW Motor and Motor Drive System as described in Section C and Attachment Number 1. ACRN: AA\$[**]	\$[**]	\$ [**]	\$ 66,610,505.00
000101	The Contractor shall deliver a 36.5 MW / 120 RPM Motor [High Value Item]			
000102	The Contractor shall deliver a 36.5 MW Motor Controller			
000103	The Contractor shall deliver the power electronic drive and switchgear, motor, motor rotor refrigeration module, heat exchanger and compressor equipments and skid, lube oil equipment and skid, stator heat exchanger equipment and skid, stator coolant pump equipment and skid, and stator coolant sump equipment and skid.			
0002	The Contractor shall deliver all Reports and Data for Line Items 0001 and 0002 in accordance with Exhibit A (DD Form 1423)			NSP
TOTAL ESTIMATED CONTRACT CONSIDERATION FOR LINE ITEMS 0001 and 0002		\$[**]	\$ [**]	\$ 66,610,505.00

TOTAL ESTIMATED VALUE OF COST-PLUS-INCENTIVE-FEE CONTRACT

(LINE ITEM NUMBERS 0001 – 0002): \$66,610,505.00 *

***Does not include possible earned Performance Incentives**

Contract Number N00014-03-C-0284

SUMMARY OF COST INCENTIVE STRUCTURE FOR ITEMS 0001 – 0002:

TARGET COST:	\$[**]
TARGET FEE:	\$[**] ([**]% of Target Costs)
TOTAL COST-PLUS-INCENTIVE FEE:	\$66,610,505.00
CPIF SHARE RATIO (Government/AMSC):	[**]
MINIMUM INCENTIVE FEE:	\$[**] ([**]% of Target Costs)
MAXIMUM INCENTIVE FEE:	\$[**] ([**]% of Target Costs)
RANGE OF INCENTIVE EFFECTIVENESS:	\$[**] - \$[**]

The Minimum and Maximum Fee, inclusive of cost and performance incentives under this contract, is []% and [**]% respectively.**

(See Section H – Paragraph Number 6. for Cost and Performance Incentive Plan Description)

SECTION C—DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

1. The research effort to be performed hereunder shall be subject to the requirements and standards contained in Exhibit A and the following paragraph(s).
2. The Contractor shall conduct the research effort in accordance with Attachment Number 1 to the contract entitled “Statement of Work”.

SECTION D—PACKAGING AND MARKING

Preservation, packaging, packing and marking of all deliverable contract line items shall conform to normal commercial packing standards to assure safe delivery at destination.

SECTION E—INSPECTION AND ACCEPTANCE

Inspection and acceptance of the final delivery under this contract will be accomplished by the Program Officer designated in Section F of this contract, who shall have at least thirty (30) days after contractual delivery for acceptance.

SECTION F—DELIVERIES OR PERFORMANCE

1. The research effort performed under this contract shall be conducted during the period from date of award through 31 March 2006. A final report will be prepared, submitted, reproduced and distributed by sixty days thereafter unless the contract is extended, in which case, the final report will be prepared in accordance with the terms of such extension.

2. Line Item Number 0001 of Section B shall be delivered to the following address no later than 31 March 2006:

Commanding Officer
Naval Surface Warfare Center
Carderock Division
Naval Ship Systems Engineering Station
5001 South Broad Street
Philadelphia, PA 19112-1403

Reference: Contract Number N00014-03-C-0284

The Government Point of Contact for coordination of the delivery and acceptance of Line Item Number 0001 is as follows:

Mr. Scott Littlefield
Director, ONR 33X
Naval Ship Science and Technology Office
BCT #3, Rm. 1229
800 North Quincy Street
Arlington, VA 22217-5660

Telephone Number: (703) 588-2358
Fax Number: (703) 696-0001
E-Mail: littles@onr.navy.mil

3. Line Item Number 0002 of Section B (Reports and Data) shall be delivered within the time periods stated in Exhibit A, F.O.B. Destination.

4. Distribution, consignment and marking instructions for all contract reports and data items shall be in accordance with Exhibit A, Enclosure Number 1 and the following:

Program Officer
Office of Naval Research
BCT #3, Rm. 1229
800 North Quincy Street
Arlington, Virginia 22217-5660

Attn: Mr. Scott Littlefield, Director, Naval Ship Science and Technology Office, ONR 33X
Ref: Contract Number N00014-03-C-0284

SECTION G—CONTRACT ADMINISTRATION DATA

1. NAPS 5252.232-9001 SUBMISSION OF INVOICES (COST REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE) (JUL 1992)

(a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.

Contract Number N00014-03-C-0284

Page 4

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and 4 copies, to the contract auditor at the following address:

Audit Agency Name:	Defense Contract Audit Agency
Address:	Greater Connecticut Branch Office 130 Darlin Street East Hartford, CT 06108-3234
Telephone:	(860) 291-7918

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to the Program Officer identified in Section F.2 of this contract. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery order. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

- (1) Contract line item number (CLIN)
- (2) Subline item number (SLIN)
- (3) Accounting Classification Reference Number (ACRN)
- (4) Payment terms
- (5) Procuring activity
- (6) Date supplies provided or services performed
- (7) Costs incurred and allowable under the contract
- (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided.

(e) A DD Form 250, "Material Inspection and Receiving Report",

- is required with each invoice submittal.
- is required only with the final Invoice.
- is not required.

(f) A Certificate of Performance

- shall be provided with each invoice submittal.
- is not required

(g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.

(h) Costs of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLINS/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

2. Submission of Invoices Direct to Payment Office

a. Pursuant to DFARS 242.803(b)(1)(C), if the cognizant Government auditor has notified the contractor of its authorization to do so, the contractor may submit interim vouchers under this contract direct to the payment office shown in Block 12 of SF-26 instead of to the address shown in subparagraph (b) of section G.1 above.

b. Such authorization does not extend to the first and final vouchers. The contractor shall continue to submit first vouchers to the cognizant auditor shown in subparagraph (b) of section G.1. above. The final voucher shall be submitted to the Administrative Contracting Officer (SF-26 block 6) with a copy to the cognizant auditor.

3. Method of Payment

As consideration for the proper performance of the work and services required under this contract, the Contractor shall be paid as follows:

a. Costs, as provided for under the contract clause entitled "Allowable Cost and Payment" (FAR 52.216-7), are subject to the contract clauses entitled "Limitation of Funds" (FAR 52.232-22) or "Limitation of Cost" (FAR 52.232-20), whichever is applicable.

b. A "Target Fee/Incentive Fee" as set forth in Section B and Section H, and subject to contract clause FAR 52.216-10 entitled "Incentive Fee (MAR 1997)".

4. Procuring Office Representatives

a. In order to expedite administration of this contract, the Administrative Contracting Officer should direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contracting Officer – Mr. Todd Hanson, ONR 0254, (703) 696-2009, DSN 426-2009,
E-Mail Address: hanson@onr.navy.mil

Contract Negotiator – Ms. Regina Williams, ONR 0254, (703) 696-2583, DSN 426-2583,
E-Mail Address: regina_williams@onr.navy.mil

Inspection and Acceptance – Mr. Scott Littlefield, Director, Naval Ship Science and Technology
Office, ONR 33X, (703) 588-2358, DSN 426-2358, E-Mail Address: littles@onr.navy.mil

Security Matters – Ms. Jennifer Ramsey, ONR 43, (703) 696-4618, DSN 426-4618

Patent Matters – Mr. Tom McDonnell, ONR 00CC, (703) 696-4000, DSN 426-4000

b. The Administrative Contracting Officer will forward invention disclosures and reports directly to Corporate Counsel (Code 00CC), Office of Naval Research, Department of the Navy, Arlington, Virginia 22217-5660. The Corporate Counsel will return the reports along with a recommendation to the Administrative Contracting Officer. The Corporate Counsel will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

5. Allotment of Funds

Line Items 0001 and 0002 are incrementally funded. For purposes of the "Limitation of Funds" clause, the amount that is presently available for payment by the Government and allotted to these items is \$[**], including an estimated amount of \$[**] for payment of the Target Cost, and an estimated amount of \$[**] for payment of the Target Fee. It is estimated that the amount allotted of \$[**] will cover the period of performance through 31 May 2003.

6. Type of Contract

This is a Cost-Plus-Incentive-Fee contract.

SECTION H—SPECIAL CONTRACT REQUIREMENTS

1. **ONR 5252.235-9714 REPORT PREPARATION (FEB 2002)**

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, Scientific and Technical Reports: Elements, Organization, and Design.

[NOTE: All NISO American National Standards are available as free, downloadable pdf(s) at <http://www.niso.org/standards/index.html> . NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904 Fax: 301-206-9789.]

2. **ONR 5252.210-9708 METRICATION REQUIREMENTS (DEC 1988)**

(a) All scientific and technical reports delivered pursuant to the terms of this contract shall identify units of measurement in accordance with the International System of Units (SI) commonly referred to as the "Metric System". Conversion to U.S. customary units may also be given where additional clarity is deemed necessary. Guidance for application of the metric system is contained in the American Society of Testing Materials document entitled "Standard Practice for Use of the International System of Units (The Modernized Metric System)" (ASTM Designation E 380-89A)

(b) This provision also applies to journal article preprints, reprints, commercially published books or chapters of books, theses or dissertations submitted in lieu of a scientific and/or technical report.

3. Invention Disclosures and Reports

The Contractor shall submit all invention disclosures and reports required by the Patent Rights clause of this contract to the Administrative Contracting Officer.

4. **ONR 5252.242-9718 TECHNICAL DIRECTION (FEB 2002)**

(a) Performance of the work hereunder is subject to the technical direction of the Program Officer designated in this contract, or duly authorized representative. For the purposes of this clause, technical direction includes the following:

- (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise serves to accomplish the objectives described in the statement of work;
 - (2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or technical portions of work description.
- (b) Technical direction must be within the general scope of work stated in the contract. Technical direction may not be used to:
- (1) Assign additional work under the contract;
 - (2) Direct a change as defined in the contract clause entitled "Changes";
 - (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
 - (4) Change any of the terms, conditions or specifications of the contract.

(c) The only individual authorized to in any way amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten working days after its receipt. The Contractor shall not proceed with the work affected by the technical direction until the Contractor is notified by the Contracting Officer that the technical direction is within the scope of the contract.

(d) Nothing in the foregoing paragraphs may be construed to excuse the Contractor from performing that portion of the work statement which is not affected by the disputed technical direction.

5. **FAR 52.216-10 INCENTIVE FEE (MAR 1997)**

- (a) *General.* The Government shall pay the Contractor for performing this contract a fee determined as provided in this contract.
- (b) *Target cost and target fee.* The target cost and target fee specified in the Schedule are subject to adjustment if the contract is modified in accordance with paragraph (d) of this clause.
- (1) "Target cost," as used in this contract, means the estimated cost of this contract as initially negotiated, adjusted in accordance with paragraph (d) of this clause.
 - (2) "Target fee," as used in this contract, means the fee initially negotiated on the assumption that this contract would be performed for a cost equal to the estimated cost initially negotiated, adjusted in accordance with paragraph (d) of this clause.

(c) *Withholding of payment.* Normally, the Government shall pay the fee to the Contractor as specified in the Schedule. However, when the Contracting Officer considers that performance or cost indicates that the Contractor will not achieve target, the Government shall pay on the basis of an appropriate lesser fee. When the Contractor demonstrates that performance or cost clearly indicates that the Contractor will earn a fee significantly above the target fee, the Government may, at the sole discretion of the Contracting Officer, pay on the basis of an appropriate higher fee. After payment of [**] percent of the applicable fee, the Contracting Officer may withhold further payment of fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed [**] percent of the applicable fee or \$[**], whichever is less. The Contracting Officer shall release [**] percent of all fee withholds under this contract after receipt of the certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to [**] percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(d) *Equitable adjustments.* When the work under this contract is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.

(e) *Fee payable.*

(1) The fee payable under this contract shall be the target fee increased by [**]% for every dollar that the total allowable cost is less than the target cost or decreased by [**]% for every dollar that the total allowable cost exceeds the target cost. In no event shall the fee be greater than [**] percent or less than [**] percent of the target cost.

(2) The fee shall be subject to adjustment, to the extent provided in paragraph (d) of this clause, and within the minimum and maximum fee limitations in paragraph (e)(1) of this clause, when the total allowable cost is increased or decreased as a consequence of—

(i) Payments made under assignments; or

(ii) Claims excepted from the release as required by paragraph (h)(2) of the Allowable Cost and Payment clause.

(3) If this contract is terminated in its entirety, the portion of the target fee payable shall not be subject to an increase or decrease as provided in this paragraph. The termination shall be accomplished in accordance with other applicable clauses of this contract.

(4) For the purpose of fee adjustment, "total allowable cost" shall not include allowable costs arising out of-

(i) Any of the causes covered by the Excusable Delays clause to the extent that they are beyond the control and without the fault or negligence of the Contractor or any subcontractor;

(ii) The taking effect, after negotiating the target cost, of a statute, court decision, written ruling, or regulation that results in the Contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;

(iii) Any direct cost attributed to the Contractor's involvement in litigation as required by the Contracting Officer pursuant to a clause of this contract, including furnishing evidence and information requested pursuant to the Notice and Assistance Regarding Patent and Copyright Infringement clause;

- (iv) The purchase and maintenance of additional insurance not in the target cost and required by the Contracting Officer, or claims for reimbursement for liabilities to third persons pursuant to the Insurance Liability to Third Persons clause;
 - (v) Any claim, loss, or damage resulting from a risk for which the Contractor has been relieved of liability by the Government Property clause; or
 - (vi) Any claim, loss, or damage resulting from a risk defined in the contract as unusually hazardous or as a nuclear risk and against which the Government has expressly agreed to indemnify the Contractor.
- (5) All other allowable costs are included in “total allowable cost” for fee adjustment in accordance with this paragraph (e), unless otherwise specifically provided in this contract.
- (f) *Contract modification.* The total allowable cost and the adjusted fee determined as provided in this clause shall be evidenced by a modification to this contract signed by the Contractor and Contracting Officer.
- (g) *Inconsistencies.* In the event of any language inconsistencies between this clause and provisioning documents or Government options under this contract, compensation for spare parts or other supplies and services ordered under such documents shall be determined in accordance with this clause.

(End of clause)

6. COST AND PERFORMANCE INCENTIVE PLAN

This contract includes the following cost and performance incentives:

1. Cost Control

The cost incentive shall be calculated in accordance with the following values:

Minimum Fee:	\$[**] ([**] % of Target Costs)
Target Fee:	\$[**] ([**] % of Target Costs)
Maximum Fee:	\$[**] ([**] % of Target Costs)
Share Ratio:	[**] (Government/Contractor Share)
Target Cost:	\$[**]
Range of Incentive Effectiveness:	\$[**]- \$[**]

The Target Fee shall be reduced by \$[**] for each \$[**] in excess of target cost that actual allowable costs are incurred until the minimum fee is reached. The Target Fee shall be increased by \$[**] for each \$[**] below target cost that actual allowable costs are incurred until the maximum fee is reached. The cost incentive shall be calculated independent of any performance incentives.

2. Practicality

The contractor may earn an additional \$[**] in fee if the motor that is delivered to the Navy is considered practical for its intended use. Practical is defined as a final product that is capable (in the configuration delivered) of moving toward the pre-production phase without major design or configuration changes.

This fee is divided into three phases:

- I—Preliminary Design: \$[**]
- II—Detailed Design: \$[**]
- III—Final Design: \$[**]*

The Preliminary Design Fee and Detailed Design Fee, if warranted, will be paid out after the Preliminary Design Review and Detailed Design Review.

*The Final Design Fee will be paid out upon program completion. The fee earned under Phase III, the final design, will be subject to reduction based on the “Output Factor” calculation defined in paragraph 4 below.

The Government Program Officer will establish a Government review team of no less than three (3) evaluators who are familiar with motor technology and Navy requirements for fielding such systems. The team will evaluate the design deliverables to determine if these documents illustrate a system that will be practical for Navy use.

3. Weight/Size

The contractor may earn an additional \$[**] in fee if the motor that is delivered to the Navy is within target weight. The target weight for the motor and ancillary equipment is [**] kilograms. The motor and ancillary equipment is defined as all equipment from the motor terminals to the output shaft flange and all equipment required for the motor to operate. It includes, but is not limited to:

- Motor Assembly
- All Cryogenic Cooling Equipment
- Lube Oil Equipment
- Lube Oil Skid
- Jacking Oil Equipment

It does not include the motor drive or the cables from the motor drive to the motor.

The completed motor and ancillary equipment may be weighed at the contractor’s facility in the presence of a Government Representative. Scale calibration shall be documented. That documentation shall be provided to the Government Representative prior to weighing the motor and ancillary equipment.

The total fee of \$[**] will be awarded* if the weight of the motor and ancillary equipment is at, or below [**] kilograms. The contractor may continue to earn a portion of that fee (on a linear scale) until the weight exceeds [**] kilograms. At [**] kilograms and above, the contractor will receive none of the \$[**] incentive fee.

$$\$[**]/ [**]kg = \$[**]/kg$$

For every kilogram over [**] kg, the contractor will lose \$[**] in fee until the fee is reduced to [**].

* The Weight/Size Fee will be paid out upon program completion. The fee earned will be subject to reduction based on the "Output Factor" calculation defined in paragraph 4 below.

4. Output Factor

The Navy's output requirement for this motor is 36.5 MW @ 120 RPMs. Significant deviation from this requirement will result in an unacceptable product. Output factor will be calculated based on Factory Acceptance Test data (part load extrapolated to full load per IEEE standard). The fee earned in the practicality incentive, for the Phase III—Final Design only, and the weight /size incentive shall be reduced if the motor fails to achieve [**] % of the 36.5 MW rating. The greater achievement factor ([**] % versus [**] %) is necessary to allow for deviations due to partial load versus full load testing. The factor shall be calculated on a linear scale with [**]% of the fee earned at a rating of [**] MW and a reduction to [**] (no Phase III Practicality or Weight/Size fees earned) at a rating of [**] MW. The output rating shall be calculated to the nearest [**] decimal places.

Example:	Phase III Final Design rated Practical	\$ [**]
	Weight/Size = [**] kg	\$ [**]
	Output Rating = [**] MW	
	Output Factor: [**] %	
	Fees Earned:	
	Phase III—Final Design	\$ [**]
	Weight/Size	\$ [**]

Factory Acceptance Testing (FAT). The major motor components (refrigeration system, rotor and field winding, exciter and stator) will undergo full functional tests prior to shipment to NGMS for final assembly and motor/drive factory acceptance testing. This will include structureborne noise and EMI measurements for the refrigeration system and exciter.

System testing will include [**]. This testing will verify:

[**]

No Load Tests

[**]

Load Test

[**]

Calculated Machine Rating

The rating of the machine will be [**].

7. Consent to Subcontract and/or Hire Consultants

The services of the following subcontractors and/or consultants have been identified as necessary for the performance of this contract:

Identified Subcontractor/Consultant	Estimated Cost
Ideal Electric	\$[**]
Syntek Technologies	\$[**]
Northrop Grumman Marine Systems	\$[**]
Northrop Grumman Ship Systems	\$[**]
MSCL,LLC	\$[**]
Center for Advanced Power Systems	\$[**]
<u>Other Consultants</u>	
Advanced Materials Laboratory	\$[**]
Total Estimated Cost	\$[**]

The preceding listing shall constitute the written consent of the Contracting Officer required by Paragraphs (c), (d) and (e) of the contract clause at FAR 52.244-2 entitled "Subcontracts". The Contracting Officer's written consent to subcontract is required for:

- (i) services acquired under a cost-reimbursement, time-and-materials, or labor-hour type subcontract or agreement;
- (ii) fixed price contracts that exceed the greater of the simplified acquisition threshold (\$[**]) or [**] percent of the total estimated cost of the contract.

The above listing constitutes consent from the Contracting Officer upon contract award to the prime contractor when the subcontractors are determined to be acceptable based on Government evaluation of information submitted in accordance with FAR 52.244-2 (f) (1) (i) through (vii).

Introduction: Section I

Attention: Prime Contractors. If a subaward is made to an educational institution, Prime Contractors are directed to please refer to the ONR Model Award for appropriate flow-down clauses to universities. See <http://www.onr.navy.mil>, click [Contracts & Grants Icon](#). Click Model Awards Link. Click Section I clauses that flow-down to University subcontractors.

SECTION I—CONTRACT CLAUSES

Cost-Plus-Incentive-Fee (NOV 2002) (1)

(A) FAR 52.252-02 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at these addresses:

<http://www.arnet.gov/far/>

http://web1.deskbook.osd.mil/htmlfiles/DBY_far.asp

http://web2.deskbook.osd.mil/htmlfiles/DBY_dfars.asp

http://farsite.hill.af.mil/farsite_script.html

For instance, a dollar threshold may trigger the applicability of the clause or a certain condition of the research may trigger the applicability of the clause. In order to provide some assistance, as to when a dollar threshold triggers a clause, we have associated certain symbols with dollar thresholds. The symbols and their appropriate dollar thresholds are as follows:

- * Applies when contract action exceeds \$10,000
- ** Applies when contract action exceeds \$100,000
- + Applies when contract action exceeds \$500,000
- ++ Applies when contract action exceeds \$500,000 and subcontracting possibilities exist. Small Business Exempt.
- x (DD 250)
- xx Not applicable

I. FEDERAL ACQUISITION REGULATION (FAR) (48 CFR CHAPTER 1) CLAUSES:

**	FAR 52.202-1	Definitions (DEC 2001)
**	FAR 52.203-3	Gratuities (APR 1984)
**	FAR 52.203-5	Covenant Against Contingent Fees (APR 1984)
**	FAR 52.203-6	Restrictions on Subcontractor Sales to the Government (JUL 1995)
**	FAR 52.203-7	Anti-Kickback Procedures (JUL 1995)
**	FAR 52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
**	FAR 52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (JAN 1997)
**	FAR 52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JUN 1997)
**	FAR 52.204-4	Printing/Copying Double-Sided on Recycled Paper (AUG 2000)
**	FAR 52.211-15	Defense Priority and Allocation Requirements (SEP 1990)
**	FAR 52.215-2	Audit and Records—Negotiation (JUN 1999) and Alternate II (APR 1998) (Alternate II is only applicable with cost reimbursement contracts with State and local Governments, educational institutions, and other non-profit organizations.)
	FAR 52.215-8	Order of Precedence—Uniform Contract Format (OCT 1997)
+	FAR 52.215-10	Price Reduction for the Defective Cost or Pricing Data (OCT 1997) (The clause is applicable to subcontracts over \$550,000.)
+	FAR 52.215-12	Subcontractor Cost or Pricing Data (OCT 1997) (Applicable to subcontracts over \$550,000 only)
**	FAR 52.215-14	Integrity of Unit Prices (OCT 1997) and Alternate I (OCT 1997) (Alternate I is applicable if the action is contracted under Other Than Full and Open Competition)
+	FAR 52.215-15	Pension Adjustments and Asset Reversions (DEC 1998)
+	FAR 52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions (OCT 1997)
+	FAR 52.215-19	Notification of Ownership Changes (OCT 1997) (Applicable when Cost or Pricing Data is required)
	FAR 52.216-7	Allowable Cost and Payment (DEC 2002)
**	FAR 52.219-4	Notice of Price Evaluation Preference for HUBzone Small Business Concerns (JAN 1999)
**	FAR 52.219-8	Utilization of Small Business Concerns (OCT 2000)
++	FAR 52.219-9	Small Business Subcontracting Plan (JAN 2002)
++	FAR 52.219-16	Liquidated Damages—Subcontracting Plan (JAN 1999)
	FAR 52.222-1	Notice to the Government of Labor Disputes (FEB 1997)
**	FAR 52.222-2	Payment for Overtime Premiums (JUL 1990) (Note: The word “zero” is inserted in the blank space indicated by an asterisk)

	FAR 52.222-3	Convict Labor (AUG 1996) (Reserved when FAR 52.222-20 Walsh Healy Public Contracts Act is applicable)
**	FAR 52.222-4	Contract Work Hours and Safety Standards Act—Overtime Compensation (SEP 2000)
	FAR 52.222-21	Prohibition of Segregated Facilities (FEB 1999)
	FAR 52.222-26	Equal Opportunity (APR 2002)
*	FAR 52.222-35	Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001 1998)
*	FAR 52.222-36	Affirmative Action for Workers with Disabilities (JUN 1998)
*	FAR 52.222-37	Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001)
**	FAR 52.223-14	Toxic Chemical Release Reporting (OCT 2000)
	FAR 52.225-13	Restrictions on Certain Foreign Purchases (JUL 2000)
	FAR 52.225-16	Sanctioned European Union Country Services (FEB 2000)
**	FAR 52.227-1	Authorization and Consent (JUL 1995) and Alternate I (APR 1984)
**	FAR 52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)
	FAR 52.228-7	Insurance Liability to Third Persons (MAR 1996) (Further to paragraph (a)(3), unless otherwise stated in this contract, types and limits of insurance required are as stated in FAR 28.307-2)
	FAR 52.232-9	Limitation on Withholding of Payments (APR 1984)
**	FAR 52.232-17	Interest (JUN 1996)
	FAR 52.232-23	Assignment of Claims (JAN 1986) and Alternate I (APR 1984)
	FAR 52.232-25	Prompt Payment (FEB 2002) and Alternate I (FEB 2002) (The words “the 30th day” are inserted in lieu of “the 7th day” at (a)(5)(i). [When Alternate I is applicable (a)(5)(i) does do not apply] [Alternate I applies when awarding a cost reimbursement contract for services])
	FAR 52.232-33	Payment by Electronic Funds Transfer—Central Contractor Registration (MAY 1999)
	FAR 52.233-1	Disputes (JULY 2002)
	FAR 52.233-3	Protest After Award (AUG 1996) and Alternate I (JUN 1985)
	FAR 52.242-1	Notice of Intent to Disallow Costs (APR 1984)
+	FAR 52.242-3	Penalties for Unallowable Costs (MAY 2001)
	FAR 52.242-4	Certification of Final Indirect Costs (JAN 1997)
**	FAR 52.242-13	Bankruptcy (JUL 1995)
	FAR 52.242-15	Stop Work Order (AUG 1989) and Alternate I (APR 1984)
	FAR 52.243-2	Changes—Cost Reimbursement (AUG 1987) and Alternate V (APR 1984)

FAR 52.244-2	Subcontracts (AUG 1998) and Alternate I (AUG 1998) [Insert in cost-reimbursement contracts, and letter, time-and-material, and labor-hour contracts exceeding SAP, and fixed price contracts exceeding SAP where unpriced actions are anticipated. Use Alternate I for cost-rembursement contracts]
** FAR 52.244-5	Competition in Subcontracting (DEC 1996)
FAR 52.244-6	Subcontracts for Commercial Items and Commercial Components (APR 2002)
FAR 52.245-5	Government Property (Cost-Reimbursement, Time-and-Materials, or Labor-Hour Contracts) (JAN 1986) and ALT I (JUL 1985) (As modified by DoD Class Deviation 99-00008 dated 13 July 1999) (ALT I is applicable if the contractor is a nonprofit organization whose primary purpose is the conduct of scientific research)
FAR 52.246-9	Inspection of Research and Development (Short Form) (APR 1984)
FAR 52.246-23	Limitation of Liability (FEB 1997)
** FAR 52.247-64	Preference for Privately Owned U.S. Flag Commercial Vessels (JUN 2000)
FAR 52.249-6	Termination (Cost-Reimbursement) (SEP 1996)
FAR 52.249-14	Excusable Delays (APR 1984)
FAR 52.251-1	Government Supply Sources (APR 1984)
FAR 52.253-1	Computer Generated Forms (JAN 1991)

II. DEPARTMENT OF DEFENSE FAR SUPPLEMENTAL (DFARS) (48 CFR CHAPTER 2) CLAUSES:

** DFARS 252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies (MAR 1999)
DFARS 252.204-7003	Control of Government Work Product (APR 1992)
DFARS 252.204-7004	Required Central Contractor Registration (NOV 2001)
** DFARS 252.209-7000	Acquisition from Subcontractors subject to On-Site Inspection under the Intermediate Range Nuclear Forces (INF) Treaty (NOV 1995)
** DFARS 252.209-7004	Subcontracting with Firms That Are Owned or Controlled by the Government of a Terrorist Country (MAR 1998)
+ DFARS 252.215-7000	Pricing Adjustments (DEC 1991)
++ DFARS 252.219-7003	Small, Small Disadvantaged and Women-owned Small Business Subcontracting Plan (DoD Contracts) (APR 1996)
** DFARS 252.225-7012	Preference for Certain Domestic Commodities (APRIL 2002)
DFARS 252.225-7031	Secondary Arab Boycott of Israel (JUN 1992)
DFARS 252.227-7013	Rights in Technical Data—Noncommercial Items (NOV 1995), and Alternate I (JUN 1995)

	DFARS 252.227-7014	Rights In Noncommercial Computer Software and Noncommercial Computer Software Documentation (JUN 1995)
	DFARS 252.227-7016	Rights in Bid or Proposal Information (JUN 1995)
	DFARS 252.227-7019	Validation of Asserted Restrictions—Computer Software (JUN 1995)
	DFARS 252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends (JUN 1995)
	DFARS 252.227-7028	Technical Data or Computer Software Previously Delivered to the Government (JUN 1995)
	DFARS 252.227-7030	Technical Data—Withholding of Payment (MAR 2000)
	DFARS 252.227-7036	Declaration of Technical Data Conformity (JAN 1997)
	DFARS 252.227-7037	Validation of Restrictive Markings on Technical Data (SEP 1999)
	DFARS 252.231-7000	Supplemental Cost Principles (DEC 1991)
	DFARS 252.235-7011	Final Scientific or Technical Report (SEP 1999)
	DFARS 252.242-7000	Post-Award Conference (DEC 1991)
**	DFARS 252.243-7002	Requests for Equitable Adjustment (MAR 1998)
	DFARS 252.245-7001	Reports of Government Property (MAY 1994)
X	DFARS 252.246-7000	Material Inspection and Receiving Report (DEC 1991)
	DFARS 252.251-7000	Ordering from Government Supply Sources (OCT 2002)
**	DFARS 252.247-7023	Transportation of Supplies by Sea (MAY 2000)
**	DFARS 252.247-7024	Notification Of Transportation Of Supplies By Sea (MAR 2000) (Applicable when the Contractor has made a negative response to the inquiry in the representation at DFARS 252.247-7022.)

(B) ADDITIONAL FAR AND DFARS CLAUSES

This contract incorporates one or more clauses by reference as indicated by the mark of (X), with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://www.arnet.gov/far/>

	FAR 52.204-2	Security Requirements (AUG 1996) (Applicable if contract will generate or require access to classified information and DD Form 254, Contract Security Classification Specification, is issued to the contractor)
X	FAR 52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JUL 1995) (Applicable to contracts exceeding \$25,000 in value.)
X	FAR 52.215-17	Waiver of Facilities Capital Cost of Money (OCT 1997) (Applicable if the Contractor did not propose facilities capital cost of money in the offer)
	FAR 52.215-20	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data (OCT 1997) (Applicable to 'solicitations' if cost or pricing data or information other than cost or pricing data are required)
X	FAR 52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data—Modifications (OCT 1997) (Applicable to 'contracts' if cost or pricing data or information other than cost or pricing data will be required for modifications)
	FAR 52.217-9	Option to Extend the Term of the Contract (MAR 2000) (In paragraph (a), insert "XX", and in paragraph (c), insert "XX") (Applicable if contract contains line item(s) for option(s)) (Complete the spaces in parentheses)
	FAR 52.219-3	Notice of Total HUBZone Set-Aside (JAN 1999)
	FAR 52.219-5	Very Small Business Set-Aside (MAR 1999) (For actions between \$2,500 and \$50,000)
	FAR 52.219-6	Notice of Total Small Business Set-Aside (JUL 1996), and Alternate I (OCT 1995) (Applicable to total small business set-asides, including SBIR)
	FAR 52.219-7	Notice of Partial Small Business Set-Aside (JUL 1996) and Alternate I (OCT 1995)
	FAR 52.219-10	Incentive Subcontracting Program (OCT 2001) (Applicable at the PCO's discretion to contract actions exceeding \$500,000 and when subcontracting possibilities exist. The clause is small business exempt) (In paragraph (b), insert the appropriate number between 0 and 10 – "XX") (Complete the space in the parentheses)
	FAR 52.219-25	Small Disadvantaged Business Participation Program—Disadvantaged Status and Reporting (OCT 1999) (Applicable if contract includes FAR 52.219-24)
	FAR 52.219-26	Small Disadvantaged Business Participation Program—Incentive Subcontracting Program (OCT 2000) (Applicable at the PCO's discretion to contract actions)

		exceeding \$500,000 and when subcontracting possibilities exist. The clause is small business exempt) (In paragraph (b), insert the appropriate number between 0 and 10 – “XX”) (Complete the space in the parentheses)
X	FAR 52.222-20	Walsh Healy Public Contracts Act (DEC 1996) (Applicable if the contract includes deliverable materials, supplies, articles or equipment in an amount that exceeds or may exceed \$10,000)
	FAR 52.223-5	Pollution Prevention and Right-to-Know Information (APR 1998) (Applicable if contract provides for performance, in whole or in part, on a Federal facility)
X	FAR 52.223-6	Drug-Free Workplace (MAY 2001) (Applies when contract action exceeds \$100,000 or at any value when the contract is awarded to an individual)
X	FAR 52.227-11	Patent Rights—Retention by the Contractor (Short Form) (JUN 1997) (Applicable if contractor is a small business or non-profit organization)
	FAR 52.230-2	Cost Accounting Standards (APR 1998) (Applicable when contract amount is over \$500,000, if contractor is subject to full CAS coverage, as set forth in 48 CFR Chapter 99, Subpart 9903.201-2(a) (FAR Appendix B)
	FAR 52.230-3	Disclosure and Consistency of Cost Accounting Practices (APR 1998) (Applicable when contract amount is over \$500,000 but less than \$25 million, and the offeror certifies it is eligible for and elects to use modified CAS coverage as set forth in 48 CFR Chapter 99, Subpart 9903.201-2 (FAR Appendix B)
	FAR 52.230-6	Administration of Cost Accounting Standards (NOV 1999) (Applicable if contract is subject to either clause at FAR 52.230-2, FAR 52.230-3 or FAR 52.230-5)
X	FAR 52.232-20	Limitation of Cost (APR 1984) (Applicable only when contract action is fully funded)
X	FAR 52.232-22	Limitation of Funds (APR 1984) (Applicable only when contract action is incrementally funded)
	FAR 52.239-1	Privacy or Security Safeguards (AUG 1996) (Applicable to contracts for information technology which require security of information technology, and/or are for the design, development, or operation of a system of records using commercial information technology services or support services.)
	FAR 52.245-18	Special Test Equipment (FEB 1993) Applicable when it is anticipated that the contractor will acquire or fabricate special test equipment but the exact identification of the equipment is not known)
X	FAR 52.246-24	Limitation of Liability—High Value Items (FEB 97) (If contract is over \$25K and requires delivery of high-value items—high unit cost (normally exceeding \$100,000 per unit such as an aircraft, an aircraft engine, a communication system, a computer system, a missile, or a ship)

X	DFARS 252.203-7002	Display of DoD Hotline Poster (DEC 1991) (Applicable only when contract action exceeds \$5 million or when any modification increases contract amount to more than \$5 million)
X	DFARS 252.204-7000	Disclosure of Information (DEC 1991) (Applies when Contractor will have access to or generate unclassified information that may be sensitive and inappropriate for release to the public)
	DFARS 252.204-7005	Oral Attestation of Security Responsibilities (NOV 2001) (Applicable if FAR 52.204-2, Security Requirements Applies)
X	DFARS 252.205-7000	Provision of Information to Cooperative Agreement Holders (DEC 1991) (Applicable only when contract action exceeds \$500,000 or when any modification increases total contract amount to more than \$500,000)
X	DFARS 252.215-7002	Cost Estimating System requirements (Oct 1998) (Applicable only to contract actions awarded on the basis of certified cost or pricing data)
	DFARS 252.223-7004	Drug-Free Work Force (SEP 1988) (Applicable (a) if contract involves access to classified information: or (b) when the Contracting Officer determines that the clause is necessary for reasons of national security or for the purpose of protecting the health or safety of performance of the contract.
	DFARS 252.223-7006	Prohibition on Storage and Disposal of Toxic and Hazardous Materials (APR 1993) (Applicable if work requires, may require, or permits contractor performance on a DoD installation)
X	DFARS 252.225-7001	Buy American Act and Balance of Payments Program (MAR 1998) (Applicable if the contract includes deliverable supplies) (This clause does not apply if an exception to the Buy American Act or Balance of Payments Program is known or if using the clause at 252.225-7007, 252.225-7021, or 252.225-7036.)
X	DFARS 252.225-7002	Qualifying Country Sources as Subcontractors (DEC 1991) (Applicable when clause at DFARS 252.225-7001, 252.227-7007, 252.227-7021, or 252.227-7036 applies)
	DFARS 252.225-7007	Buy American Act—Trade Agreements—Balance of Payments Program (OCT 2002) (Use instead of FAR 52.225-5, Trade Agreements (Include in contracts valued at \$186,000 or more, if the Trade Agreements Act applies (see 25.401 and 25.403) and the agency has determined that the restrictions of the Buy American Act or Balance of Payments Program are not applicable to U.S.—made end products, unless the acquisition is to be awarded and performed outside the United States in support of a contingency operation or a humanitarian or peacekeeping operation and does not exceed the increase simplified acquisition threshold of \$200,000.) The clause need not be used where purchase from foreign sources is restricted (see 225.401 (b)(ii)). The clause

		may be used where the contracting officer anticipates a waiver of the restriction.)
	DFARS 252.225-7008	Supplies to be Accorded Duty-Free Entry (MAR 1998) (Applicable when the contract provides for duty-free entry and includes FAR 52.225-8—Duty-Free Entry)
	DFARS 252.225-7009	Duty-Free Entry—Qualifying Country Supplies (End Products and Components) (AUG 2000) (Applicable if contract includes deliverable supplies)
	DFARS 252.225-7010	Duty-Free Entry—Additional Provisions (AUG 2000) (Applicable when FAR 52.225-8—Duty-Free Entry is included in the contract.)
X	DFARS 252.225-7016	Restriction On Acquisition Of Ball And Roller Bearings (DEC 2000) (Applicable if contract includes deliverable supplies, unless Contracting Officer knows that items being acquired do not contain ball or roller bearings)
X	DFARS 252.225-7026	Reporting of Contract Performance Outside the United States (JUN 2000) (Applicable only when contract value exceeds \$500,000 or when any modification increases contract value to more than \$500,000)
	DFARS 252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises (SEP 2001) [(Applicable if FAR Part 12 is not used, and for supplies and services (but not R&D) expected to exceed SAP thresholds) (This Final Rule replaces FAR 52.226-1 (JUN 2000) via DFARS Chg Ntc 20020531]
	DFARS 252.227-7018	Rights in Noncommercial Technical Data and Computer Software—Small Business Innovation Research (SBIR) Program (JUN 1995) (Applicable when technical data or computer software will be generated during performance of contracts under the SBIR Program)
X	DFARS 252.227-7034	Patents—Subcontracts (APR 1984) (Applicable when FAR 52.227-11 applies)
X	DFARS 252.227-7039	Patents—Reporting of Subject Inventions (APR 1990) (Applied when FAR 52.227-11 applies)
	DFARS 252.242-7004	Material Management and Accounting System (DEC 2000) (Applicable to contract actions exceeding \$100,000) (Not applicable for contracts awarded to small businesses, educational institutions, or nonprofit organizations)

SECTION J—LIST OF ATTACHMENTS

1. EXHIBIT A, entitled “Contract Data Requirements List” (DD Form 1423)—11 Page(s) with Enclosure Number 1, entitled “Contract Data Requirements List—Instructions for Distribution” – 2 Pages.
2. Attachment Number 1, entitled “Statement of Work” – 3 Pages.
3. Attachment Number 2, entitled “Financial Accounting Data Sheet” – 1 Page.
4. Attachment Number 3, entitled “Identification and Assertion of Restrictions on the Government’s Use, Release or Disclosure of Technical Data” – 3 Pages

SECTION K—REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFEROR

1. The Contractor’s Representations and Certifications, dated 26 November 2002, are hereby incorporated into this contract by reference.

CONTRACT NUMBER N00014-03-C-0284**Page 23**

ATTACHMENT NUMBER 1

CONTRACT NUMBER N00014-03-C-0284

STATEMENT OF WORK

The objective of this program is to develop a Full Scale, High Power Density, Lightweight, Advanced 36.5 MW Propulsion Motor and Drive System compatible with naval applications. The program consists of three phases:

Phase A : 36.5 MW Motor Systems Preliminary Design

Phase C : Motor and Drive Manufacture and FAT

Phase B : Motor and Drive Detailed Design

36.5 MW Motor System Preliminary Design

Phase 0 Complete preliminary design of the full-scale demonstrator system, address the integration of the proposed technology into an electric warship concept, provide manufacturing and acceptance test plans, and assess the industrial base and market share.

Engineering and Management

Systems Engineering and Integration

Utilizing the DD(X) motor and drive requirements, develop interface control drawings and subsystem specifications. Estimate motor and drive system transient, acoustic, and signature performance. Conduct assessment of stator and HTS coil technology to reduce size, weight, cost, and improve power density.

Ship System Integration

Evaluate the drive and motor requirements for the DD(X) in-hull application. Submit both a preliminary and final ship integration assessment.

Program Management

Submit technical progress and cost reports. Assess the industrial base and market for large motors. Develop a preliminary motor and drive system test plan.

Motor and Drive System

Complete the motor drive and system preliminary design including layouts.

Motor Active

Conduct trade studies to update the design concept. Complete preliminary design of the active motor components. This includes the rotor and stator thermal, mechanical and electrical design. Conduct component tests to validate design. Develop preliminary manufacturing plans for each subsystem. Develop preliminary factory test plans and a preliminary operation and maintenance procedure. Initial design layout drawings completed.

Motor Mechanical

Complete the mechanical design of the motor frame, bearing, and rotor and stator shock analysis. Develop layout drawings with dimensions and weight, including a preliminary cross section of motor. Address the changes required to militarize the preliminary design.

Motor Assembly

Preliminary manufacturing and assembly plan.

Variable Speed Drive

Finalize drive requirements for commercial application and establish preliminary size, weight and cooling requirements based on ship architecture established in 0. Conduct trade studies to meet program goals.

A.3.1, A.3.2, A.3.3 Ancillaries

Define preliminary procurement requirements for the lube oil, cooling systems and switchgear for the motor and drive system.

A.4 FAT Testing

Develop a preliminary assembly and test plan. Develop facility modifications necessary to

accomplish test objectives.

36.5-MW Motor and Drive Detailed Design

Phase B Complete detailed design and long lead item procurement. Develop specifications for the motor, drive, and ancillary equipment.

B.1 Engineering and Management

B.1.1 Systems Engineering and Integration

Complete requirements for the motor and drive system and components, manage interfaces, and maintain interface control documents. Update system and component specifications for the motor and ancillaries. Complete the motor and drive system level interface and installation documentation. Update electrical performance analysis. Conduct failure mode analysis and update manufacturing plans.

B.1.2 Ship System Integration

Define, analyze and allocate requirements from system level down through specific components based on DD(X) engine room application. Define requirement deviation for the purpose of land-based motor and drive system testing.

B.1.3 Program Management

Submit technical progress and cost reports. Coordinate and manage all subcontractors. Update motor and drive test plan.

B.2 Motor and Drive System

Perform detailed motor design.

B.2.1 Motor Active

Complete detailed design including all manufacturing and assembly drawings. Update performance analysis. Complete manufacturing plans for each subsystem. Develop specifications for long lead items. Update factory test plans for the major subsystems. Complete the operation and maintenance procedure. Develop spare parts list.

B.2.2 Motor Mechanical

Complete detailed design of the frame and bearings. Conduct stress analysis of the assembly and the system.

B.2.3 [Reserved]

B.2.4 Variable Speed Drive

Select the VSD design and place orders for long lead material. Monitor the VSD vendor's design progress.

B.3.1, B.3.2, B.3.3 Ancillaries

Finalize procurement requirements for the lube oil, cooling systems and switchgear for the motor and drive system.

B.4 FAT Testing

Update assembly and test plan. Define facility modifications necessary to accomplish test objectives.

B.4.1 Test Planning and Management

Develop test schedule, requirements, and procedures for FAT. Identify test facility requirements.

B.4.2 [Reserved]

B.4.3 Test Facilities

Develop test facility layout, equipment list, and requirements. Procure and install all components.

C 36.5-MW Motor and Drive Manufacture and FAT

Phase C Manufacture motor and drive system, complete Factory Acceptance Testing, and deliver to the contract specified U.S. Navy facility.

C.1 Engineering and Management

C.1.1 Systems Engineering and Integration

Complete the final spare parts list. Complete Interface and control documentation.

C.1.2 Ship System Integration

Develop a report on the ship integration implications of the motor test results.

C.1.3 Program Management

Submit technical progress and cost reports. Coordinate and manage all subcontractors. Complete a final report summarizing Phases A, B, and C. Complete the motor and drive system test plan.

C.2 Motor and Drive System

C.2.1 Motor Active

Complete manufacturing and procurement of the rotor, stator, exciter, and rotor cooling system. Complete acceptance testing for all subsystems in accordance with the factory acceptance test plans for each subsystem. Complete the operating and maintenance documentation and the spare parts list.

C.2.2 Motor Mechanical

Fabricate the frame and procure the bearings. Assemble the motor in preparation for FAT. Complete Installation and Checkout (INCO) procedure.

C.2.3 Motor Assembly

Complete motor assembly and fabrication.

C.2.4 Variable Speed Drive

Manufacture and test the Variable Speed Drive. Install the VSD on the test bed.

C.3.1, C.3.2, C.3.3 Ancillaries

Procure the lube oil, cooling equipment and switchgear and deliver to the motor test site.

C.4 FAT Testing

Prepare instrumentation, data acquisition, and analysis equipment. Complete motor system testing including the motor, drive, and ancillaries.

C.4.1 Test Planning and Management

Schedule and conduct all FAT activities. Submit test reports.

C.4.2 Motor System FAT

Complete motor system testing including the motor, drive, and ancillaries. Package and ship motor, drive, and ancillaries to the contract specified Navy facility.

ATTACHMENT NUMBER 2

FINANCIAL ACCOUNTING DATA SHEET—NAVY

1. CONTRACT NUMBER (Critical)		2. SPIN (Critical)		3. MOD(Critical)			4. PR NUMBER 03PR08747-00				PAGE 1 of 1			
CLIN/SLIN	6. LINE OF ACCOUNTING		C. SUBHEAD (Critical)	D. OBJ CLA	E. PARM	F. RFM	G. SA	H. AAA (Critical)	I. IT	J. PAA	K. COST CODE		7 AMOUNT (Critical)	NAVY INTERNAL USE ONLY REF DOC/ARN
	A. ACRN (Critical)	B. APPROPRIATION (Critical)									PROJ.	POU UNIT MCC & SUF		
	AA	1731319	W3DK	255	RA	333	0	068342	2D	000000	02912 000 4MW0	\$[**]	PR#03PRO8747-00 FRC:34MW	
PAGE TOTAL									\$[**]					
GRAND TOTAL									\$[**]					

COMPTROLLER APPROVAL;
 FOR FISCAL DATA AND SIGNATURE
 BY [illegible]
 DATE 2/28/03

ATTACHMENT NUMBER 3

**IDENTIFICATION AND ASSERTION OF RESTRICTIONS ON THE
GOVERNMENT'S USE, RELEASE, OR DISCLOSURE OF TECHNICAL DATA AND
COMPUTER SOFTWARE**

This document is submitted in accordance with DFARS 252.227-7013(e) and 252.227-7014(e) for Contract Number N00014-03-C-0284 in response to ONR BAA 02-028.

The contractor asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data and computer software should be restricted –

<i>Technical Data To Be Furnished with Restrictions</i>	<i>Basis for Assertion</i>	<i>Asserted Rights Category</i>	<i>Person Asserting Restrictions</i>	<i>Expiration Date</i>
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	6/21/04
[**]	[**]	[**]	American Superconductor	6/21/04
[**]	[**]	[**]	American Superconductor	10/24/05
[**]	[**]	[**]	American Superconductor	2/14/07
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	5 years from contract execution

[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	N/A
[**]	[**]	[**]	American Superconductor	5 years from contract execution

American Superconductor Corporation reserves the right to supplement the above list of data items and computer software pursuant to DFAR 252.227-7013(e). We also reserve the right to identify additional software items that may be delivered under the subject contract with restrictions pursuant to DFAR 252.227-7014. *If the assertion is applicable to items, components, or processes developed at private expense, identify both the data and each such item, component, or process.

**Generally, the development of an item, component, or process at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose technical data pertaining to such items, components, or processes. Indicate whether development was exclusively or partially at private expense. If development was not at private expense, enter the specific reason for asserting that the Government's rights should be restricted.

***Enter asserted rights category (e.g. government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited or government purpose rights under this or a prior contract, or specifically negotiated licenses.)

****Corporation, individual, or other person, as appropriate.

DATE: _____

PRINTED NAME: _____

TITLE: _____

SIGNATURE: _____

**Confidential Materials omitted and filed separately with the
Securities and Exchange Commission. Asterisks denote omissions.**

FIFTH AMENDMENT

This Fifth Amendment, effective as of the date set forth above the signatures of the parties below, further amends the Exclusive Patent License Agreement dated July 6, 1987 (the "4405 LICENSE AGREEMENT") between the MASSACHUSETTS INSTITUTE OF TECHNOLOGY ("M.I.T."), a Massachusetts corporation having its principal office at 77 Massachusetts Avenue, Cambridge, Massachusetts, 02139, USA and AMERICAN SUPERCONDUCTOR CORPORATION ("COMPANY"), a Delaware corporation having its principal office at 2 Technology Drive, Westborough, MA 01581.

WHEREAS, M.I.T. is the owner of certain patent rights relating to M.I.T. Case No. 4405, "Process for Making Superconducting Oxides (in Usable Form) by Oxidation of Alloys of the Metallic Constituents," by John B. Vander Sande and Gregory J. Yurek that are the subject of the 4405 LICENSE AGREEMENT;

WHEREAS, COMPANY wishes to enter into a cross license agreement (hereinafter referred to as "SCLA") with Sumitomo Electric Industries (hereinafter referred to as "SEI") to gain access to patents held by SEI that may be useful to COMPANY in its general activities and as partial consideration wishes to provide SEI with a sublicense to certain of the rights granted COMPANY in the 4405 LICENSE AGREEMENT;

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein, the parties hereby agree to modify the 4405 LICENSE AGREEMENT as follows:

1. This Amendment is effective if signed by COMPANY on or prior to April 18, 2003.
2. This Amendment and M.I.T.'s agreement contained herein shall be valid only during the time period that both of the following two statements are true:
 - i. The executed SCLA between COMPANY and SEI obligates COMPANY to make payments totaling [**] dollars to SEI as partial consideration for the SCLA, and
 - ii. The SCLA requires SEI to pay royalties to COMPANY for sales of LICENSED PRODUCTS of [**] percent ([**]%).

3. The parties agree that for the purposes of this Amendment, the following terms shall have the following meanings:
 - “1st RECOVERY DATE” shall mean the date after which cumulative net royalties paid to COMPANY by SEI under the SCLA exceed \$[**].
 - “2nd RECOVERY DATE” shall mean the date after which cumulative net royalties paid to COMPANY by SEI under the SCLA exceed \$[**].
 - “3rd RECOVERY DATE” shall mean the date after which cumulative net royalties paid to COMPANY by SEI under the SCLA exceed \$[**].
 - “4th RECOVERY DATE” shall mean the date after which cumulative net royalties paid to COMPANY by SEI under the SCLA exceed \$[**].
4. As required by Article 2.4 of the 4405 LICENSE AGREEMENT, M.I.T. hereby provides its written agreement for the term of this Amendment that COMPANY may sublicense the PATENT RIGHTS to SEI at a royalty rate of [**] percent ([**]%) instead of the [**] percent ([**]%) royalty rate called for in Article 4.1(b). Should COMPANY sublicense the PATENT RIGHTS to SEI at any rate other than [**]%, then COMPANY’S obligation to M.I.T. under Article 4.1(b) for payment of royalties on net sales made by SEI under the SCLA shall be [**] percent ([**]%).
5. For all sales made by SEI during the time period that the SCLA requires SEI to pay royalties to COMPANY of [**] percent ([**]%), COMPANY’S obligation to M.I.T. under Article 4.1(b) for payment of royalties on net sales made by SEI under the SCLA for LICENSED PRODUCTS shall be according to the following:
 - [**] percent ([**]%) until the 1st RECOVERY DATE and then:
 - [**] percent ([**]%) until the 2nd RECOVERY DATE and then:
 - [**] percent ([**]%) until the 3rd RECOVERY DATE
 - and then:
 - [**] percent ([**]%) until the 4th RECOVERY DATE and then:
 - and thereafter royalties due M.I.T. on net sales made by SEI under the SCLA shall be [**] percent ([**]%).
6. Article 5.2 is amended by adding the following sentence to the end of the paragraph:

Notwithstanding the existing terms of Article 5.2, COMPANY shall only

be required to report on business conducted by SEI during the preceding [**] quarters within thirty days after March 1st and September 1st of each year.

7. COMPANY shall notify M.I.T. in writing within thirty days of the following events:
- a. when all the provisions of paragraph 2 are first met;
 - b. if and when any of the provisions of paragraph 2 are no longer true; and
 - c. after achieving the 1st and the 2nd and the 3rd, and the 4th RECOVERY DATES.

The EFFECTIVE DATE of this Agreement is April 18, 2003

MASSACHUSETTS INSTITUTE OF
TECHNOLOGY

AMERICAN SUPERCONDUCTOR
CORPORATION

By: /s/ Lita L. Nelson

By: /s/ Alexis P. Malozemoff

Name: Lita L. Nelson, Director

Name: Alexis P. Malozemoff

Title: Technology Licensing Office

Title: Chief Technical Officer

CERTIFICATION

I, Gregory J. Yurek, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of American Superconductor Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) [Paragraph omitted in accordance with SEC transition instructions contained in SEC Release 34-47986];
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 14, 2003

/s/ GREGORY J. YUREK

Gregory J. Yurek
Chief Executive Officer

CERTIFICATION

I, Kevin M. Bisson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of American Superconductor Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) [Paragraph omitted in accordance with SEC transition instructions contained in SEC Release 34-47986];
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 14, 2003

/s/ KEVIN M. BISSON

Kevin M. Bisson
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of American Superconductor Corporation (the "Company") for the period ended June 30, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Gregory J. Yurek, Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ GREGORY J. YUREK

Gregory J. Yurek
Chief Executive Officer

August 14, 2003

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of American Superconductor Corporation (the "Company") for the period ended June 30, 2003 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Kevin M. Bisson, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ KEVIN M. BISSON

Kevin M. Bisson
Chief Financial Officer

August 14, 2003