FORM 10-K405

BTU INTERNATIONAL INC - BTUI

Exhibit:

Filed: March 31, 1998 (period: December 31, 1997)

Annual report. The Regulation S-K Item 405 box on the cover page is checked

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549
FORM 10-K

(MARK ONE)
[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED DECEMBER 31, 1997

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE TRANSITION PERIOD FROM __________________ TO ___________________.

COMMISSION FILE NUMBER 0-17297

BTU INTERNATIONAL, INC.
(Exact name of Registrant as specified in its charter)

DELAWARE (State or Other Jurisdiction of Incorporation or Organization)	04-2781248 (I.R.S. Employer Identification Number)
23 ESQUIRE ROAD, NORTH BILLERICA, MASSACHUSETTS (Address of principal executive offices)	01862-2596 (Zip Code)

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (978) 667-4111

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

None Registered

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

Title of Each Class

Common Stock, $.01 Par Value

Indicate by check mark whether the Registrant (1) has filed all reports required 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 X No __

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K [X].

The aggregate market value of the shares of Common Stock, $.01 par value, of the Company held by non-affiliates of the Company was $ 23,492,057 on March 24, 1998

Indicate number of shares outstanding of the Registrant's Common Stock, par value $.01 per share, as of the latest practicable date: As of March 24, 1998: 7,177,662 shares.

DOCUMENTS INCORPORATED HEREIN BY REFERENCE

The following documents are incorporated herein by reference: Part II - Portions of the Annual Report to Stockholders, for the year ended December 31, 1997; and Part III - Portions of the Proxy Statement for the 1998 Annual Meeting of Stockholders, both of which are to be filed with the Securities and Exchange Commission.

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BTU INTERNATIONAL, INC.
1997 FORM 10-K ANNUAL REPORT

TABLE OF CONTENTS

PART I

ITEM 1. BUSINESS

General:

The Company designs, manufactures, sells and services thermal processing equipment and related process controls for use in the electronics, power generation, automotive and other industries. The Company is the major supplier of solder reflow systems used for surface mount applications in printed circuit board assembly. The Company is a principal worldwide supplier of systems used in: low temperature curing/encapsulation; hybrid integrated circuit manufacturing; integrated circuit packaging and sealing; and processing multi-chip modules. The Company is a leading supplier of systems for sintering nuclear fuel for commercial power generation. In addition, its products are used in other specialty applications such as brazing and the sintering of ceramics and powdered metals, and the deposition of precise thin film coatings.

THE COMPANY HAS FOCUSED ON THREE KEY STRATEGIC AREAS:

TECHNOLOGICAL LEADERSHIP - As process parameters change, with higher speed and higher density components and printed circuit boards, the Company has responded by developing and introducing systems which advance the state of the art in processing for many applications and industries.

PRODUCT DIVERSIFICATION - The Company utilizes its core technologies to satisfy the customers' changing needs by offering a variety of systems capable of processing material from 100(Degree)C to 2000(Degree)C. These systems are marketed at a wide range of price levels for various applications which include; surface mount device solder reflow, epoxy curing, integrated circuit packaging and thick film, metals, ceramic and nuclear fuel sintering, and other applications.

CUSTOMER SUPPORT - As thermal processing systems become more complex and require greater support, many customers, especially those in high-volume production, prefer dealing with a limited number of large capital equipment suppliers. The Company's reputation for system performance and technological innovation, together with its established worldwide service organization, is an important strength in selling to manufacturers for high-volume production applications.

PRODUCTS:

THE THERMAL PROCESSING APPLICATIONS PERFORMED BY THE COMPANY'S PRODUCTS ARE USED IN THE MANUFACTURE OF:

- Surface Mount Technology (SMT) Solder Reflow
- Low Temperature Epoxy Curing/Encapsulation
- PC Board Multi Chip Modules (MCM-L)
- Conductive Polymer Thick Film Curing
- Hybrid Microelectronics
- Integrated Circuit Packaging (Ball Grid Array - BGA, Micro BGA, and Chip Scale Packaging - CSP)
- Ceramic Multilayer Package & Multi Chip Module Firing (MCM-C)
- Nuclear Fuel Sintering
- Diffusion and Annealing for Photovoltaic Applications
- Refractory & Powdered Metal Sintering
- Technical Ceramic Sintering
- Brazing of Electronic, Electrical, Automotive and Medical Components
- CRT Coating

THESE PRODUCTS PERFORM THERMAL PROCESSES EITHER IN A CONTINUOUS OR IN A BATCH MODE:

- Solder Reflow Systems
- Conveyor Curing Systems
- Continuous Belt Conveyor Processing Systems
- High Temperature (up to 2000(Degree)C) Systems (continuous and batch)
- Atmospheric Pressure Chemical Vapor Deposition (APCVD) Systems

Each system has precise microprocessor controlled functions, such as process gas measurement, temperature control and profiling, time sequencing, and Computer Intergrated Manufacturing (CIM) - SECS/GEM Machine Interface Software.

The technological change in processing is driven by the trends toward miniaturization (hand held products), higher circuit densities, and the need for advanced controls with cleaner process environments. The trend toward automation to support highly reproducible processes is a requirement for most applications. Customer needs for a high level of service and spare parts support leads to a preference for the large capital equipment supplier with a broad technological base and an established reputation for quality. Remote diagnosis of field equipment from BTU's factory (via modem) increases equipment availability (uptime).

Solder Reflow Systems

Convection solder reflow systems, with or without controlled atmosphere, have become the preferred method of attaching surface mount devices to high density printed circuit boards. Solder, in the form of a paste, is applied to the printed circuit board and surface mount devices are placed on the solder paste. The assembly is then heated in a continuous multi-zoned recirculated convection process to above the melting temperature of the solder, after which the product is rapidly cooled by convection to solidify the solder. Uniform heating and cooling of the product is required to prevent stresses and component overheating.

Surface mount technology is contributing to the miniaturization of high-density printed circuit boards and allows board designs with components on both top and bottom. Surface mount technology is now the standard for high density printed circuit board assembly. Prices for the Company's solder reflow systems range from $35,000 to $200,000.

Conveyor Epoxy/Polymer Thick Film (PTF) Curing Systems

BTU's conveyor curing systems have process applications in several stages of Printed Circuit Board (PCB) manufacturing to cure/encapsulate conductive or dielectric epoxy at temperatures up to 225(Degree)C. The system allows fast, stable curing/encapsulation at a controlled temperature. Epoxy material developments have dramatically reduced cure times, which the Company believes should expand the market for these curing systems for PC board and electronic packaging. Prices for the Company's curing/encapsulation systems range from $25,000 to $150,000.

Continuous Belt Processing Systems

BTU's continuous belt processing systems are used in a variety of applications (such as integrated circuit packaging, hybrid circuit manufacturing, brazing of automotive components, etc.). These systems operate between 300(Degree)C and 1200(Degree)C and may measure up to 60 feet long. They can be equipped with one or more gas barriers and atmospheric zones and may vary in length of heating zones from four to forty-eight feet. Depending upon load capacity requirements, conveyor belt widths vary from four to forty-eight inches. Prices for these systems range from $30,000 to $800,000.

High Temperature Systems

BTU offers walking beam, special batch systems and pusher systems for high temperature processing with heavy loads. The Company's walking beam system employs a proprietary conveyance mechanism that can process loads of up to 800 pounds per square foot at temperatures up to 2000(Degree)C.

A major application for this high-temperature product is sintering multilayer integrated circuit packages. In addition, these systems are used in sintering technical ceramics, nuclear fuels and refractory and powdered metals. These systems are usually customized and vary in price from $250,000 to $2,500,000.

Atmospheric Pressure Chemical Vapor Deposition Systems

Atmospheric pressure chemical vapor deposition ("APCVD") is a thin film deposition process in which the vapors of two or more chemicals are mixed in a controlled environment at elevated temperatures at atmospheric pressure. A chemical reaction occurs at these elevated temperatures causing a thin film to be deposited on the desired substrate. The process is typically carried out in a continuous belt processing system at throughput rates of one to four square feet per minute.

The Company's APCVD systems, which sell for between $250,000 and $1,000,000, are used in the manufacture of silicon devices, photovoltaics and optoelectronic devices.

Marketing, Sales and Customers:

The Company's worldwide customer base consists primarily of independent manufacturers of electronic devices, computers, telecommunications, printed circuit board assembly houses, and other companies in the electronics industry. Other customers include nuclear fuel manufacturers and technical ceramics manufacturers and producers using specialty brazing applications. Repeat sales to existing customers represent a significant portion of the Company's revenue.

The Company markets its products through the combined efforts of a direct sales force and independent sales/service representatives. Direct sales/service offices are maintained in the United States, England, Scotland, Germany, Singapore, Malaysia and China. Independent sales/service representatives are located in all major industrialized countries worldwide.

The Company operates on a worldwide basis in support of its multinational customer base. The following table shows the percentages of the Company's revenues in the United States, Europe and the Far East, for the last three years:

	1997	1996	1995
United States	50%	47%	52%
Europe	23	25	19
Far East	24	23	24
Other	3	5	5

For further information on export sales and foreign operations, see Note 4 of the Company's Consolidated Financial Statements.

Reliability, performance, uptime and meantime-to-repair (MTR) and cost of ownership, together with technological leadership, are important factors by which customers evaluate potential suppliers of sophisticated processing systems. The Company supports its customers with field service, training programs, parts sales and operating manuals. Technical support is also available through either direct telephone links or on-site Company personnel to provide assistance in process support and the service and maintenance of equipment.

Worldwide sales to Solectron represented approximately 14% of revenue in 1997. No individual customer accounted for greater than 10% of revenues in 1996 or 1995.

The Company does not consider its business to be seasonal in nature, but it is cyclical insofar as it is dependent on the capital equipment procurement patterns of its customers.

Backlog:

Backlog was $ 10.2 million at December 31, 1997 versus $8.1 million at December 31, 1996. The primary reason is a strong increase in surface mount technology product demand during 1997. Most of the Company's backlog is expected to be shipped within 3 to 6 months. The Company includes in backlog only those orders for which a purchase order has been assigned by the customer and a delivery schedule has been specified. Because of possible changes in delivery schedules and order cancellations, the Company's backlog at any particular date is not necessarily representative of sales for any succeeding period.

Manufacturing and Raw Materials:

The Company manufactures a portion of its equipment to custom specifications. On the custom equipment orders raw material inventory is typically purchased only after an order is received. In the case of standard equipment, certain raw materials may be purchased based upon forecast. Manufacturing costs are financed in part through progress payments, especially in the case of deliveries with long lead times.

The Company has an integrated manufacturing operation in the United States, and purchases certain standard components and designs and manufactures others. Although the Company relies upon single sources for certain parts, it believes that alternative sources of supply are available in each case. The Company has not experienced any disruption in its business due to an inadequate supply of materials.

Research, Development and Engineering:

The Company's research, development and engineering programs are devoted to the enhancement of existing systems and the development of new systems for new applications. As the complexity of producing miniaturized circuitry increases, the electronics and other industries are working more closely with larger, capital equipment suppliers to determine and develop future product and process needs. The Company's current internally financed efforts include development of enhanced convection heat transfer systems for solder reflow, new deposition processes in APCVD, advanced controls and related software systems.

Competition:

There are numerous suppliers of thermal processing systems for the electronic and other industrial thermal processing applications. Although buying decisions have traditionally focused on price, the Company believes that technological leadership, process capability, throughput, environmental safeguards, uptime, meantime-to-repair, cost of ownership, and after sale support have become increasingly important factors. It is on the basis of these criteria, rather than primarily on price, that the Company competes in its markets.

The Company's principal competitors for integrated circuit packaging and hybrid circuit manufacturing systems vary by product application. In conveyor belt systems, Lindberg (a division of General Signal) and SierraTherm are the Company's principal competitors. In high temperature systems, the principal competitors are Lindberg, Cremar and De Gussa. In solder reflow systems, the principal competitors are Heller, Electrovert Speedline (a division of Cookson Group PLC) and Dover Soltec (a division of Dover Corporation).

The electronics industry is characterized by rapid technological change. The Company must continue its development efforts to compete effectively. Introduction of improved systems or techniques by others without a similar advance by the Company could adversely affect the Company's prospects.

Patents and Trademarks:

The Company holds many US and foreign patents, and it will continue to seek patents on inventions that result from its research and development activities. Although it believes its patents are of value, the Company depends primarily on its technological creativity and know-how, rather than on its patents, to maintain its competitive position. The Company also owns certain trademarks and proprietary information that it considers important to its business and that it seeks to protect through appropriate means.

Environmental:

Compliance with laws and regulations regarding the discharge of materials into the environment, or otherwise relating to the protection of the environment, has not had any material effects on the capital expenditures, earnings or competitive position of the Company. The Company does not anticipate any material capital expenditures for environmental control facilities in 1998.

Employees:

As of December 31, 1997, the Company had a total of 306 employees of which 279 were domestic and 27 were foreign based. None of the Company's employees are represented by a union or other collective bargaining agent, and the Company considers its relations with its employees to be good.

ITEM 2. PROPERTIES

The Company maintains its headquarters in North Billerica, Massachusetts, where it owns a 150,000 square foot manufacturing facility and leases an additional 17,000 square feet of manufacturing space. The Company operates its manufacturing facility on a full first shift and partial second shift basis. In England, for its European sales and service operations, the Company operates out of a leased facility which lease expires in 2010. In the Far East the Company has sales and service offices in Beijing China, Singapore, and Penang Malaysia all of which are leased. The Company believes that its plants and capital equipment operated at approximately 70 % of productive capacity during the fourth quarter of 1997 and that such plants and capital equipment provide sufficient manufacturing capacity through 1998.

ITEM 3. LEGAL PROCEEDINGS

There were no material legal proceedings pending as of the time of this filing.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

There were no matters submitted to a vote of the Company's security holders during the fourth quarter of 1997.

ITEM 4A. EXECUTIVE OFFICERS OF THE REGISTRANT

NAME	AGE	POSITIONS
Paul J. van der Wansem	58	Chairman of the Board of Directors, President and Chief Executive Officer
Thomas P. Kealy	55	Vice President, Corporate Controller and Chief Accounting Officer
Santo J. DiNaro	52	Vice President of Operations and Engineering

Paul J. van der Wansem has been President, Chief Executive Officer and a Director of the Company since 1979. From December 1977 to 1981, he served as Vice President of Holec, N.V., a Dutch electronics company, and from 1978 through 1981 was President of Holec (USA), Inc. From 1970 through 1973, Mr. van der Wansem worked as an adjunct director of First National City Bank in Amsterdam and from 1973 to 1977 as a management consultant for the Boston Consulting Group, Inc.

Thomas P. Kealy has been Vice President, Corporate Controller and Chief Accounting Officer of the Company since February 1991. He has been the Corporate Controller since joining the company in July 1985. Prior to that, Mr. Kealy served for 14 years in various financial management positions, including Division Controller, for Polaroid Corporation. Earlier he was the Corporate Controller for Coro, Inc. and Lebanon, Inc.

Santo J. DiNaro has been Vice President of Operations and Engineering since December 1997. Prior to joining BTU International, Mr. DiNaro served as head of Engineering at Varian's Ion Implant Division and previously was the Operations Manager. Mr. DiNaro was with Varian for 17 years.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDERS MATTERS.

The following in the BTU International, Inc. 1997 Annual Report is incorporated herein by reference:

"Common stock and market prices" set forth on page 24.

The Company's common stock is traded in the Nasdaq National Market System under the symbol BTUI. As of March 24, 1998 there were approximately 490 stockholders of record.

To date, the Company has paid no cash dividends to its common shareholders. The Company has no plans to pay cash dividends in the near future on its common stock.

ITEM 6. SELECTED FINANCIAL DATA

"Selected consolidated financial data" on page 4 of the BTU International, Inc. 1997 Annual Report is incorporated herein by reference.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

"Management's discussion and analysis of financial condition and results of operations" on pages 5-7 of the BTU International, Inc. 1997 Annual Report is incorporated herein by reference.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The consolidated financial statements, and the notes relating thereto, together with the report thereon of Arthur Andersen LLP, independent public accountants, dated February 13, 1998, appearing on pages 8-22 of the BTU International, Inc. 1997 Annual Report are incorporated herein by reference. In addition the financial information by quarter appearing on pages 23-24 of the BTU International, Inc. 1997 Annual Report is incorporated herein by reference. With the exception of the aforementioned information and the information incorporated by reference in items 5, 6 and 7, the 1997 Annual Report, is not deemed to be filed as part of this report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Information relating to the executive officers of the Company is included in Item 4A of Part I.

Information relating to the directors of the Company is included under the caption "Election of Directors" in the 1997 Proxy Statement for BTU International, Inc. and is incorporated herein by reference.

Information related to compliance with Section 16(a) of the Exchange Act is included under the caption "Compliance Under Section 16(a) of the Securities Exchange Act of 1934" in the 1997 Proxy Statement for BTU International, Inc. and is incorporated here by reference.

ITEM 11. EXECUTIVE COMPENSATION

Information relating to executive compensation is included under the caption "Executive Compensation" in the 1997 Proxy Statement for BTU International, Inc. and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Information relating to the security ownership of certain beneficial owners and management is included under the caption "Beneficial Ownership of Shares" in the 1997 Proxy Statement for BTU International, Inc. and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

None.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

The following documents are filed as part of this report:

Financial Statements (see Item 8)

Consolidated Balance Sheets as of December 31, 1997 and 1996

Consolidated Statements of Operations for the years ended December 31, 1997, 1996 and 1995

Consolidated Statements of Stockholders' Investment for the years ended December 31, 1997, 1996 and 1995

Consolidated Statements of Cash Flows for the years ended December 31, 1997, 1996 and 1995

Notes to Consolidated Financial Statements

Report of Independent Public Accountants

Financial Statement Schedules

Report of Independent Public Accountants

Schedule II - Valuation and Qualifying Accounts, for the years ended December 31, 1997, 1996 and 1995

All other schedules are omitted as the required information is not applicable or is included in the financial statements or related notes.

Exhibits

The exhibits which are filed with this Form 10-K or which are incorporated herein by reference are set forth in the Exhibit Index which appears in Part IV of this report beginning at page 11.

Reports on Form 8-K

No reports on Form 8-K were filed in the fourth quarter of 1997.

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To BTU International, Inc.:

We have audited in accordance with generally accepted auditing standards, the consolidated financial statements included in BTU International, Inc.'s annual report to stockholders incorporated by reference in this Form 10-K, and have issued our report thereon dated February 13, 1998. Our audit was made for the purpose of forming an opinion on those consolidated statements taken as a whole. The schedule listed in the preceding index is the responsibility of the Company's management and is presented for purposes of complying with the Securities and Exchange Commission's rules and are not part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion based on our audit and the report of other auditors, fairly states in all material respects the financial data required to be set forth therein in relation to the basic financial statements taken as a whole.

Arthur Andersen LLP

Boston, Massachusetts,
February 13, 1998

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

BTU INTERNATIONAL, INC.

Date: March 27, 1998	By: PAUL J. VAN DER WANSEM Paul J. van der Wansem President, Chief Executive Officer (principal executive officer) and Director
Date: March 27, 1998	By: THOMAS P. KEALY Thomas P. Kealy Vice President Corporate Controller and Chief Accounting Officer (principal financial and accounting officer)
Date: March 27, 1998	By: DR. JEFFREY CHUAN CHU Dr. Jeffrey Chuan Chu Director
Date: March 27, 1998	By: DAVID A.B. BROWN David A.B. Brown Director
Date March 27, 1998	By: ALEXANDER V. d'ARBELOFF Alexander V. d'Arbeloff Director

EXHIBIT INDEX

The following designated exhibits are, as indicated below, either filed herewith or have heretofore been filed with the Securities and Exchange Commission under the Securities Act of 1933 and the Securities Exchange Act of 1934 and are referred to and incorporated herein by reference to the BTU International, Inc. Registration Statement Filing on Form S-1 ("33-24882"), the annual report as reported on the 1989 Form 10-K ("1989 10-K"), the annual report as reported on the 1991 Form 10-K ("1991 10-K"), the annual report as reported on the 1992 Form 10-K ("1992 10-K"), the annual report as reported on the 1993 Form 10K ("1993 10-K"), the annual report as reported on the 1994 Form 10K ("1994 10-K"), or the annual report as reported on the 1995 Form 10K ("1995 10-K"), Or the quarterly report as reported on 9-28-97 Form 10Q(9-28-97 10-Q).

		Exhibit	SEC Docket
EXHIBIT 3.	ARTICLES OF INCORPORATION AND BY-LAWS		
Incorporated herein by reference:			
3.1	Certificate of Incorporation, as amended.	3.1	33-24882
3.2	By-Laws.	3.2	33-24882
EXHIBIT 4.	INSTRUMENTS DEFINING THE RIGHTS OF SECURITY HOLDERS, INCLUDING DEBENTURES		
Incorporated herein by reference:			
4.0	Specimen Common Stock Certificate.	4.0	33-24882
EXHIBIT 10.	MATERIAL CONTRACTS		
Incorporated herein by reference:			
10.5	Agreement to Purchase Preferred Stock dated December 18, 1984 among the Registrant and certain stockholders.	10.5	33-24882
10.6	Agreement in Connection with Purchase of Class AA Preferred Stock of B&B International Holdings, Inc. dated August 5, 1988 among the Registrant and certain stockholders.	10.6	33-24882
10.13	1988 Employee Stock Purchase Plan. *	10.13	33-24882
10.14	1982 Key Employees Stock Option Plan. *	10.14	33-24882
10.15	1989 Stock Option Plan for Directors. *	10.15	1989 10-K
10.22	Assets Purchase Agreement, dated as of March 4, 1992, between Bruce Technologies International, Inc. and BTU International, Inc.	10.22	1991 10-K
10.23	Joint Venture Agreement, dated as of March 4, 1992, among Kokusai Electric Co., Ltd., BTU International, Inc. and Bruce Technologies International, Inc.	10.23	1991 10-K
10.33	Promissory Note, dated March 3, 1992, between BTU Engineering Corporation and John Hancock Mutual Life Insurance Company.	10.33	1991 10-K

10.34	Amendment to Mortgage Deed, dated March 3, 1992, between BTU Engineering Corporation and John Hancock Mutual Life Insurance Company.	10.34	1991 10-K
10.37	BTU International, Inc. 1993 Equity Incentive Plan *	10.37	1992 10-K
10.38	Credit agreement between BTU International, Inc. and Shawmut Bank, N.A., dated November 16, 1994.	10.38	1994 10-K
10.39	BTU(UK) Limited and RD International (UK) Limited underlease, relating to Unit B15 Southwood Summit Centre	10.39	1994 10-K
10.40	First Modification to Credit Agreement between International, Inc. and Shawmut Bank, N.A., dated October 20, 1995.	10.40	1995 10-K
10.41	Second Modification to Credit Agreement between International, Inc. and Shawmut Bank, N.A., dated November 27, 1995.	10.41	1995 10-K
10.42	Mortgage note between BTU International, Inc. and John Hancock Mutual Life Insurance Company, dated June 30, 1997	10.42	9-28-97 10-Q
10.43	Credit Agreement between BTU International, Inc. and US Trust, dated September 5, 1997	10.43	9-28-97 10-Q

EXHIBIT 11. STATEMENT RE: COMPUTATION OF PER SHARE EARNINGS

Filed herewith:

11.0 Calculation of net income per common share

EXHIBIT 13. ANNUAL REPORT TO STOCKHOLDERS

Filed herewith:

13.0 BTU International, Inc. 1997 Annual Report, except for the specific portions incorporated by reference herein, the Annual Report is being furnished for information purposes only and is not deemed to be filed.

EXHIBIT 21. SUBSIDIARIES OF THE REGISTRANT

Filed herewith:

21.0 Subsidiaries of the Registrant.

EXHIBIT 23. CONSENTS OF EXPERTS AND COUNSEL

Filed herewith:

23.1 Consent of Arthur Andersen LLP

EXHIBIT 27. FINANCIAL DATA SCHEDULE

Filed herewith:

27.0 Financial Data Schedule

* - Indicates management contract or compensatory plan or arrangement.

Schedule II

BTU INTERNATIONAL, INC.
VALUATION AND QUALIFYING ACCOUNTS
(Dollars in Thousands)

For the Year Ended December 31, 1997

Description	Balance at beginning of period	Additions: Charged to costs and expenses	Additions: Charged to other accounts	Deductions- (A)	Balance at end of period
Allowance for doubtful accounts	$160	$-	$-	$-	$160

For the Year Ended December 31, 1996

Description	Balance at beginning of period	Additions: Charged to costs and expenses	Additions: Charged to other accounts	Deductions- (A)	Balance at end of period
Allowance for doubtful accounts	$191	$-	$-	$31	$160

For the Year Ended December 31, 1995

Description	Balance at beginning of period	Additions: Charged to costs and expenses	Additions: Charged to other accounts	Deductions- (A)	Balance at end of period
Allowance for doubtful accounts	$114	$77	$-	$-	$191

(A) Amounts indicated as deductions are for amounts charged against these reserves in the ordinary course of business.

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Exhibit 11

BTU INTERNATIONAL, INC.
CALCULATION OF NET INCOME PER COMMON SHARE
(Dollars in Thousands, except per share data)

	For the Year Ended December 31, 1997	1996	1995
Net income	$ 1,250	$ 3,560	$ 5,073
Dividends accrued - Class A and Class AA redeemable preferred stock	-	-	(93)
Net income applicable to common stockholders	$ 1,250	$ 3,560	$ 4,980
Weighted average number of shares outstanding			
Basic Shares	7,290,548	7,303,936	7,230,346
Effect of Dilutive Options	45,154	33,773	89,771
Diluted Shares	7,335,702	7,337,709	7,320,117
Earnings Per Share			
Basic	$ 0.17	$ 0.49	$ 0.69
Diluted	$ 0.17	$ 0.49	$ 0.68

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FINANCIAL REVIEW

SELECTED CONSOLIDATED FINANCIAL DATA:
(Thousands, except per share amounts)

FOR THE YEARS ENDED DECEMBER 31,	1997	1996	1995	1994	1993
STATEMENT OF OPERATIONS DATA:					
Net sales	$ 52,118	$ 45,811	$ 58,274	$43,342	$ 36,980
Cost of goods sold	30,431	26,768	32,022	23,297	21,759
Gross profit	21,687	19,043	26,252	20,045	15,221
Selling, general and administrative	15,349	14,123	15,583	12,697	10,948
Research, development and engineering	3,808	3,850	4,266	3,634	2,612
Restructuring charge	530	-	-	-	-
Operating income	2,000	1,070	6,403	3,714	1,661
Interest income	478	344	273	188	100
Interest expense	(488)	(599)	(563)	(609)	(611)
Gain on sale of investment	-	3,400	-	-	-
Other income (expense), net	(341)	82	90	49	(33)
Income before Provision for income taxes	1,649	4,297	6,203	3,342	1,117
Provision for income taxes	399	737	1,130	662	107
Net income	1,250	3,560	5,073	2,680	1,010
Dividends - preferred stock	-	-	(93)	(160)	(181)
Net income applicable to common stockholders	$ 1,250	$ 3,560	$ 4,980	$ 2,520	$ 829
Earnings per share:					
Basic	$ 0.17	$ 0.49	$ 0.69	$ 0.36	$ 0.12
Diluted	$ 0.17	$ 0.49	$ 0.68	$ 0.35	$ 0.12
Weighted average number of shares outstanding					
Basic Shares	7,291	7,304	7,230	7,097	7,059
Diluted Shares	7,336	7,338	7,320	7,195	7,143

AS OF DECEMBER 31,	1997	1996	1995	1994	1993
BALANCE SHEET AND OTHER DATA:					
Cash and cash equivalents	$ 11,873	$ 10,218	$ 6,145	$ 6,896	$ 4,754
Working capital	26,098	25,268	18,005	13,433	10,923
Total assets	40,379	36,763	35,834	30,965	25,845
Long-term debt	5,313	5,352	5,715	6,050	6,315
Redeemable preferred stock	-	-	-	1,200	1,767
Stockholders' investment	23,558	22,207	18,696	11,950	9,331
Book value per share	3.22	3.05	2.56	1.73	1.36
Total employees	306	323	406	322	316

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

The following table shows the percentage of net sales that certain elements of the Consolidated Statements of Operations represent:

YEARS ENDED DECEMBER 31,	1997	1996	1995
Net sales	100.0%	100.0%	100.0%
Cost of goods sold	58.4%	58.4%	55.0%
Gross profit	41.6%	41.6%	45.0%
Operating expenses:			
Selling, general and administrative	29.5%	30.8%	26.7%
Research, development and engineering	7.3%	8.4%	7.3%
Restructuring Charges	1.0%	0.0%	0.0%
Operating income	3.8%	2.4%	11.0%
Interest income	0.9%	0.7%	0.4%
Interest expense	(0.9%)	(1.3%)	(1.0%)
Gain on sale of investment	0.0%	7.4%	0.0%
Other income (expense), net	(0.6%)	0.2%	0.2%
Income before income taxes	3.2%	9.4%	10.6%
Income tax provision	0.8%	1.6%	1.9%
Net income	2.4%	7.8%	8.7%

1997 COMPARED TO 1996

During 1997 net sales increased by $ 6.3 million to $52.1 million, representing an increase of 13.8% versus 1996. A strong increase in sales occurred for the surface mount technology products which are primarily used by our large multinational customers, as many of these customers increased their capital expenditures significantly during 1997 as compared to 1996. Sales of the Company's high temperature equipment declined in 1997, primarily due to a decrease in demand for our walking beam and pusher furnaces used in nuclear fuel and ceramic sintering.

There were no material variations in the geographic dispersion of net sales for 1997 as compared to 1996. The effect of price changes for specific products has not materially impacted the change in net sales for the periods presented.

Gross profit increased by $ 2.6 million, or 13.9%, in 1997 as compared to 1996. Gross profit as a percentage of sales remained at 41.6.% for 1997 as in 1996. The increase in gross profit dollars for 1997 was due to the total increase in revenues versus 1996. The increase in surface mount technology sales where margins increased was offset by the decrease in high temperature sales which generally generate a higher gross margin percentage, these factors combined generated the same overall gross margin percent in both 1997 and 1996.

Selling, general and administrative expenses increased in 1997 by $1.2 million, or 8.7%, but decreased as a percentage of net sales to 29.5% compared to 30.8% in 1996. The higher costs in 1997 are primarily the result of: $ 0.5 million increase in commissions related to the higher sales level; and a $0.6 million increase in sales and service cost primarily in the Far East were the Company established new direct sales and service offices.

Research, development and engineering expenses in 1997 decreased by $42,000 , or 1.1%, and decreased as a percentage of net sales to 7.3% compared to 8.4% in 1996. The Company is committed to continue investing in new technologies and is pursuing new product developments in order to support growing customer requirements.

Restructuring Charge - During the first quarter of 1997 the Company incurred a restructuring charge of $530,000 related primarily to severance costs incurred as a result of certain changes in the manner the Company conducts its business. This charge represented one-time costs regarding actions taken in response to a shift in the amount of out-sourced material and a change to a direct approach to sales and service support in certain Far East territories.

Interest income increased by $134,000 or 39.0% in 1997 compared to 1996. This increase in interest income is due to the higher investment balances in 1997 versus 1996.

Interest Expense decreased in 1997 by $ 111,000 or 18.5% compared to 1996. The decrease is primarily due to the lower level of interest expense on the new mortgage, which carries a lower interest rate, as of June 30, 1997.

Other Income and (Expense) reflects various non-operating expenses incurred during 1997. The Company incurred a one-time charge of $ 271,000 for an adverse jury determination regarding a California service representative during the second quarter of 1997, this represents the majority of other expenses.

Income taxes decreased in 1997 by $338,000 when compared to 1996. This decrease is directly related to the decrease in income before income taxes, primarily due the gain on sale of investment in 1996 which generated $3.4 million in pre-tax income in 1996. The Company has recorded an effective tax rate for 1997 of 24.2%, as compared to an effective tax rate of 17.2% for 1996. These compare to the statutory USA Federal rate of 34%. The 1997 provision reflects the use of certain NOL carryforwards available to the Company's U.K. subsidiary, which was profitable in 1997. During 1996 the Company recorded the benefit of net operating losses utilized, resulting in the lower effective tax rates.

1996 COMPARED TO 1995

During 1996 net sales decreased by $12.5 million to $45.8 million, representing a decrease of 21.4% versus 1995. The major decrease in sales occurred in the high-end surface mount technology products. These products are primarily used by our large multinational customers. Most of these customers did significantly decrease their capital expenditures in line with the slowdown in the electronics industry during 1996. Sales of the company's mid-range surface mount technology products continued to grow in part due to the increase in new customers.

There were no material variations in the geographic dispersion of net sales for 1996 as compared to 1995. The effect of price changes for specific products has not materially impacted the change in net sales for the periods presented.

Gross profit decreased by $7.2 million, or 27.5%, in 1996 as compared to 1995. Gross profit as a percentage of sales also decreased during 1996 to 41.6.% versus 45.0% in 1995. The primary reason for this decrease in margin dollars for 1996 was due to the overall decrease in revenues versus 1995. The decrease in the margin percentage was primarily due to the change in the product mix sold in 1996 versus 1995; from high-end to mid-range surface mount technology products which carry a lower gross profit margin, as well as lower absorption of overhead costs in 1996.

Selling, general and administrative expenses decreased in 1996 by $1.5 million, or 9.4%, but increased as a percentage of net sales to 30.8% compared to 26.7% in 1995 as a result of the 1996 sales decline. The lower costs in 1996 are primarily the result of: $1.3 million in decreased commissions related to the lower sales level; and a $0.5 million decrease in employee profit sharing costs and executive bonuses, commensurate with the Company's lower overall profit levels.

Research, development and engineering expenses in 1996 decreased by $0.4 million, or 9.8%, but increased as a percentage of net sales to 8.4% compared to 7.3% in 1995. The decrease in overall spending was related to the costs associated with the timing of new product development and introduction.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Interest income increased by $71,000 in 1996 compared to 1995. This increase in interest income is due to the investment of additional cash resulting from the sale of the Company's minority interest in Bruce Technologies International Inc. (BTI) in June 1996.

On June 8, 1996 the Company sold its 19.4% investment in BTI for $ 7,000,000, resulting in a pretax gain of $ 3,400,000, net of direct costs.

Income taxes decreased in 1996 by $393,000 compared to 1995. This decrease is directly related to the decrease in income before income taxes generated by the lower sales level in 1996. The Company has recorded an effective tax rate during 1996 of 17.5%, as compared to an effective tax rate of 18.2% during 1995. These compare to the statutory USA Federal rate of 34%. During 1996 and 1995, the Company has recorded the benefit of net operating losses utilized, resulting in the lower effective tax rates.

LIQUIDITY AND CAPITAL RESOURCES

During 1997, the Company completed two financing agreements. The Company refinanced its mortgage note payable with the same institution. In addition, to provide greater flexibility in working capital and potential expansion in the future, the Company expanded its line of credit by entering into a new long term credit agreement with a Bank.

The Company has an unsecured revolving line of credit with a bank which allows for the aggregate of borrowings and/or letters of credit of up to $14,000,000. Borrowings are available to the Company at either the Bank's base rate or a Eurodollar rate, as elected by the Company. This loan agreement is available to the Company until April 30, 2002, and is subject to certain financial covenants.

The Company has a mortgage note, which is secured by its land and building. The Mortgage note payable had an outstanding balance at December 31, 1997 of $5,519,000. The Company refinanced the mortgage note payable with the same institution on June 30, 1997, extending the maturity date to July 1, 2004. The mortgage requires monthly payments of $53,922, including interest at 8.125%. A final balloon payment of $3,825,000 is due at maturity.

During 1997, the Company has invested approximately $ 1,300,000 in capital improvements primarily to enhance the level of quality in the Company's products through an improved manufacturing facility. The Company does not presently have any outstanding commitments for capital expenditures that would have a material impact on the Company's liquidity and future capital resources.

The Company expects that its current cash position, ability to borrow necessary funds, as well as cash flows from operations will be sufficient to meet its corporate, operating and capital requirements into 1999.

OTHER MATTERS

The impact of inflation and the effect of foreign exchange rate changes during 1997 has had an immaterial impact on the Company's business and financial results.

The Company has assessed and continues to assess the impact of the Year 2000 issue on its operations from both a product and operational basis. Additionally, the Company has begun an assessment of its supplier compliance with Year 2000 issues. Although final costs have yet to be determined, it is anticipated that these Year 2000 costs will not materially impact the financial results of the Company.

This annual report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the Company's current plans and expectations and involve risks and uncertainties that could cause actual future activities and results of operations to be materially different from those set forth in the forward-looking statements. Important factors that could cause actual results to differ include, among others, general market conditions governing supply and demand, the timely availability and acceptance of new products, and the impact of competitive products and pricing and other risks detailed in the Company's SEC reports.

CONSOLIDATED BALANCE SHEETS
(Thousands, except share amounts)

As of December 31,	1997	1996
ASSETS CURRENT ASSETS		
Cash and cash equivalents (Notes 1 and 12)	$11,873	$10,218
Trade accounts receivable, less reserves of $160 in 1997 and 1996, (Note 1)	12,334	10,630
Inventories (Note 1)	10,028	9,760
Other current assets (Note 6)	1,124	1,661
TOTAL CURRENT ASSETS	35,359	32,269
PROPERTY, PLANT AND EQUIPMENT, AT COST (NOTES 1 AND 3)		
Land	210	210
Buildings and improvements	5,949	5,591
Machinery and equipment	5,783	5,021
Furniture and fixtures	749	731
	12,691	11,553
Less-accumulated depreciation	8,077	7,288
NET PROPERTY, PLANT AND EQUIPMENT	4,614	4,265
Other assets, net of accumulated amortization of $437 in 1997 and $421 in 1996.	406	229
TOTAL ASSETS	$40,379	$36,763

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

CONSOLIDATED BALANCE SHEETS
(Thousands, except share amounts)

	As of December 31,	1997	1996
LIABILITIES AND STOCKHOLDERS' INVESTMENT	CURRENT LIABILITIES		
	Current maturities of long-term debt and capital lease obligations (Note 3)	$ 224	$ 363
	Trade accounts payable (Note 10)	6,013	4,124
	Customer deposits	428	441
	Accrued expenses (Note 2)	2,596	2,073
	TOTAL CURRENT LIABILITIES	9,261	7,001
	Long-term debt and capital lease obligations, less current maturities (Notes 3 and 12)	5,313	5,352
	Deferred income taxes (Notes 1 and 6)	2,247	2,203
	TOTAL LIABILITIES	16,821	14,556
	Commitments and contingencies (Note 3)		
	STOCKHOLDERS' INVESTMENT (NOTE 8)		
	Series preferred stock, $1 par value- Authorized-5,000,000 shares; Issued and outstanding-none	-	-
	Common stock, $.01 par value- Authorized-25,000,000 shares; Issued-7,674,923 and 7,635,167 shares at December 31, 1997 and 1996, respectively	77	76
	Additional paid-in capital	20,250	20,115
	Retained earnings	4,061	2,811
	Less treasury stock- 355,281 shares, at cost, at December 31, 1997 and 1996	(1,183)	(1,183)
		23,205	21,819
	Cumulative translation adjustment (Note 1)	353	388
	TOTAL STOCKHOLDERS' INVESTMENT	23,558	22,207
	TOTAL LIABILITIES AND STOCKHOLDERS' INVESTMENT	$ 40,379	$ 36,763

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

CONSOLIDATED STATEMENTS OF OPERATIONS
(Thousands, except per share amounts)

FOR THE YEARS ENDED DECEMBER 31,	1997	1996	1995
NET SALES (NOTES 1, 4, AND 5)	$ 52,118	$ 45,811	$ 58,274
Cost of goods sold	30,431	26,768	32,022
GROSS PROFIT	21,687	19,043	26,252
Selling, general and administrative (Note 10)	15,349	14,123	15,583
Research, development and engineering (Note 1)	3,808	3,850	4,266
Restructuring charge	530	-	-
OPERATING INCOME	2,000	1,070	6,403
Interest income	478	344	273
Interest expense (Note 3)	(488)	(599)	(563)
Gain on sale of investment (Note 9)	-	3,400	-
Other income (expense)	(341)	82	90
INCOME BEFORE PROVISION FOR INCOME TAXES	1,649	4,297	6,203
Provision for income taxes (Notes 1 and 6)	399	737	1,130
NET INCOME	1,250	3,560	5,073
Dividends accrued-Class A and AA redeemable preferred stock	-	-	(93)
NET INCOME APPLICABLE TO COMMON STOCKHOLDERS	$ 1,250	$ 3,560	$ 4,980
EARNINGS PER SHARE			
BASIC	$ 0.17	$ 0.49	$ 0.69
DILUTED	$ 0.17	$ 0.49	$ 0.68
WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING			
BASIC SHARES	7,291	7,304	7,230
EFFECT OF DILUTIVE OPTIONS	45	34	90
DILUTED SHARES	7,336	7,338	7,320

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

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' INVESTMENT

(Thousands)

	COMMON STOCK	ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS (DEFICIT)	TREASURY STOCK	CUMULATIVE TRANSLATION ADJUSTMENT	TOTAL STOCKHOLDERS' INVESTMENT
BALANCE AT DECEMBER 31, 1994	$ 72	$ 18,226	$ (5,729)	$ (935)	$ 316	$ 11,950
Net income	-	-	5,073	-	-	5,073
Translation adjustment	-	-	-	-	16	16
Sales of common stock (Note 8)	2	230	-	-	-	232
Tax benefit of stock options exercised	-	318	-	-	-	318
Conversion of preferred AA shares	2	1,198	-	-	-	1,200
Dividends declared	-	-	(93)	-	-	(93)
BALANCE AT DECEMBER 31, 1995	$ 76	$ 19,972	$ (749)	$ (935)	$ 332	$ 18,696
Net income	-	-	3,560	-	-	3,560
Translation adjustment	-	-	-	-	56	56
Sales of common stock (Note 8)	-	119	-	-	-	119
Tax benefit of stock options exercised	-	24	-	-	-	24
Purchase of treasury stock	-	-	-	(248)	-	(248)
BALANCE AT DECEMBER 31, 1996	$ 76	$ 20,115	$ 2,811	$ (1,183)	$ 388	$ 22,207
NET INCOME	-	-	1,250	-	-	1,250
TRANSLATION ADJUSTMENT	-	-	-	-	(35)	(35)
SALES OF COMMON STOCK (NOTE 8)	1	108	-	-	-	109
TAX BENEFIT OF STOCK OPTIONS EXERCISED	-	27	-	-	-	27
BALANCE AT DECEMBER 31, 1997	$ 77	$ 20,250	$ 4,061	$ (1,183)	$ 353	$ 23,558

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

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Thousands)

FOR THE YEARS ENDED DECEMBER 31,	1997	1996	1995
CASH FLOWS FROM OPERATING ACTIVITIES-			
Net income	$ 1,250	$ 3,560	$ 5,073
Adjustments to reconcile net income to net cash provided by (used in) operating activities-			
Depreciation and amortization	961	832	740
Deferred income taxes	44	756	(267)
Net gain on sale of investment	-	(3,400)	-
Net changes in operating assets and liabilities-			
Accounts receivable	(1,704)	878	(1,816)
Inventories	(268)	139	(4,381)
Other current assets	537	(1,232)	949
Accounts payable	1,889	(483)	1,601
Customer deposits	(13)	45	(1,411)
Accrued expenses	523	(2,564)	547
Other assets	(193)	(3)	(13)
NET CASH PROVIDED BY (USED IN) OPERATING ACTIVITIES	3,026	(1,472)	1,022
CASH FLOWS FROM INVESTING ACTIVITIES-			
Purchases of property, plant and equipment, net	(1,294)	(946)	(1,099)
Net proceeds from sale of investment	-	6,876	-
NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES	(1,294)	5,930	(1,099)
CASH FLOWS FROM FINANCING ACTIVITIES-			
Principal payments under long-term debt and capital lease obligations	(300)	(336)	(310)
Proceeds from mortgage refinance	122	-	-
Issuance of common stock	109	119	232
Tax benefit of stock options exercised	27	24	318
Purchase of treasury stock	-	(248)	-
Payments of preferred stock dividends	-	-	(363)
Redemption of Class A preferred stock	-	-	(567)
NET CASH USED IN FINANCING ACTIVITIES	(42)	(441)	(690)
EFFECT OF EXCHANGE RATES ON CASH	(35)	56	16
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	1,655	4,073	(751)
CASH AND CASH EQUIVALENTS, AT BEGINNING OF YEAR	10,218	6,145	6,896
CASH AND CASH EQUIVALENTS, AT END OF YEAR	$ 11,873	$ 10,218	$ 6,145

Supplemental disclosures of cash flow information are included in Note 11. The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Nature of Operations

BTU International, Inc. (the Company) and its wholly owned subsidiaries are primarily engaged in the manufacture, sale, installation and service of thermal processing systems, which are used as capital equipment in various manufacturing processes, primarily in the electronics industry.

b. Principles of Consolidation and the Use of Estimates

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany balances and transactions have been eliminated in consolidation. The preparation of these financial statements required the use of certain estimates by management in determining the entity's assets, liabilities, revenue and expenses. Actual results may vary from these estimates.

c. Cash and Cash Equivalents

The Company has classified certain liquid financial instruments, with original maturities of less than three months, as cash equivalents.

d. Inventories

Inventories consist of material, labor and overhead and are valued at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method for all inventories.

Inventories consist of:
(Thousands)

DECEMBER 31,	1997	1996
Raw materials and manufactured components	$ 4,883	$ 5,660
Work-in-process	3,723	2,527
Finished goods	1,422	1,573
	$ 10,028	$ 9,760

e. Property, Plant and Equipment

The Company provides for depreciation using the straight-line method over a period sufficient to amortize the cost of the asset over its useful life. The estimated useful lives for depreciation purposes are as follows:

Buildings and improvements	8-25	years
Machinery and equipment	2-8	years
Furniture and fixtures	5-8	years

Maintenance and repairs are charged to operations as incurred. When equipment and improvements are sold or otherwise disposed of, the asset cost and accumulated depreciation are removed from the accounts, and the resulting gain or loss, if any, is included in the results of operations.

f. Income Taxes

The Company complies with the requirements of Statement of Financial Accounting Standards (SFAS) No. 109, "Accounting for Income Taxes." Under SFAS No. 109, deferred tax assets and liabilities are recognized for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. The amounts of deferred tax assets or liabilities are based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse.

g. Translation of Foreign Currencies

Foreign currencies are translated in accordance with SFAS No. 52, "Foreign Currency Translation." Under this standard, assets and liabilities of the Company's foreign operations are translated into United States dollars at current exchange rates. Income and expense items are translated at average rates of exchange prevailing during the year. Gains and losses arising from translation are accumulated as a separate component of stockholders' investment. Exchange gains and losses (if any) arising from transactions denominated in foreign currencies are included in income as incurred. No such exchange gains or losses were incurred in the periods presented.

h. Patents

The Company has patents for certain of its products and processes. No value has been assigned to these patents in the accompanying consolidated financial statements.

i. Revenue Recognition

Revenue is recognized based upon shipment of product to the customer, except for large contracts that are not completed within the normal operating cycle of the business which are accounted for on a percentage completion basis. Under the percentage completion method, revenues are recognized in proportion to costs incurred compared to total estimated costs, full provision is made for any anticipated loss. No percentage completion revenues were recorded at December 31, 1997. Amounts related to such contracts included in net sales were $1,361,000 and $1,102,000 for the years ended December 31, 1996 and 1995, respectively.

j. Research, Development and Engineering

Research, development and engineering costs are charged to expense as incurred.

k. Earnings Per Share Information

Earnings per share in 1997, 1996 and 1995 have been restated to comply with the Statement of Financial Accounting Standards (SFAS) No. 128 "Earning Per Share." Under SFAS No. 128, Earnings Per Share (EPS) is presented under two calculations, Basic and Diluted. Basic EPS is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted EPS is computed using the weighted average number of common and dilutive potential common shares outstanding during the period, using the treasury stock method. Options outstanding that were not included in the determination of diluted EPS, because they were antidilutive were 42,500, 123,800 and 0 in 1997,1996 and 1995 respectively.

l. Reclassification

Certain prior year financial statement information has been reclassified to conform with the current year presentation.

NOTE 2: ACCRUED EXPENSES

Accrued expenses at December 31, 1997 and 1996 consisted of the following:

(Thousands)	1997	1996
Accrued commissions	$ 1,441	$ 1,112
Accrued warranty	459	414
Accrued income taxes	-	41
Accrued bonus	89	-
Other	607	506
	$ 2,596	$ 2,073

NOTE 3: DEBT, CAPITAL LEASES, COMMITMENTS AND CONTINGENCIES

Debt at December 31, 1997 and 1996 consisted of the following:

(Thousands)	1997	1996
Mortgage note payable	$ 5,519	$ 5,664
Capital lease obligations, interest rates ranging from 6.9% to 9.6%, net of interest of $2 and $6 in 1997 and 1996, respectively	18	51
	5,537	5,715
Less-current maturities	224	363
	$ 5,313	$ 5,352

The mortgage note payable is secured by the Company's land and building and requires monthly payments of $53,922, including interest at 8.125%. This mortgage note payable was refinanced with the same institution on June 30, 1997, extending the maturity date to July 1, 2004. The new agreement requires a final balloon payment of $ 3,825,000 at maturity.

The previous mortgage required a monthly payment of $ 68,500 including interest at 9.0%, these terms were in affect until June 30, 1997.

Under the terms of the debt, the minimum repayments of long-term debt and capital lease obligations by year are as follows:

(Thousands)

	8.125% MORTGAGE	CAPITAL LEASES	TOTAL
1998	$ 206	$ 18	$ 224
1999	224	-	224
2000	242	-	242
2001	263	-	263
2002	285	-	285
2003	310	-	310
2004	3,989	-	3,989
	$ 5,519	$ 18	$ 5,537

At December 31, 1997, the Company has an unsecured revolving line of credit, with a US bank, which allows for aggregate borrowings and/or letters of credit of up to $14,000,000. Borrowings are available to the Company at either the Bank's base rate or a Eurodollar rate, as elected by the Company. This loan agreement is available to the Company until April 30, 2002, subject to the maintenance of certain financial covenants. At December 31, 1997, the Company was in compliance with all covenants of this agreement. As of December 31, 1997, no amounts were outstanding under this unsecured revolving line of credit. Available borrowings under the line were reduced by $ 71,000 which was committed under a stand by letter of credit.

The Company conducts its UK operations in a facility that is under a long-term operating lease expiring in 2010. Rent expense under this lease was approximately $143,000 in 1997, $145,000 in 1996 and $205,000 in 1995. In 1994, the Company sublet a portion of this leased space. The initial term of the sublease is five years. Under the terms of the sublease the Company will receive approximately $132,000 per year. At the end of the initial five year sublet period, the sublease can be extended at market rates for two subsequent and concurrent five year periods. As of December 31, 1997, assuming the sublease is not extended, the future minimum lease commitment for this facility is $3,130,000, payable as follows $145,000 for each year 1998 and 1999, $250,000 for the year 2000, $280,000 for each year 2001 and 2002 and $2,030,000 thereafter through 2010.

The Company is a party to various claims arising in the normal course of business. Management believes the resolution of these matters will not have a material impact on the Company's results of operations or financial condition.

NOTE 4: FOREIGN OPERATIONS

Export sales were $26,057,000 in 1997, $24,380,000 in 1996 and $27,767,000 in 1995.

The following table shows the percentages of the Company's revenues by geographic region, for the last three years:

	1997	1996	1995
United States	50%	47%	52%
Europe	23	25	19
Far East	24	23	24
Other	3	5	5

NOTE 5: SIGNIFICANT CUSTOMERS

One customer individually represented approximately 14% of revenues in 1997. No individual customer accounted for greater than 10% of revenues in 1996 or 1995.

NOTE 6: INCOME TAXES

The components of income before provision for income taxes are as follows:

(Thousands) FOR THE YEAR	1997	1996	1995
Domestic	$ 1,040	$ 3,985	$ 5,762
Foreign	609	312	441
Total	$ 1,649	$ 4,297	$ 6,203

For the years ended December 31, 1997, 1996 and 1995, the Company's provision for income taxes are as shown below:

(Thousands)	FEDERAL	STATE	FOREIGN	TOTAL
DECEMBER 31, 1997				
CURRENT	$ 308	$ 47	$ 0	$ 355
DEFERRED	39	5	0	44
	$ 347	$ 52	$ 0	$ 399
DECEMBER 31, 1996				
Current	$ (50)	$ 31	$ 0	$ (19)
Deferred	578	178	0	756
	$ 528	$ 209	$ 0	$ 737
DECEMBER 31, 1995				
Current	$ 1,163	$ 234	$ 0	$ 1,397
Deferred	(441)	174	0	(267)
	$ 722	$ 408	$ 0	$ 1,130

The differences between the statutory United States federal income tax rate of 34% versus the Company's effective tax rate are as follows:

(Thousands) FOR THE YEAR	1997	1996	1995
Tax provision at United States statutory rate	$ 561	$ 1,461	$ 2,109
State income taxes, net of federal benefit	48	184	269
Utilization of domestic net operating loss carryforwards and reduction of valuation reserves	-	(769)	(1,122)
Utilization of foreign net operating loss carryforwards	(189)	(97)	(137)
Non-deductible and other	(21)	(42)	11
Total provision	$ 399	$ 737	$ 1,130

Deferred income taxes and prepaid income taxes are comprised of the following at December 31, 1997 and 1996:

(Thousands)	1997	1996
Revenues recognized for books, not tax	$ (4,767)	$ (5,720)
Accelerated tax depreciation	(196)	(240)
Other	(116)	(116)
Total deferred liabilities	(5,079)	(6,076)
Inventory reserves	233	253
Inventory capitalization	78	341
Commissions	-	756
Other	453	283
Federal tax net operating loss carryforward	559	732
Federal tax credit carryforwards	1,805	1,804
Total deferred assets	3,128	4,169
Total net deferred liability	(1,951)	(1,907)
Valuation allowance	(296)	(296)
Net deferred income taxes	$ (2,247)	$ (2,203)

The valuation allowance relates to uncertainty surrounding the realization of the deferred tax assets, principally certain tax loss and credit carryforwards. Realization is dependent on generating sufficient taxable income prior to expiration of the loss carryforwards. As of December 31, 1997, the Company had federal tax net operating loss carryforwards of $1,645,000, which expire beginning in 2007. In addition, the Company has research and development and AMT credit carryforwards of $1,805,000, which expire beginning in 1999. The tax carryforwards are subject to review and possible adjustment by the Internal Revenue Service. Additionally, changes in ownership may limit the utilization of US net operating losses for tax purposes in any one year, deferring the use of these losses to future years. Included in other current assets is a refundable income tax receivable of $ 587,000 as of December 31, 1997 and $1,162,000 as of December 31, 1996. In addition the Company's UK subsidiary utilized some of it's net operating loss carryforwards to reduce the current consolidated tax provision. The UK subsidiary has $ 2,265,000 of net operating loss carryforwards available at December 31, 1997. The benefit of these losses are being recognized as utilized.

NOTE 7: EMPLOYEE BENEFITS

The Company has management incentive and profit sharing plans for its executives and all of its employees. These plans provide for bonuses upon the attainment of stipulated earnings per share and operating income targets. Under these plans, $ 89,000 was expensed in 1997, no amounts were expensed in 1996, while $801,000 in expense was recorded in 1995.

The Company has a deferred 401(k) contribution plan that is available to cover all domestic employees of the Company who have met certain length of service requirements. Subject to non-discriminatory restrictions on highly compensated employees, participants can voluntarily contribute up to 17% of their compensation to the plan, and the Company, at its discretion, may match this contribution up to a stipulated percentage. The Company's expense under the plan was $ 170,000, $191,000 and $172,000 for the years ended December 31, 1997, 1996 and 1995, respectively.

NOTE 8: STOCK OPTION AND PURCHASE PLANS

The Company has two stock option plans. The 1989 Stock Plan for Directors (1989 Plan) provides for stock options to certain directors of the Company. The 1993 Equity Incentive Plan (1993 Plan) provides for stock options for selected key employees and the Company's non-employee directors. Under the terms of the 1993 Plan, other stock awards can also be granted at the discretion of the Company's Board of Directors.

Under each plan, the exercise price of the options is not less than fair market value at the date of the grants. The 1989 Plan options expire over seven years and the 1993 Plan options expire over periods not to exceed 10 years. Shares available for future stock option grants, pursuant to these plans, are 127,763 at December 31, 1997, 330,763 at December 31, 1996, and 449,323 at December 31, 1995.

A summary of all stock option activity for the years ended December 31, 1997, 1996 and 1995 is as follows:

	1997		1996		1995	
	NUMBER OF SHARES	WEIGHTED AVERAGE PRICE PER SHARE	Number of Shares	Weighted Average Price Per Share	Number of Shares	Weighted Average Price Per Share
Outstanding at beginning of year	189,095	$ 3.64	120,045	$ 1.98	257,612	$ 1.71
Granted	234,500	3.98	130,100	4.49	2,000	4.25
Exercised	(24,405)	2.50	(49,510)	1.69	(136,027)	1.50
Forfeited	(31,500)	3.90	(11,540)	4.32	(3,540)	2.00
Outstanding at end of year	367,690	$ 3.91	189,095	$ 3.64	120,045	$ 1.98
Options exercisable at end of year	66,790	$ 2.92	36,517	$ 2.05	52,782	$ 1.87

At December 31, 1997 the outstanding options have exercise prices ranging from $ 1.38 to $ 6.19 and a weighted average remaining contractual life of 5.6 years.

The Company has an Employee Stock Purchase Plan. Under the terms of the plan, employees are entitled to purchase shares of common stock at the lower of 85% of fair market value at the beginning or the end of each six-month option period. A total of 300,000 shares has been reserved for issuance under this plan, of which 59,228 remain available at December 31, 1997. During 1997, a total of 15,351 shares were purchased at prices ranging from $2.55 to $3.83 per share.

The Company applies Accounting Principles Board Opinion No. 25 and related Interpretations in accounting for its stock option and purchase plans. Accordingly, no compensation cost has been recognized related to the plans. Had compensation cost for the plans been determined based on the fair value at the grant dates for the awards under these plans consistent with SFAS No. 123, "Accounting for Stock-Based Compensation", the Company's net income and net income per share would have been reduced to the pro forma amounts indicated below:

(Thousands except per share amounts) FOR THE YEAR		1997	1996	1995
Net income	As reported	$ 1,250	$ 3,560	$ 5,073
	Pro forma	1,140	3,516	5,063
Income per diluted share	As reported	$ 0.17	$ 0.49	$ 0.68
	Pro forma	0.16	0.48	0.68

Pro forma compensation costs were estimated using the Black-Scholes option pricing model using the following weighted average assumptions for grants in 1997, 1996 and 1995, respectively: a dividend yield rate of 0 for each year; expected lives of 5.0, 4.5 and 1.2 years; expected volatility of 68.2%, 55.3% and 66.9%; and risk free interest rates of 6.4%, 6.2% and 6.3%. The weighted average fair value of options granted during 1997, 1996 and 1995 was $2.48, $2.29 and $1.99, respectively.

As the SFAS No. 123 presentation has not been applied to options granted prior to January 1, 1995, the resulting pro forma reduction in net earnings and earnings per share may not be representative of what could be expected in future years.

NOTE 9: SALE OF INVESTMENT.

In 1996, the Company sold its 19.4% minority interest in Bruce Technologies International, Inc. (BTI) for $7,000,000. As a result the Company recognized a pretax gain on this investment of $3,400,000, net of direct costs.

NOTE 10: RELATED PARTY TRANSACTIONS

During 1997 and 1996, certain transactions were made between the Company and certain related parties, all of which management believes were at arms length. These transactions included payments to two of the Company's directors in 1997 and one director in 1996 for consulting services of $44,000 and $15,000 in 1997 and 1996, respectively. The Company also had related party transactions with respect to the purchase of certain software development and components from a company which is partially owned by one of the Company's key employees. The amount of contract software and hardware purchased from this party in the ordinary course of doing business was $827,000 and $769,000 in 1997 and 1996, respectively; as well, $ 57,000 and $ 81,000 is included in trade accounts payable on the Consolidated Balance Sheets at December 31, 1997 and 1996, respectively.

NOTE 11: SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION

(Thousands)

FOR THE YEAR	1997	1996	1995
Cash paid (received) during the year for-			
Interest	$ 488	$ 599	$ 563
Income taxes	(391)	1,778	85
Supplemental schedule of noncash financing activities-			
Class AA preferred stock conversion	-	-	1,200
Accrual of preferred stock dividends	-	-	96

NOTE 12: DISCLOSURES ABOUT THE FAIR VALUE OF FINANCIAL INSTRUMENTS

The following methods and assumptions were used to estimate the fair value of each class of financial instrument for which it is practicable to estimate that value:

a. Cash and Cash Equivalents - The carrying amount of these assets on the Company's Consolidated Balance Sheet approximates their fair value because of the short maturity of these instruments.

b. Long-term Debt and Capital Lease Obligations - The fair value of this long-term indebtedness as of December 31, 1997 and 1996 were approximately $ 5,536,792 and $ 5,528,782 based on a discounted cash flow analysis, using the prevailing cost of capital for the Company as of each date.

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To BTU International, Inc.:

We have audited the accompanying consolidated balance sheets of BTU International, Inc. (a Delaware corporation) and subsidiaries as of December 31, 1997 and 1996, and the related consolidated statements of operations, stockholders' investment and cash flows for each of the three years in the period ended December 31, 1997. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We did not audit the financial statements of BTU Europe Ltd. (a subsidiary of the Company), which statements reflect total assets, total revenues and total net income of 3 percent, 5 percent and 49 percent in 1997 and 5 percent, 6 percent and 9 percent in 1996, respectively, of the consolidated totals. Those statements were audited by other auditors whose report has been furnished to us and our opinion, insofar as it relates to the amounts included for that entity, is based solely on the report of the other auditors.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits and the report of other auditors provide a reasonable basis for our opinion.

In our opinion, based on our audit and the report of other auditors, the financial statements referred to above present fairly, in all material respects, the financial position of BTU International, Inc. and subsidiaries as of December 31, 1997 and 1996, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1997 in conformity with generally accepted accounting principles.

ARTHUR ANDERSEN LLP

Boston, Massachusetts
February 13, 1998

FINANCIAL INFORMATION BY QUARTER
(UNAUDITED)

(Thousands, except per share amounts)

		March 30,	June 29,	Sept. 28,	Dec. 31,
1997	NET SALES	$ 11,026	$ 12,799	$ 12,722	$ 15,571
	GROSS PROFIT	4,791	5,168	5,165	6,563
	OPERATING INCOME	(405)	625	601	1,179
	NET INCOME	(276)	303	485	738
	EARNINGS PER SHARE				
	BASIC	$ (0.04)	$ 0.04	$ 0.07	$ 0.10
	DILUTED	$ (0.04)	$ 0.04	$ 0.07	$ 0.10
	WEIGHTED AVERAGE SHARES OUTSTANDING				
	BASIC	7,280	7,281	7,287	7,306
	DILUTED	7,304	7,307	7,386	7,432

		March 31,	June 30,	Sept. 29,	Dec. 31,
1996	Net sales	$ 11,748	$ 11,746	$ 10,373	$ 11,944
	Gross profit	5,248	4,761	4,280	4,754
	Operating income	507	404	117	42
	Net income	357	3,093	74	36
	Earnings per share				
	Basic	$ 0.05	$ 0.42	$ 0.01	$ 0.01
	Diluted	$ 0.05	$ 0.42	$ 0.01	$ 0.01
	Weighted average shares outstanding				
	Basic	7,289	7,297	7,331	7,299
	Diluted	7,365	7,345	7,359	7,323

FINANCIAL INFORMATION BY QUARTER (CONTINUED)
(UNAUDITED)

COMMON STOCK MARKET PRICES PER SHARE FOR THE QUARTERS ENDED	HIGH	LOW
MARCH 30,1997	$ 4.000	$ 2.875
JUNE 29, 1997	4.625	2.500
SEPTEMBER 28, 1997	6.875	3.500
DECEMBER 31, 1997	7.438	5.063
March 31, 1996	$ 7.375	$ 4.188
June 30, 1996	6.250	3.875
September 29, 1996	4.250	2.875
December 31, 1996	3.563	2.625

The Company's common stock is traded in The Nasdaq National Market under the symbol BTUI. There were approximately 490 stockholders of record as of March 24, 1998.

CORPORATE INFORMATION

TRANSFER AGENT
Bank of Boston
C/O Boston EquiServe, L.P.
Mail Stop 45-02-64
PO Box 644
Boston, Massachusetts 02105-0644

STOCK LISTING
BTU International, Inc.
common stock is traded on
The Nasdaq National Market
under the symbol "BTUI"

SEC FORM 10-K
A copy of the company's Form 10-K,
filed with the Securities and Exchange
Commission (SEC), is available
without charge upon written request to:

Vice President, Corporate Controller
BTU International, Inc.
23 Esquire Road
North Billerica, Massachusetts 01862
(978) 667-4111, extension 106

GENERAL COUNSEL
Ropes & Gray
One International Place
Boston, Massachusetts 02110

INDEPENDENT PUBLIC
ACCOUNTANTS
Arthur Andersen LLP
225 Franklin Street
Boston, Massachusetts 02110

ANNUAL MEETING
The annual meeting of stockholders
will be held on May 22, 1998
at 10:00 AM EST at BTU International,
23 Esquire Road, North Billerica,
Massachusetts 01862

HEADQUARTERS
BTU International, Inc.
23 Esquire Road
North Billerica, Massachusetts 01862

OFFICERS
Paul J. van der Wansem
Chairman, President and Chief Executive Officer

Santo J. DiNaro
Vice President of Operations and Engineering

Thomas P. Kealy
Vice President, Corporate Controller and
Chief Accounting Officer

DIRECTORS
Paul J. van der Wansem
Chairman, President and Chief Executive Officer

Alexander V. d'Arbeloff
Chairman
Teradyne, Inc.

David A.B. Brown
President
The Windsor Group, Inc.

Dr. Jeffrey Chuan Chu
Chairman
Columbia International Corporation

AUDIT COMMITTEE
Alexander V. d'Arbeloff
David A.B. Brown
Dr. Jeffrey Chuan Chu

COMPENSATION COMMITTEE
Alexander V. d'Arbeloff
David A.B. Brown
Dr. Jeffrey Chuan Chu

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Exhibit 21

SUBSIDIARIES OF THE REGISTRANT

BTU Overseas, Limited (Fed. I.D. # 04-2757966)
BTU Engineering FSC, Inc. (Fed. I.D. # 04-2736403)
BTU Europe LTD
BTU GmbH

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Exhibit 23.1

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation of our reports included in and incorporated by reference in this Form 10-K, into the Company's previously filed Registration Statements on Form S-8 File No. 33-28344, File No. 33-29113, File No. 33-59045 and File No. 33-59081.

Arthur Andersen LLP

Boston, Massachusetts,
March 26, 1998

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