

Securities and Exchange Commission  
Washington, D.C. 20549

FORM 10-K  
ANNUAL REPORT

Pursuant to Section 13 or 15 (d) of the  
Securities Exchange Act of 1934  
For the fiscal year ended  
December 31, 1997

Commission file number 0-2504

MINE SAFETY APPLIANCES COMPANY  
A Pennsylvania Corporation  
IRS Employer Identification No. 25-0668780  
121 Gamma Drive  
RIDC Industrial Park  
O'Hara Township  
Pittsburgh, Pennsylvania 15238  
Telephone 412/967-3000

Securities registered pursuant to Section 12(g) of the Act:

Preferred Stock Purchase Rights

Common Stock, no par value

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 1997

Commission File No. 0-2504

MINE SAFETY APPLIANCES COMPANY

(Exact name of registrant as specified in its charter)

Pennsylvania

25-0668780

(State or other jurisdiction of  
incorporation or organization)

(IRS Employer Identification No.)

121 Gamma Drive  
RIDC Industrial Park  
O'Hara Township  
Pittsburgh, Pennsylvania

15238

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: 412/967-3000

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Preferred Stock Purchase Rights

(Title of Class)

Common Stock, no par value

(Title of Class)

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 and (2) has been subject to such filing requirements for the past 90 days.

Yes  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 registrant's knowledge, in the definitive proxy statement incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.  
[ X ]

As of February 27, 1998, there were outstanding 5,053,510 shares of common stock, no par value including 600,000 shares held by the Mine Safety Appliances Company Stock Compensation Trust. Total market value of outstanding voting stock as of February 27, 1998 was \$313,317,620. The aggregate market value of voting stock held by non-affiliates as of February 27, 1998 was \$171,667,770.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents have been incorporated by reference:

DOCUMENT	FORM 10-K PART NUMBER
- - - - -	- - - - -
(1) Annual Report to Shareholders for the year ended December 31, 1997	I, II, IV
(2) Proxy Statement filed pursuant to Regulation 14A in connection with the registrant's Annual Meeting of Shareholders to be held on May 5, 1998	III

PART I

Item 1. Business

Products and Markets:

The primary business of the registrant and its affiliated companies is the manufacture and sale of products designed to protect the safety and health of workers throughout the world.

Principal products include respiratory protective equipment that is air-purifying, air-supplied and self-contained in design. The registrant also produces instruments that monitor and analyze workplace environments and control industrial processes. Personal protective products include head, eye and face, body and hearing protectors. Many of these products are sold under the registered trademark "MSA", and have wide application for workers in industries that include manufacturing, fire service, power generation, telecommunications, mining, chemicals, petroleum, construction, pulp and paper processing, transportation, government, automotive, aerospace, asbestos abatement, and hazardous materials clean-up.

Other products manufactured and sold, which do not fall within the category of safety and health equipment, include boron-based and other specialty chemicals.

The registrant and its affiliated companies are in competition with many large and small enterprises. In the opinion of management, the registrant is a leader in the manufacture of safety and health equipment.

Orders, except under contracts with U.S. government agencies and with international governments, are generally filled promptly after receipt and the production period for special items is usually less than one year. The backlog of orders under contracts with U.S. government agencies and certain international governments is summarized as follows:

	December 31		
	1997	1996	1995
	\$19,600	\$14,400	\$30,400
	0	900	7,900

Approximately \$300,000 under contracts with U.S. government agencies is expected to be shipped after December 31, 1998.

Sales of products to U.S. government agencies continued to decrease in 1997; however, incoming orders were slightly higher than shipments in 1997, and about the same as 1996 incoming orders. The company's business is not dependent upon a single customer or group of related customers, the loss of which would have a material adverse effect on the registrant's results. Further information with respect to the registrant's products, operations in different geographic areas, equity in earnings and assets of international affiliated companies is reported at Note 5 of Notes to Consolidated Financial Statements contained in the registrant's Annual Report to Shareholders for the year ended December 31, 1997, incorporated herein by reference.

Research:  
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The registrant and its affiliated companies engage in applied research with a view to developing new products and new applications for existing products. Most of its products are designed and manufactured to meet currently applicable performance and test standards published by groups such as ANSI (American National Standards Institute), MSHA (Mine Safety & Health Administration), NIOSH (National Institute for Occupational Safety and Health), UL (Underwriters' Laboratories), SEI (Safety Equipment Institute) and FM (Factory Mutual). The registrant also from time to time engages in research projects for others such as the Bureau of Mines and the Department of Defense or its prime contractors. Registrant-sponsored research and development costs were \$16,668,000 in 1997, \$19,122,000 in 1996, and \$20,366,000 in 1995.

In the aggregate, patents have represented an important element in building up the business of the registrant and its affiliates, but in the opinion of management no one patent or group of patents is of material significance to the business as presently conducted.

General:  
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The company was founded in 1914 and is headquartered in Pittsburgh, Pennsylvania. As of December 31, 1997, the registrant and its affiliated companies had approximately 4,200 employees, of which 2,100 were employed by international affiliates. None of the U.S. employees is subject to the provisions of a collective bargaining agreement.

In the United States and in those countries in which the registrant has affiliates, its products are sold by its own salespersons, independent distributors

and/or manufacturers' representatives. In international countries where the registrant has no affiliate, products are sold primarily through independent distributors located in those countries.

The registrant is cognizant of environmental responsibilities and has taken affirmative action regarding this responsibility. There are no current or expected legal proceedings or expenditures with respect to environmental matters which would materially affect the operations of the registrant and its affiliates.

Generally speaking, the operations of the registrant and its affiliates are such that it is possible to maintain sufficient inventories of raw materials and component parts on the manufacturing premises.

Equipment and machinery for processing chemicals and rubber, plastic injection molding equipment, molds, metal cutting, stamping and working equipment, assembly fixtures and similar items are regularly acquired, repaired or replaced in the ordinary course of business at prevailing market prices as necessary.

In January 1998, the company announced that it had initiated action to sell its domestic affiliate, HAZCO Services, Inc. (due to its incompatibility with MSA's newly-established network of distributors). Further information about the registrant's business is included in Management's Discussion and Analysis at pages 10 to 12 of the Annual Report to Shareholders, incorporated herein by reference.

Executive Officers:

Name ----	Age ---	All Positions and Offices Presently Held -----
J. T. Ryan III	54	Chairman and Chief Executive Officer
T. B. Hotopp	56	President
J. E. Herald	56	Vice President - Finance (Chief Financial Officer)
D. H. Cuzzo	64	Vice President and Secretary
D. L. Zeitler	49	Vice President and Treasurer
J. M. Barendt	38	Vice President
J. A. Bigler	48	Vice President
W. E. Christen	53	Vice President
B. V. DeMaria	50	Vice President
W. M. Lambert	39	Vice President
G. R. McGee	57	Vice President
G. W. Steggles	63	Vice President

All the executive officers have been employed by the registrant since prior to January 1, 1993 and have held their present positions since prior to that date except as follows:

- (a) Mr. Hotopp was elected President on December 18, 1996. Prior to that time, he was Senior Vice President and General Manager, Safety Products.
- (b) Mr. Cuzzo was elected Vice President on April 27, 1995. Prior to that time, he was Secretary.
- (c) Mr. Zeitler was elected Vice President on January 9, 1998. Prior to that time, he was Treasurer.
- (d) Mr. Barendt was elected Vice President on January 9, 1998. From prior to January 1, 1993 until April 1996, he was Manager, Research and Development at the company's Callery Chemical Division. From April 1996 until December 1996, he was Acting General Manager of Callery Chemical Division. From December 1996, he was General Manager of the Callery Chemical Division.

- (e) Mr. Bigler was elected Vice President on January 9, 1998. From prior to January 1, 1993 until April 1995, he was National Sales Manager. From April 1995 he was Director of Sales.
- (f) Mr. DeMaria was elected Vice President on January 9, 1998. From prior to January 1, 1993 until September 1994, he was Manager, Employee Benefits. From September 1994 he was Director, Human Resources.
- (g) Mr. Lambert was elected Vice President on January 9, 1998. From prior to January 1, 1993 until August 1993, he was a Product Line Manager. From August 1993 until March 1995, he was a Senior Product Line Manager. From March 1995 until August 1996, he was Marketing Manager. From August 1996 until December 1996, he was Director of Marketing. From December 1996 he was General Manager of the Safety Products Division.
- (h) Mr. McGee was employed by the registrant on January 2, 1997 and was elected Vice President and General Manager, Instrument Division. From prior to January 1, 1993 until July 1996, Mr. McGee was President and Chief Executive Officer of Balzer High Vacuum Products. From July 1996 until he joined the registrant, he was President and Chief Executive Officer of Pfeiffer Vacuum Technology, Inc., which is a spinoff of Balzer High Vacuum Products.

The executive officers of the registrant serve at the pleasure of the Board of Directors and are not elected to any specified term of office.



The primary responsibilities of these officers follow:

Individual -----	Responsibilities -----
Mr. Hotopp	U. S. operations
Mr. Cuzzo	General Counsel and corporate taxes
Mr. Zeitler	Cash and risk insurance management
Mr. Barendt	Research, product development, manufacturing and marketing of specialty chemical products
Mr. Bigler	U.S. sales and distribution
Mr. Christen	European operations
Mr. DeMaria	Human resources and corporate communications
Mr. Lambert	Research, product development, manufacturing and marketing of safety products in the U.S.
Mr. McGee	Research, product development, manufacturing and marketing of instrument and battery products in the U.S.
Mr. Steggles	International operations outside the U.S. and Europe

Item 2. Properties  
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World Headquarters:  
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The registrant's executive offices are located at 121 Gamma Drive, RIDC Industrial Park, O'Hara Township, Pittsburgh, Pennsylvania 15238. This facility contains approximately 138,000 sq. ft.

Production and Research Facilities:  
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The registrant's principal U.S. manufacturing and research facilities are located in the Greater Pittsburgh area in buildings containing approximately 968,000 square feet. Other U.S. manufacturing and research facilities of the registrant are located in Jacksonville, North Carolina (107,000 sq. ft.), Lyons, Colorado (10,000 sq. ft.), Sparks, Maryland (41,000 sq. ft.), Dayton, Ohio (33,000 sq. ft.), Lawrence, Massachusetts (42,000 sq. ft.), and Englewood, Colorado (41,000 sq. ft.).

Manufacturing facilities of international affiliates of the registrant are located in Australia, Brazil, Canada, France, Germany, Italy, Japan, Mexico, Peru, Scotland, South Africa, Spain, and Sweden. The most significant are located in Germany (approximately 431,000 sq. ft., excluding 127,000 sq. ft. leased to others),

and in Glasgow, Scotland (approximately 130,000 sq. ft., excluding 10,000 sq. ft. leased to others); research activities are also conducted at these facilities.

Virtually all of these buildings are owned by the registrant and its affiliates and are constructed of granite, brick, concrete block, steel or other fire-resistant materials. The German facility is owned subject to encumbrances securing indebtedness in the aggregate amount of \$1,931,000 as of December 31, 1997.

Sales Offices and Warehouses:  
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The registrant and its U.S. affiliates own one warehouse and lease 9 other distribution warehouses with aggregate floor space of approximately 55,000 sq. ft. in or near principal cities in 9 states in the United States. Leases expire at various dates through 1999. Sales offices and distribution warehouses are owned or leased in or near principal cities in 26 other countries in which the registrant's affiliates are located.

Item 3. Legal Proceedings  
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Not Applicable.

Item 4. Submission of Matters to a Vote of Security Holders  
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No matters were submitted to a vote of security holders during fourth quarter 1997.

PART II

- Item 5. Market for the Registrant's Common Equity and Related Stockholder Matters
  - Item 6. Selected Financial Data
  - Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
  - Item 8. Financial Statements and Supplementary Data
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Incorporated by reference herein pursuant to Rule 12b - 23 are

- Item 5 - "Common Stock" appearing at page 12
- Item 6 - "Five-Year Summary of Selected Financial Data" appearing at page 23
- Item 7 - "Management's Discussion and Analysis" appearing at pages 10 to 12
- Item 8 - "Financial Statements and Notes to Consolidated Financial Statements" appearing at pages 13 to 22

of the Annual Report to Shareholders for the year ended December 31, 1997. Said pages of the Annual Report are submitted with this report and pursuant to Item 601(b)(13) of Regulation S-K shall be deemed filed with the Commission only to the extent that material contained therein is expressly incorporated by reference in Items 1, 5, 6, 7, 8 and 14 (a) hereof.

Item 7a. Quantitative and qualitative disclosures about market risk

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Not applicable.

Item 9. Changes in and Disagreements with Accountants on Accounting and

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Financial Disclosure

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Not applicable.

PART III

- Item 10. Directors and Executive Officers of the Registrant
- Item 11. Executive Compensation
- Item 12. Security Ownership of Certain Beneficial Owners and Management
- Item 13. Certain Relationships and Related Transactions

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Incorporated by reference herein pursuant to Rule 12b - 23 are (1) "Election of Directors" appearing at pages 1 to 3, (2) "Other Information Concerning Directors and Officers" appearing at pages 4 to 10 (except as excluded below), and (3) "Stock Ownership" appearing at pages 11 to 13 of the Proxy Statement filed pursuant to Regulation 14A in connection with the registrant's Annual Meeting of Shareholders to be held on May 5, 1998. The information appearing in such Proxy Statement under the caption "Compensation Committee Report on Executive Compensation," and the other information appearing in such Proxy Statement and not specifically incorporated by reference herein, including without limitation the information under the captions "Comparison of Five-Year Cumulative Total Return" and "1998 Management Share Incentive Plan" is not incorporated herein.

PART IV

Item 14. Exhibits, Financial Statement Schedules, and Reports on Form 8-K

(a) 1 and 2. Financial Statements

The following information appearing on pages 13 to 22 inclusive in the Annual Report to Shareholders of the registrant for the year ended December 31, 1997, is incorporated herein by reference pursuant to Rule 12b-23.

Report of Independent Accountants

Consolidated Balance Sheet - December 31, 1997 and 1996

Consolidated Statement of Income - three years ended December 31, 1997

Consolidated Statement of Earnings Retained in the Business - three years ended December 31, 1997

Consolidated Statement of Cash Flows - three years ended December 31, 1997

Notes to Consolidated Financial Statements

Said pages of the Annual Report are submitted with this report and, pursuant to Item 601(b)(13) of Regulation S-K shall be deemed to be filed with the Commission only to the extent that material contained therein is expressly incorporated by reference in Items 1, 5, 6, 7, 8 and 14 (a)(1) and (2) hereof.

The following additional financial information for the three years ended December 31, 1997 is filed with the report and should be read in conjunction with the above financial statements:

Report of Independent Accountants on Financial Statement Schedule  
Schedule II - Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable, not material or the required information is shown in the financial statements and notes to the financial statements listed above.

(a) 3. Exhibits

- (3)(i) Restated Articles of Incorporation as amended to April 27, 1989, filed in Form 10-Q on August 5, 1994, are incorporated herein by reference.
- (3)(ii) By-laws of the registrant, as amended to August 29, 1990, filed in Form 10-Q on November 13, 1995, are incorporated herein by reference.
- (4) Rights Agreement dated as of February 10, 1997 between the registrant and Norwest Bank Minnesota, N.A., as Rights Agent, filed as Exhibit 1 to the registrant's Form 8-A on February 25, 1997, is incorporated herein by reference.
- (10)(a) \* 1987 Management Share Incentive Plan, filed in Form 10-K on March 25, 1994, is incorporated herein by reference.
- (10)(b) \* 1990 Non-Employee Directors' Stock Option Plan, as amended to April 27, 1994, filed in Form 10-Q on August 5, 1994, is incorporated herein by reference.
- (10)(c) \* Executive Insurance Program, filed in Form 10-Q on August 5, 1994, is incorporated herein by reference.
- (10)(d) \* Board of Directors April 24, 1984 Resolution providing for payment by the Company to officers the difference between amounts payable under terms of the Company's Non-Contributory Pension Plan and the benefit limitations of Section 415 of the Internal Revenue Code, filed in Form 10-Q on May 11, 1995 is incorporated herein by reference.
- (10)(e) Trust Agreement as of June 1, 1996 between the registrant and PNC Bank, N.A. re the Mine Safety Appliances Company Stock Compensation Trust, filed in Form 10-K on March 26, 1997, is incorporated herein by reference.

\* The exhibits marked by an asterisk are management contracts or compensatory plans or arrangements.

(a) 3. Exhibits (continued)

(13) Annual Report to Shareholders for year ended December 31,  
1997

(21) Affiliates of the registrant

(23) Consent of Price Waterhouse LLP, independent accountants

(27) Financial Data Schedule (filed in electronic format only)

The registrant agrees to furnish to the Commission upon request copies of all instruments with respect to long-term debt referred to in Note 4 of the Notes to Consolidated Financial Statements filed as part of Exhibit 13 to this annual report which have not been previously filed or are not filed herewith.

(b) Reports on Form 8-K

No reports on Form 8-K were filed during the last quarter of the year ended December 31, 1997.

Report of Independent Accountants  
on Financial Statement Schedule

February 18, 1998

To the Board of Directors of  
Mine Safety Appliances Company

Our audits of the consolidated financial statements referred to in our report dated February 18, 1998, appearing on page 13 of the 1997 Annual Report to Shareholders of Mine Safety Appliances Company (which report and consolidated financial statements are incorporated by reference in this Annual Report on Form 10-K), also included an audit of the Financial Statement Schedule listed in Item 14(a) of this Form 10-K. In our opinion, this Financial Statement Schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

PRICE WATERHOUSE LLP

F-1



SCHEDULE II

MINE SAFETY APPLIANCES COMPANY AND AFFILIATES  
 VALUATION AND QUALIFYING ACCOUNTS  
 THREE YEARS ENDED DECEMBER 31, 1997  
 (IN THOUSANDS)

	1997	1996	1995
	-----	-----	-----
Allowance for doubtful accounts:			
Balance at beginning of year	\$2,993	\$2,640	\$2,102
Additions -			
Charged to costs and expenses	1,229	812	949
Balance from acquisitions	288		
Deductions from reserves (1)	806	459	411
	-----	-----	-----
Balance at end of year	\$3,704	\$2,993	\$2,640
	=====	=====	=====

(1) Bad debts written off, net of recoveries.

SIGNATURES  
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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.

MINE SAFETY APPLIANCES COMPANY

March 26, 1998

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(Date)

By /s/ John T. Ryan III

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John T. Ryan III  
Chairman of the Board and  
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
-----	-----	-----
/s/ John T. Ryan III ----- John T. Ryan III	Director; Chairman of the Board and Chief Executive Officer	March 26, 1998
/s/ James E. Herald ----- James E. Herald	Vice President - Finance; Principal Financial and Accounting Officer	March 26, 1998
/s/ Joseph L. Calihan ----- Joseph L. Calihan	Director	March 26, 1998
/s/ Calvin A. Campbell, Jr. ----- Calvin A. Campbell, Jr.	Director	March 26, 1998
/s/ G. Donald Gerlach ----- G. Donald Gerlach	Director	March 26, 1998
/s/ Helen Lee Henderson ----- Helen Lee Henderson	Director	March 26, 1998
/s/ Thomas H. Witmer ----- Thomas H. Witmer	Director	March 26, 1998
/s/ Thomas B. Hotopp ----- Thomas B. Hotopp	Director	March 26, 1998

## Management's Discussion and Analysis

## Results of Operations

1997 versus 1996 -- Sales for 1997 were \$494.3 million, a decrease of \$6.7 million, or 1%, from \$501.0 million in 1996. The slight decline in sales reflects the absence of U.S. military gas mask business and the negative currency translation effect of the strong U.S. dollar, particularly in relation to continental European currencies. These decreases were offset by improved sales in U.S. commercial markets and modest growth in local currency sales in international markets.

Sales by U.S. operations decreased 3% in 1997. Sales for 1996 included some military gas mask business on contracts which were expiring and several large special instrument orders. Sales of specialty chemicals continued to grow in 1997, although at a more modest pace than in recent years. Personal protective equipment sales in commercial markets improved during 1997 and also benefited from the inclusion of a full year's sales from the fall protection and disposable respirator acquisitions which were made in 1996.

Sales by European operations, stated in U.S. dollars, decreased 11% in 1997. Although local currency sales in Europe improved slightly in 1997, negative currency translation effects, particularly in Germany, resulted in the decrease when stated in U.S. dollars. Sales by MSA's operations outside the U.S. and Europe increased 22% in 1997. The inclusion of MSA Africa, which became wholly owned at the beginning of 1997, was a major factor in this improvement. Latin American and Asian operations reported strong sales growth.

Gross profit for 1997 was \$192.1 million, a decrease of \$1.8 million, or 1%, from \$193.9 million in 1996. The 1997 ratio of gross profit to sales improved slightly to 38.9% from 38.7%. While the gross profit percentage has been relatively stable over the past three years, the current levels represent an overall improvement from the roughly 36% gross profit level in 1992 through 1994. The improved gross profit percentage in 1997 is the result of cost reductions from improved manufacturing processes and the continuing sales mix shift away from lower-margin military sales to higher-margin commercial sales. Gross profit in 1996 also benefited from liquidations of lower-cost LIFO inventories which were not repeated in 1997. Excluding this effect, gross margin percentages improved in 1997 in the U.S., while those in Europe slipped.

Research and development expenses in 1997 were \$16.7 million, compared to \$19.1 million in 1996. The decrease reflects an emphasis on core-product research, more limited external research purchases, and higher reimbursements for research performed under contracts with customers in 1997. Research expenses incurred in Germany were also lower, when stated in U.S. dollars, due to currency translation effects.

Depreciation, selling and administrative expenses increased \$516,000 to \$156.0 million in 1997, and increased as a percent of sales to 31.6% from 31.0% in 1996. The modest increase reflects expenses incurred in conjunction with the Enterprise Wide System and Global New Product Development initiatives, partially offset by favorable currency translation effects associated with the strong U.S. dollar. Ongoing depreciation, and selling and administrative expenses were generally lower than in 1996.

Currency exchange losses charged to income in 1997 were \$40,000, compared to \$735,000 in 1996. The most significant losses from currency valuation changes in both years occurred in Brazil.

The effective income tax rate, for which further information is included in note 8, was 39.7% in 1997 and 37.1% in 1996. The higher effective rate in 1997 reflects additional tax expenses at international companies.

Net income in 1997 decreased \$1.2 million to \$21.9 million from \$23.1 million in 1996. Basic earnings per share of common stock improved in 1997 to \$4.81, compared to \$4.74 in 1996. Earnings per share benefited from share repurchases that reduced average shares outstanding by 7% in 1997.

1996 versus 1995 -- Sales for 1996 were \$501.0 million, an increase of \$13.3 million, or 3%, from \$487.7 million in 1995. The increase occurred primarily in U.S. commercial markets. Sales by international operations improved modestly in 1996, mainly in Europe.

Sales by U.S. operations increased 4% in 1996. The 1996 U.S. sales increase occurred primarily in commercial markets, while sales to U.S. government agencies decreased significantly, continuing the trend of declining military gas mask business. Commercial sales of instrument and specialty chemicals sustained the growth pattern shown in 1995 and 1994. Conversely, lower government funding and changing customer preferences continued to reduce commercial sales of respiratory protection equipment.

Sales by European operations, stated in U.S. dollars, increased 3% in 1996. The modest growth reflected a stagnant European economic environment in 1996, after noticeable growth in 1995. Other international markets were about the same in 1996, after significant growth in 1995 occurred in Australia, Brazil, and Chile.

Gross profit for 1996 was \$193.9 million, a \$3.1 million, or 2% increase over \$190.8 million in 1995. The 1996 ratio of gross profit to sales declined slightly to 38.7% from 39.1% in 1995. Gross margin percentages in both 1996 and 1995 improved as a result of manufacturing process improvements, the shift in product mix away from military sales to commercial sales, and significant credits resulting from liquidations of lower-cost LIFO inventories.

Depreciation, selling and administrative expenses in 1996 decreased \$2.8 million, or 2%, to \$155.4 million, and decreased as a percent of sales to 31.0%

from 32.4% in 1995. The decrease reflects lower field sales and marketing expenses, resulting from the rationalization of distribution channels in the U.S.

Currency exchange losses charged to income in 1996 were \$735,000, compared to \$1.2 million in 1995. The most significant losses from currency valuation changes in both years occurred in Brazil and Mexico.

Results for 1996 also included a \$2.5 million settlement with the U.S. government regarding the partial termination of earlier gas mask contracts, which resulted in the recovery of costs incurred in prior years.

The effective income tax rate, for which further information is included in note 8, was 37.1% in 1996 and 42.9% in 1995. The lower effective rate in 1996 reflects additional tax benefits from international operations.

Net income in 1996 increased \$4.2 million to \$23.1 million from \$18.9 million in 1995. Basic earnings per share of common stock improved in 1996 to \$4.74, compared to \$3.32 in 1995. Earnings per share benefited from share repurchases that reduced average shares outstanding 14% in 1996.

#### Restructuring

During 1997 the company substantially completed the U.S. restructuring activities which were initiated in late 1996 to reduce costs and better align production capacities with demand. The most significant of these activities was the closing of the Esmond, Rhode Island, plant, which was required primarily because of low levels of U.S. military gas mask business. In 1997, Esmond's commercial product activities were relocated to other manufacturing facilities, all Esmond employees were relocated, released, or retired and the facility was vacated. Provisions for separation pay and asset impairments that were established in 1996 were adequate to complete these activities without significant adjustment. The net effect of U.S. restructuring activities on 1997 results was minimal, considering both expenses incurred and related asset sale and pension curtailment gains.

The most significant costs included in the \$2.2 million restructuring charge in 1997 relate to workforce reductions at European operations, including \$1.7 million in accrued severance and phased retirement pay in Germany.

Restructuring charges of \$7.8 million in 1996 related primarily to separation pay and asset impairment write-downs connected with the Esmond plant closing. Charges of \$730,000 in 1995 were for workforce reductions at international locations.

#### Liquidity and Financial Condition

Cash and cash equivalents decreased \$5.2 million during 1997, compared to a \$6.9 million decrease in 1996. The company's principal source of financing capital expenditures and internal growth is cash flow from operations. Operations provided cash of \$30.9 million in 1997, compared to \$56.5 million in 1996. The decrease primarily reflects increased working capital needs in 1997 associated with the U.S. restructuring activities and the currency translation effects of the strong U.S. dollar on the net current assets of international affiliates. Cash provided by operations in 1996 benefited from significant inventory reductions.

The company has an ongoing program of plant and equipment modernization to improve the efficiency of existing manufacturing facilities. Capital expenditures were \$35.3 million in 1997, compared to \$21.6 million in 1996. Increased capital expenditures in 1997 include costs for new enterprise wide information systems, manufacturing facility improvements associated with the U.S. restructuring activities, and a new headquarters building at HAZCO Services, Inc. In the past five years, approximately \$120 million has been spent on new plants, equipment and distribution facilities, and information systems.

Dividends paid on the common stock during 1997 (the 80th consecutive year of dividend payment) were \$1.24 per share, up from the \$1.10 per share in 1996 and \$1.06 per share in 1995. Cash dividends are paid at a conservative percentage of income, which is consistent with the company's practice of financing growth internally. During 1997, the company repurchased 184,708 common shares for \$11.3 million. As of December 31, 1997, an additional 325,666 shares may be repurchased under current authorizations.

The average amount of short-term debt outstanding during 1997 and 1996 was \$21.6 million and \$2.9 million, respectively. Borrowings during 1997 were increased primarily to finance capital expenditures. Credit available at year-end with banks was the U.S. dollar equivalent of \$48.6 million, of which \$25.8 million was unused. Short-term debt of international affiliates is payable in local currencies, which is in keeping with the company's policy of reducing currency exchange exposures by offsetting local currency assets with local currency debt.

Long-term debt and the current portion thereof decreased \$2.2 million to \$13.7 million, a conservative 5.4% of total capital. Total capital is defined as long-term debt plus the current portion of long-term debt and shareholders' equity.

Accounts receivable decreased \$10.4 million to \$91.4 million at December 31, 1997. Trade receivables expressed in number of days' sales outstanding were 65 days, compared to 71 days in 1996. Inventories increased \$4.0 million to \$81.1 million at December 31, 1997. Inventory measured against sales turned 6.1 times in 1997 and 6.5 times in 1996. The working capital ratio was 2.1 and 2.5 to 1 at year's end 1997 and 1996, respectively.

The company's financial position remains strong and should provide adequate capital resources for growth.

#### Cumulative Currency Translation Adjustment

The year-end position of the U.S. dollar relative to international currencies resulted in translation losses of \$7.2 million being charged to the cumulative translation adjustments shareholders' equity account in 1997, compared to a \$747,000 loss in 1996 and a \$2.9 million gain in 1995. Significant 1997 translation losses occurred in Europe, particularly Germany, and in Australia. Losses in 1996 in Germany and Japan were partially offset by gains in Australia and Britain.

#### Recent Developments and Outlook

The company is currently replacing its existing information systems with an Enterprise Wide System (EWS) of business software to integrate and better serve global operating and information requirements. This software, which is already in use at MSA Britain, is compatible with year 2000 processing requirements. The planned implementation schedule for EWS at MSA companies throughout the world is expected to avoid potential year 2000 problems with existing computer systems.

As part of the ongoing initiatives to rationalize distribution channels and improve operating performance, the company has initiated action to sell HAZCO Services, Inc. (due to its incompatibility with MSA's newly-established network of distributors). This action, which is expected to be completed during 1998, is not estimated to have a material impact on 1998 results. The 1997 operating results of HAZCO Services, Inc. are not material to the consolidated financial statements.

#### Common Stock

At December 31, 1997, there were 4,455,915 shares of common stock outstanding. There were approximately 400 identifiable common stockholders on November 14, 1997, a recent date for dividends. The common stock last-sale price and up-to-the-minute volume information (Symbol: MNES) is included in the National Association of Security Dealers, Inc., (NASDAQ) National Market System. The quarterly high and low price quotations for common shares follow:

Quarter	1997		1996	
	High	Low	High	Low
First	\$63 3/4	\$53 1/2	\$52 1/4	\$45 1/4
Second	63 3/4	56 1/2	48	41
Third	73	59 3/4	51 5/8	41 1/4
Fourth	73 1/2	65 1/2	55 1/2	50 1/4

Common stock quarterly cash dividend information is as follows:

Quarter	Amount Per Share	Record Date	Payment Date
1997			

First	\$	.31	Feb. 21, 1997	Mar. 10, 1997
Second		.31	May 16, 1997	Jun. 10, 1997
Third		.31	Aug. 15, 1997	Sep. 10, 1997
Fourth		.31	Nov. 14, 1997	Dec. 10, 1997
-----				
Total		1.24		
-----				

1996				
-----				
First	\$	.27	Feb. 16, 1996	Mar. 10, 1996
Second		.27	May 17, 1996	Jun. 10, 1996
Third		.28	Aug. 16, 1996	Sep. 10, 1996
Fourth		.28	Nov. 15, 1996	Dec. 10, 1996
-----				
Total		1.10		
-----				

The company's stock transfer agent is Norwest Bank Minnesota, N.A., 161 North Concord Exchange, South St. Paul, MN 55075-1139.

Report of Management

Mine Safety Appliances Company's consolidated financial statements and related notes that appear in this Annual Report to Shareholders were prepared by the company in accordance with generally accepted accounting principles. In fulfilling its responsibilities for the integrity and objectivity of the consolidated financial statements, management maintains accounting procedures designed to provide accurate books, records and accounts which reasonably and fairly reflect the transactions of the company in a consistent manner on the accrual basis of accounting.

Company personnel are trained and given responsibilities to ensure adequate internal accounting controls at a cost commensurate with the risks involved. Internal accounting controls, monitored by an internal audit staff, provide reasonable assurances that transactions are executed in accordance with proper authorization and that adequate accountability for the company's assets is maintained.

The Board of Directors, through its Audit Committee, is responsible for assuring that management fulfills its responsibilities in the preparation of the financial statements. The Audit Committee meets at least twice a year with the company's independent accountants to discuss the scope of their examination and any significant findings resulting therefrom.

/s/ James E. Herald

James E. Herald  
Vice President--Finance  
Chief Financial Officer

Report of Independent Accountants

To the Shareholders and Board of Directors of Mine Safety Appliances Company

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of income, of earnings retained in the business and of cash flows present fairly, in all material respects, the financial position of Mine Safety Appliances Company and its subsidiaries at 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. 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 conducted our audits of these statements in accordance with generally accepted auditing standards which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

/s/ Price Waterhouse LLP

Price Waterhouse LLP  
Pittsburgh, Pennsylvania  
February 18, 1998



Consolidated Statement  
of Income

(In thousands, except per share amounts)  
Year Ended December 31

	1997	1996	1995
Net sales.....	\$494,324	\$ 500,985	\$ 487,668
Other income.....	5,085	5,870	4,191
	-----	-----	-----
	499,409	506,855	491,859
	-----	-----	-----
Costs and expenses			
Cost of products sold.....	302,225	307,112	296,845
Selling, general and administrative.....	134,444	133,071	138,187
Depreciation.....	21,516	22,373	20,002
Interest.....	2,781	1,595	1,730
Currency exchange losses.....	40	735	1,233
Facilities consolidation and restructuring charges.....	2,164	7,786	730
Contract costs recovery.....		(2,484)	
	-----	-----	-----
	463,170	470,188	458,727
	-----	-----	-----
Income before income taxes.....	36,239	36,667	33,132
Provision for income taxes.....	14,385	13,606	14,220
	-----	-----	-----
Net income.....	\$21,854	\$ 23,061	\$ 18,912
	=====	=====	=====
Basic earnings per common share.....	\$ 4.81	\$ 4.74	\$ 3.32
	=====	=====	=====
Diluted earnings per common share.....	\$ 4.80	\$ 4.74	\$ 3.32
	=====	=====	=====

Consolidated Statement of  
Earnings Retained in the Business

(In thousands)  
Year Ended December 31

	1997	1996	1995
At beginning of year.....	\$325,898	\$ 309,712	\$ 296,993
Net income.....	21,854	23,061	18,912
Dividends declared			
Common.....	(4,181)	(6,811)	(6,140)
Preferred.....	(37)	(64)	(53)
	-----	-----	-----
At end of year.....	\$343,534	\$ 325,898	\$ 309,712
	=====	=====	=====

See notes to consolidated financial statements.

Consolidated Balance Sheet

(In thousands, except per share amounts)  
December 31

	1997	1996
<b>Assets</b>		
<b>Current Assets</b>		
Cash.....	\$ 5,264	\$ 7,963
Temporary investments, at cost which approximates market.....	14,657	17,133
Receivables, less allowance for doubtful accounts \$3,704 and \$2,993.....	91,388	101,740
Inventories.....	81,066	77,040
Deferred tax assets-net.....	16,827	18,659
Prepaid expenses and other current assets.....	10,411	5,872
	-----	-----
Total current assets.....	219,613	228,407
<b>Property</b>		
Land.....	6,256	6,196
Buildings.....	107,632	106,767
Machinery and equipment.....	221,812	224,390
Construction in progress.....	18,949	10,079
	-----	-----
Total.....	354,649	347,432
Less accumulated depreciation.....	(199,465)	(200,374)
	-----	-----
Net property.....	155,184	147,058
<b>Other Assets</b>		
.....	31,607	32,217
	-----	-----
Total.....	\$406,404	\$407,682
	=====	=====
<b>Liabilities</b>		
<b>Current Liabilities</b>		
Notes payable and current portion of long-term debt.....	\$ 25,181	\$ 8,239
Accounts payable.....	30,809	27,584
Employees' compensation.....	12,088	13,666
Insurance.....	8,919	9,965
Taxes on income.....	4,089	9,156
Other current liabilities.....	22,154	23,204
	-----	-----
Total current liabilities.....	103,240	91,814
<b>Long-term Debt</b>		
.....	12,270	13,278
	-----	-----
<b>Other Liabilities</b>		
Deferred tax liabilities-net.....	22,780	16,781
Pensions and other employee benefits.....	25,736	43,504
Other noncurrent liabilities.....	929	873
	-----	-----
Total other liabilities.....	49,445	61,158
<b>Shareholders' Equity</b>		
Preferred stock, 4 1/2% cumulative, \$50 par value (callable at \$52.50).....	3,569	3,569
Common stock, no par value (shares outstanding: 1997--4,455,915; 1996--4,611,125).....	12,297	10,866
Cumulative translation adjustments.....	(5,744)	1,430
Minimum pension liability adjustment.....	(538)	
Earnings retained in the business.....	343,534	325,898
Stock compensation trust.....	(28,200)	(28,200)
Treasury shares, at cost.....	(83,469)	(72,131)
	-----	-----
Total shareholders' equity.....	241,449	241,432
	-----	-----
Total.....	\$406,404	\$407,682
	=====	=====

See notes to consolidated financial statements.

Consolidated Statement  
of Cash Flows

(In thousands)

Year Ended December 31

	1997	1996	1995
<b>Operating Activities</b>			
Net income.....	\$ 21,854	\$ 23,061	\$ 18,912
Depreciation.....	21,516	22,373	20,002
Pensions.....	(13,027)	(2,716)	(2,510)
Deferred income taxes.....	7,445	(2,525)	(601)
Receivables.....	10,352	(10,785)	(2,257)
Inventories.....	(4,026)	6,581	(6,655)
Accounts payable and accrued liabilities.....	(4,079)	16,157	4,902
Other assets and liabilities.....	(2,745)	961	210
Other--including currency exchange adjustments.....	(6,385)	3,348	3,607
Cash Flow From Operating Activities.....	30,905	56,455	35,610
<b>Investing Activities</b>			
Property additions.....	(35,304)	(21,583)	(19,136)
Property disposals.....	3,225	1,889	1,811
Acquisitions and other investing.....	(2,411)	(10,276)	(2,170)
Cash Flow From Investing Activities.....	(34,490)	(29,970)	(19,495)
<b>Financing Activities</b>			
Additions to long-term debt.....	295	146	218
Reductions of long-term debt.....	(1,037)	(1,445)	(2,078)
Cash dividends.....	(5,655)	(5,438)	(6,193)
Company stock purchases and sales.....	(9,907)	(27,547)	(28,030)
Changes in notes payable and short-term debt.....	17,438	2,247	(3,973)
Cash Flow From Financing Activities.....	1,134	(32,037)	(40,056)
Effect of exchange rate changes on cash.....	(2,724)	(1,302)	1,471
Decrease in cash and cash equivalents.....	(5,175)	(6,854)	(22,470)
Beginning cash and cash equivalents.....	25,096	31,950	54,420
Ending cash and cash equivalents.....	\$ 19,921	\$ 25,096	\$ 31,950
<b>Supplemental cash flow information:</b>			
Interest payments.....	\$ 3,668	\$ 1,419	\$ 1,922
Income tax payments.....	15,762	9,893	13,638

See notes to consolidated financial statements.

Notes to Consolidated  
Financial Statements

Note 1--Basis of Presentation

SIGNIFICANT ACCOUNTING POLICIES ARE STATED IN ITALICS AT THE APPLICABLE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

THE PREPARATION OF FINANCIAL STATEMENTS IN CONFORMITY WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPLES REQUIRES MANAGEMENT TO MAKE ESTIMATES AND ASSUMPTIONS THAT AFFECT THE REPORTED AMOUNTS OF ASSETS AND LIABILITIES AND DISCLOSURE OF CONTINGENT ASSETS AND LIABILITIES AT THE DATE OF THE FINANCIAL STATEMENTS AND THE REPORTED AMOUNTS OF REVENUES AND EXPENSES DURING THE REPORTING PERIOD. ACTUAL RESULTS COULD DIFFER FROM THOSE ESTIMATES.

ALL SIGNIFICANT MAJORITY-OWNED COMPANIES ARE INCLUDED IN THE CONSOLIDATED FINANCIAL STATEMENTS. INVESTMENTS IN WHICH THE COMPANY HAS AN EQUITY INTEREST OF 20% TO 50% ARE CARRIED AT EQUITY IN NET ASSETS. INTERCOMPANY TRANSACTIONS ARE ELIMINATED IN CONSOLIDATION.

SALES UNDER CONTRACTS ARE RECORDED AT FIXED OR ESTIMATED CONTRACT SALES PRICES AS DELIVERIES ARE MADE. CONTRACTS REQUIRING PERFORMANCE OVER SEVERAL PERIODS ARE ACCOUNTED FOR BY THE PERCENTAGE-OF-COMPLETION METHOD OF ACCOUNTING. PROFITS EXPECTED TO BE REALIZED ARE BASED ON ESTIMATES OF TOTAL SALES AND COSTS AT COMPLETION. THESE ESTIMATES ARE PERIODICALLY REVIEWED AND REVISED DURING THE CONTRACT PERFORMANCE PERIOD. ADJUSTMENTS TO PROFITS ARE RECORDED IN THE PERIOD IN WHICH ESTIMATES ARE REVISED; LOSSES ARE RECOGNIZED IN FULL AS THEY ARE IDENTIFIED.

PROPERTY IS STATED AT COST. DEPRECIATION IS BASED ON ESTIMATED USEFUL LIVES USING ACCELERATED AND STRAIGHT-LINE METHODS. MAINTENANCE AND REPAIRS ARE CHARGED TO EXPENSE. RENEWALS AND BETTERMENTS WHICH SUBSTANTIALLY EXTEND THE USEFUL LIFE OF PROPERTY ARE CAPITALIZED. PROFITS OR LOSSES RESULTING FROM DISPOSITIONS ARE INCLUDED IN INCOME.

THE FINANCIAL STATEMENTS OF COMPANIES FOR WHICH THE UNITED STATES DOLLAR IS DETERMINED TO BE THE FUNCTIONAL CURRENCY ARE TRANSLATED USING CURRENT AND HISTORIC EXCHANGE RATES; ADJUSTMENTS RELATED THERETO ARE INCLUDED IN INCOME FOR THE CURRENT PERIOD. THE FINANCIAL STATEMENTS OF ALL OTHER COMPANIES ARE TRANSLATED FROM THEIR FUNCTIONAL CURRENCY INTO UNITED STATES DOLLARS USING CURRENT EXCHANGE RATES; THE RESULTANT TRANSLATION ADJUSTMENTS ARE NOT INCLUDED IN INCOME BUT ARE ACCUMULATED IN A SEPARATE EQUITY ACCOUNT. TRANSACTION GAINS AND LOSSES ARE RECOGNIZED IN INCOME FOR THE CURRENT PERIOD.

CASH AND CASH EQUIVALENTS IN THE CONSOLIDATED STATEMENT OF CASH FLOWS INCLUDES TEMPORARY INVESTMENTS THAT ARE READILY MARKETABLE AND HAVE MINIMAL RISK AS TO CHANGE IN VALUE. CERTAIN SECURITIES HAVE MATURITIES IN EXCESS OF NINETY DAYS; BUT, AS PART OF THE COMPANY'S CASH MANAGEMENT PROGRAM, MATURITIES ARE SCHEDULED BASED ON EXPECTED CASH NEEDS FOR THE ENSUING TWELVE MONTHS.

Note 2--Other Income

	(In thousands)		
	1997	1996	1995
Interest.....	\$2,068	\$ 2,628	\$3,585
Commissions, royalties and product services.....	1,551	1,944	1,959
Dispositions of assets.....	1,164	1,725	(320)
Equity in earnings of affiliates...	516	656	(451)
Other.....	(214)	(1,083)	(582)
Total.....	5,085	5,870	4,191

Note 3--Inventories

THE U.S. INVENTORIES ARE VALUED ON THE LAST-IN, FIRST-OUT (LIFO) COST METHOD. OTHER INVENTORIES ARE VALUED AT THE LOWER OF COST, USING AVERAGE OR CURRENT STANDARD COSTS WHICH APPROXIMATE ACTUAL COSTS ON A FIRST-IN, FIRST-OUT (FIFO) BASIS, OR MARKET, DETERMINED BY REPLACEMENT COST OR NET REALIZABLE VALUE.

Reductions in inventory quantities during 1997, 1996, and 1995 resulted in liquidations of LIFO inventory quantities carried at lower costs prevailing in prior years. The effect of these liquidations reduced cost of sales by \$572,000 in 1997, \$10,361,000 in 1996 and \$5,455,000 in 1995, and increased net income by \$349,000 (\$.08 per share), \$6,217,000 (\$1.28 per share) and \$3,200,000 (\$.56 per share), respectively.

	(In thousands)		
	1997	1996	1995
Finished products.....	\$36,626	\$32,042	\$34,970

Work in process.....	13,772	15,311	16,135
Raw materials and supplies.....	30,668	29,687	32,516
-----			
Total inventories.....	81,066	77,040	83,621
-----			
Excess of FIFO costs over LIFO costs...	45,053	45,740	55,185
-----			

Inventories stated on the LIFO basis represent 45%, 39%, and 39% of the total inventories at December 31, 1997, 1996, and 1995, respectively.

Note 4--Long-Term Debt

	(In thousands)	
U.S.	1997	1996
-----		
Industrial development debt issues		
payable through 2022, 4.6%.....	\$10,950	\$10,950
Other, 2.2% to 18.9%.....	76	218
International companies		
Various notes payable through 2002,		
4.0% to 9.2% (\$1,931 secured		
by pledge of assets located abroad)..	2,636	4,703
-----		
Total.....	13,662	15,871
Amounts due within one year.....	1,392	2,593
-----		
Long-term debt.....	12,270	13,278
-----		

Approximate maturities of these obligations over the next five years are \$1,392,000 in 1998, \$427,000 in 1999, \$311,000 in 2000, \$290,000 in 2001, and \$284,000 in 2002. Some U.S. loan agreements contain covenants to maintain specified levels of shareholders' equity.

Note 5--Business Segments and International Operations

The company is primarily engaged in the manufacture and sale of safety and health equipment. Principal products include respiratory and hearing protective equipment and head, eye and face protectors, safety clothing, industrial emergency care products, mining safety equipment and monitoring instruments. These safety and health products have historically accounted for more than 90% of revenues, operating profits and assets. Other products which do not fall within the safety and health equipment segment of the company's business include boron-based and other specialty chemicals.

Information about the company's operations in different geographic areas is summarized as follows:

	(In thousands)		
	1997	1996	1995
<b>Net Sales and Revenues</b>			
U.S. operations.....	\$275,075	\$283,805	\$274,148
European operations.....	125,678	139,083	135,367
Other non-U.S. operations.....	95,889	79,371	79,164
<b>Net Sales and Revenues.....</b>	<b>496,642</b>	<b>502,259</b>	<b>488,679</b>
<b>Intercompany Transfers</b>			
U.S. operations.....	34,204	24,364	22,779
European operations.....	17,389	17,588	18,014
Other non-U.S. operations.....	1,501	769	795
<b>Intercompany Transfers.....</b>	<b>53,094</b>	<b>42,721</b>	<b>41,588</b>
<b>Operating Profit and Income Before Income Taxes</b>			
U.S. operations.....	37,179	30,048	22,870
European operations.....	2,127	4,810	4,984
Other non-U.S. operations.....	6,431	4,980	6,475
Eliminations.....	(7,319)	(897)	(1,970)
<b>Operating Profit.....</b>	<b>38,418</b>	<b>38,941</b>	<b>32,359</b>
Interest expense.....	(2,781)	(1,595)	(1,730)
Corporate income/(expense)--net.....	602	(679)	2,503
<b>Income Before Income Taxes.....</b>	<b>36,239</b>	<b>36,667</b>	<b>33,132</b>
<b>Identifiable Assets and Total Assets</b>			
U.S. operations.....	252,009	246,329	234,237
European operations.....	91,082	104,676	106,854
Other non-U.S. operations.....	52,998	45,799	44,050
Eliminations.....	(17,194)	(19,211)	(14,684)
<b>Identifiable Assets.....</b>	<b>378,895</b>	<b>377,593</b>	<b>370,457</b>
Corporate assets.....	27,509	30,089	35,820
Discontinued operations.....			323
<b>Total Assets.....</b>	<b>406,404</b>	<b>407,682</b>	<b>406,600</b>
<b>Net Assets of Non-U.S. Operations.....</b>	<b>95,421</b>	<b>103,018</b>	<b>99,163</b>
<b>Net Income of Non-U.S. Operations.....</b>	<b>5,104</b>	<b>8,882</b>	<b>6,364</b>

Transfers between geographic areas are stated at established intercompany selling prices. Operating profit is total revenues less operating expenses. Interest income and expense, equity in unconsolidated affiliates, facilities consolidation and restructuring charges, contract costs recovery, and income taxes have not been included in computing operating profit. Corporate assets not included in identifiable assets are principally cash and investments.

Note 6--Restructuring

Restructuring charges of \$2,164,000 in 1997, most of which relate to planned workforce reductions, include \$1,743,000 for severance and phased retirement pay in Germany. Relocation and start-up costs of \$1,190,000 related to the closing of the Esmond, Rhode Island, safety products manufacturing facility were largely offset by pension curtailment gains of \$1,185,000. Charges of \$7,786,000 in 1996 were principally for separation pay and asset impairments associated with the Esmond plant closing. Charges of \$730,000 in 1995 related to workforce reductions at international locations.

Note 7--Research and Development Expense

RESEARCH AND DEVELOPMENT COSTS, CHARGED AGAINST INCOME AS INCURRED, were \$16,668,000 in 1997, \$19,122,000 in 1996, and \$20,366,000 in 1995.

Note 8--Income Taxes

INCOME TAXES ARE ACCOUNTED FOR IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 109. DEFERRED TAX BALANCES ARE STATED AT TAX RATES EXPECTED TO BE IN EFFECT WHEN TAXES ARE ACTUALLY PAID OR RECOVERED. NO PROVISION IS MADE FOR UNDISTRIBUTED EARNINGS OF INTERNATIONAL COMPANIES SINCE LITTLE OR NO TAX WOULD RESULT UNDER APPLICABLE EXISTING STATUTES OR BECAUSE MANAGEMENT INTENDS THAT THESE EARNINGS BE PERMANENTLY REINVESTED FOR WORKING CAPITAL AND CAPITAL EXPENDITURE REQUIREMENTS.

The U.S. and non-U.S. components of income before income taxes, and provisions for income taxes are summarized as follows:

	(In thousands)		
	1997	1996	1995
<b>Income Before Income Taxes</b>			
U.S. income.....	\$ 43,735	\$ 31,087	\$ 28,501
Non-U.S. income.....	7,510	12,267	11,700
Currency translation (losses).....	(437)	(641)	(887)
Eliminations.....	(14,569)	(6,046)	(6,182)
<b>Income Before Income Taxes.....</b>	<b>36,239</b>	<b>36,667</b>	<b>33,132</b>
<b>Provisions For Income Taxes</b>			
<b>Current</b>			
Federal.....	2,686	9,549	8,451
State.....	479	1,634	1,642
Non-U.S.....	3,775	4,948	4,728
<b>Total current provision.....</b>	<b>6,940</b>	<b>16,131</b>	<b>14,821</b>
<b>Deferred</b>			
Federal.....	6,595	(900)	(584)
State.....	1,256	(146)	(13)
Non-U.S.....	(406)	(1,479)	(4)
<b>Total deferred provision.....</b>	<b>7,445</b>	<b>(2,525)</b>	<b>(601)</b>
<b>Provisions for Income Taxes.....</b>	<b>14,385</b>	<b>13,606</b>	<b>14,220</b>

The components of deferred taxes are as follows:

<b>Deferred tax assets</b>			
Postretirement benefits.....	5,926	5,905	5,666
Inventory reserves and unrealized profits.....	4,379	5,463	5,975
Vacation allowances.....	1,960	2,023	2,048
Postemployment benefits.....	643	1,251	1,251
Liability insurance.....	3,003	3,124	3,153
Loss carryforwards.....	533	350	1,785
Restructuring.....	290	1,089	
Warranties.....	2,220	1,239	695
Other.....	2,598	4,641	3,804
<b>Total deferred tax assets.....</b>	<b>21,552</b>	<b>25,085</b>	<b>24,377</b>
<b>Deferred tax liabilities</b>			
Depreciation.....	(20,728)	(22,227)	(24,159)
Pension.....	(6,777)	(980)	(1,010)
<b>Total deferred tax liabilities.....</b>	<b>(27,505)</b>	<b>(23,207)</b>	<b>(25,169)</b>
<b>Net deferred taxes.....</b>	<b>(5,953)</b>	<b>1,878</b>	<b>(792)</b>

The following is a reconciliation of income taxes calculated at the U.S. Federal income tax rate of 35% to the provision for income taxes:

Provision for income taxes at statutory rate.....	12,684	12,833	11,596
State income taxes.....	1,128	967	1,059
Currency translation.....	153	313	310
Non-U.S. taxes.....	418	(995)	694
Other--net.....	2	488	561
<b>Provision for income taxes.....</b>	<b>14,385</b>	<b>13,606</b>	<b>14,220</b>

Undistributed earnings of international companies for which U.S. income taxes have not been provided were \$68,407,000 at December 31, 1997.

Note 9--Capital Stock

The authorized capital of the company consists of:

- . Common stock, no par value--20,000,000 shares
- . Second cumulative preferred voting stock, \$10 par value--1,000,000 shares
- . 4 1/2% cumulative preferred stock, \$50 par value--100,000 shares

Common stock activity is summarized as follows:

	(In thousands)		
	Shares Issued	Stock Compensation Trust	Shares In Treasury
Balances January 1, 1995.....	6,713,503		897,831
Stock options exercised.....	5,900		
Purchased for treasury.....			638,815
Balances December 31, 1995.....	6,719,403		1,536,646
Management Share Incentive Plan issues.....	17,050		
Management Share Incentive Plan forfeitures..	(560)		
Stock options exercised.....	13,840		
Sale to Stock Compensation Trust.....		600,000	(600,000)
Purchased for treasury.....			601,962
Balances December 31, 1996.....	6,749,733	600,000	1,538,608
Management Share Incentive Plan forfeitures..	(147)		
Stock options exercised.....	29,645		
Purchased for treasury.....			184,708
Balances December 31, 1997.....	6,779,231	600,000	1,723,316

(In thousands)		
Shares Issued	Stock Compensation Trust	Treasury Cost
\$ 8,048		\$(40,388)
252		(28,277)
8,300		(68,665)
771		
(25)		
602		
1,218	\$(28,200)	26,982
		(28,853)
10,866	(28,200)	(70,536)
(7)		
1,438		
		(11,338)
12,297	(28,200)	(81,874)

Second cumulative preferred voting stock--none has been issued.

As to the 4 1/2% cumulative preferred stock, 71,373 shares have been issued (none during the three years ended December 31, 1997), while the amounts held in treasury at each year end are 1997 - 49,313 shares, \$1,595,000; 1996 - 49,313 shares, \$1,595,000; and 1995 - 47,935 shares, \$1,553,000.

The company has established the Mine Safety Appliances Company Stock Compensation Trust, the purpose of which is to fund certain benefit plans, including employee stock options and awards. In 1996, the company sold 600,000 treasury shares, at market value, to the Trust, in exchange for a \$28,200,000 promissory note, 8% interest, payable to the company.

The company has adopted a Shareholder Rights Plan which includes distribution of rights as a dividend at the rate of one right for each share of the company's common stock owned on February 21, 1997. Each right entitles the holder to buy a fraction of a share of participating preferred stock for \$225 in the event certain persons or groups acquire 15% or more of the company's outstanding common stock. Each right entitles its holder to purchase common stock having a value twice the exercise price. The rights will expire on February 21, 2007.

Note 10--Leases

The company leases office space, manufacturing and warehouse facilities, automobiles and other equipment under operating leases expiring at various dates through 2001. Rent expense was \$6,751,000 in 1997, \$6,956,000 in 1996, and \$6,970,000 in 1995. Future minimum rental payments under noncancelable leases are not significant.

Note 11--Earnings per Share

BASIC EARNINGS PER SHARE IS COMPUTED ON THE WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING DURING THE PERIOD. DILUTED EARNINGS PER SHARE INCLUDES THE EFFECT OF THE WEIGHTED AVERAGE STOCK OPTIONS OUTSTANDING DURING THE PERIOD, USING THE TREASURY STOCK METHOD. ANTIDILUTIVE OPTIONS ARE NOT CONSIDERED IN COMPUTING DILUTED EARNINGS PER SHARE.

	(In thousands)		
	1997	1996	1995
Net income.....	\$21,854	\$23,061	\$18,912
Preferred stock dividends.....	(37)	(64)	(53)
Income available to common shareholders....	21,817	22,997	18,859
Basic shares outstanding.....	4,536	4,852	5,681
Stock options.....	13	3	3
Diluted shares outstanding.....	4,549	4,855	5,684





Note 12--Short-Term Debt

Short-term bank lines of credit amounted to \$48,610,000 of which \$25,814,000 was unused at December 31, 1997. Generally, these short-term lines of credit are renewable annually, and there are no significant commitment fees or compensating balance requirements. Short-term borrowings with banks, which exclude the current portion of long-term debt, were \$23,762,000 and \$5,491,000 at December 31, 1997 and 1996, respectively. The average month-end balance of total short-term borrowings during 1997 was \$21,649,000 while the maximum month-end balance of \$32,749,000 occurred at November 30, 1997. The average interest rate during 1997 was approximately 8% based upon total short-term interest expense divided by the average month-end balance outstanding, and 8% at year-end.

Note 13--Retirement Plans

Substantially all employees are covered by non-contributory pension plans. Various U.S. employees also participate in a contributory retirement savings plan wherein employees may contribute from 1% to 10% of their compensation to a trust fund, to which the company contributes an amount equal to 50% of the employees' contributions not in excess of 8%. The company's (income)/expense for all plans was (\$7,737,000) in 1997, \$2,798,000 in 1996, and \$3,069,000 in 1995.

THE NON-CONTRIBUTORY PENSION PLANS ARE ACCOUNTED FOR IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 87 WHICH REQUIRES USE OF THE PROJECTED UNIT CREDIT COST METHOD TO DETERMINE THE PROJECTED BENEFIT OBLIGATION AND PLAN COST. THE PRINCIPAL U.S. PLAN IS FUNDED IN COMPLIANCE WITH THE EMPLOYEE RETIREMENT INCOME SECURITY ACT (ERISA). IT IS THE GENERAL POLICY TO FUND CURRENT COSTS FOR THE INTERNATIONAL PLANS EXCEPT IN GERMANY, WHERE IT IS COMMON PRACTICE AND PERMISSIBLE UNDER TAX LAWS TO ACCRUE BOOK RESERVES. A minimum liability is recognized for unfunded defined benefit plans for which the accumulated benefit obligation exceeds accrued pension costs. The amount of the minimum liability in excess of unrecognized prior service cost, net of tax benefit, is recorded as a reduction in shareholders' equity. Non-contributory plan benefits are generally based on years of service and employees' compensation during the last years of employment. Benefits are paid from funds previously provided to trustees or are paid by the company and charged to the book reserves.

Information pertaining to the non-contributory defined benefit plans is provided in the following tables.

Cost for Defined Benefits Plans (In thousands)	U.S. Plans			International Plans		
	1997	1996	1995	1997	1996	1995
Service cost--benefits earned during the period.....	\$ 3,014	\$ 3,205	\$ 2,826	\$ 1,641	\$ 2,036	\$ 1,939
Interest cost on projected benefit obligation.....	10,170	9,892	10,023	3,308	4,003	4,055
Actual (return)/loss on plan assets.....	(52,403)	(33,411)	(45,817)	(2,162)	(1,861)	(1,964)
Net amortization and deferral.....	30,239	15,667	29,169	709	601	896
Settlement and curtailment adjustments.....	(5,726)		(508)			
Pension expense (income).....	(14,706)	(4,647)	(4,307)	3,496	4,779	4,926
Funding Status and Projected Benefit Obligation						
Reconciliation						
December 31 (In thousands)						
Actuarial present value of benefit obligations						
Accumulated benefit obligation						
Vested.....	125,398	119,131	119,959	43,048	38,088	47,125
Nonvested.....	1,851	1,904	1,962	1,102	9,874	1,230
Total.....	127,249	121,035	121,921	44,150	47,962	48,355
Plan assets at fair value, primarily listed stocks and bonds.....	272,927	234,591	209,902	21,982	20,744	18,211
Projected benefit obligation.....	148,611	141,702	146,097	46,396	50,565	54,101
Plan assets in excess of (less than) projected benefit obligation.....	124,316	92,889	63,805	(24,414)	(29,821)	(35,890)
The excess (less than) consists of						
Unamortized portion of transition gain (loss), being recognized over future years.....	4,987	6,104	7,017	(840)	(1,111)	(1,422)
Unrecognized net gain (loss) from past experience different from that assumed.....	94,606	77,562	52,979	7,799	5,131	(331)
Unrecognized prior service cost.....	(1,863)	(2,326)	(2,693)	(586)	(675)	(815)
Minimum liability for unfunded plans.....	1,824	963	1,301			
(Accrued)/prepaid pension cost included in the consolidated balance sheet.....	24,762	10,586	5,201	(30,787)	(33,166)	(33,322)
Total.....	124,316	92,889	63,805	(24,414)	(29,821)	(35,890)
Assumed long-term rates of return on assets.....	9.0%	9.0%	9.0%	7.5-8.0%	8.0-9.0%	8.0-9.0%
Assumed discount rates for future benefits.....	7.0	7.5	7.3	5.3-8.0	6.1-8.0	7.0-8.5
Assumed long-term rates for compensation increases.....	4.5	4.5	5.0	2.5-8.5	3.0-6.0	4.0-6.5

Note 14--Postretirement Benefits

The company provides certain health care benefits and limited life insurance for retired employees and their eligible dependents, THE COSTS FOR WHICH ARE ACCOUNTED FOR IN ACCORDANCE WITH STATEMENT OF FINANCIAL ACCOUNTING STANDARDS (SFAS) NO. 106. SFAS NO. 106 REQUIRES RECOGNITION OF RETIREE HEALTH AND LIFE INSURANCE BENEFITS DURING THE EMPLOYEES' SERVICE WITH THE COMPANY. Further information about these benefits is provided in the following tables.

Cost for Benefits (In thousands)	1997	1996	1995
Service cost--benefits earned during the period.....	\$ 303	\$ 408	\$ 349
Interest cost on accumulated postretirement benefit obligation.....	1,030	1,152	1,168
Special benefit adjustments associated with early retirement and restructuring...		36	(247)
Postretirement benefits expense.....	1,333	1,596	1,270
Funded Status and Accumulated Postretirement Benefit Obligation Reconciliation December 31 (In thousands)			
Accumulated postretirement benefit obligation			
Active employees.....	2,886	3,214	3,352
Other active participants.....	5,997	6,955	7,224
Retirees.....	8,883	10,169	10,576
Total.....	6,400	6,268	6,031
Unamortized loss.....	15,283	16,437	16,607
(202)	(1,431)	(2,241)	
Accrued postretirement benefit cost included in consolidated balance sheet.....	15,081	15,006	14,366
Assumed discount rates for future benefits.....	7.0%	7.5%	7.3%

Annual rates of increase in the costs of covered health care benefits assumed for 1997 were 6%, decreasing gradually to 4% for the year 1999 and thereafter. The health care cost trend rate assumption has a significant effect on the amounts reported; a one-percentage-point increase in each year would increase the accumulated postretirement benefit obligation by \$967,000 and increase the current service and interest costs for the year by \$112,000.

Note 15--Stock Plans

The company's Management Share Incentive Plan permitted the granting of restricted stock awards and stock options to eligible key employees through December 1997. The 1990 Non-Employee Directors' Stock Option Plan provides for annual grants of stock options to eligible directors. As of December 31, 1997, there were 35,800 shares reserved for future grants pursuant to this Plan.

Stock options are generally granted at market value option prices and expire after ten years (limited instances of option prices in excess of market value and expiration after five years). Restricted stock awards are granted (17,050 shares in 1996) to employees without payment to the company in consideration of services to be performed in ensuing five-year periods. THE COMPANY APPLIES ACCOUNTING PRINCIPLES BOARD OPINION 25 AND RELATED INTERPRETATIONS IN ACCOUNTING FOR THE PLANS. ACCORDINGLY, NO COMPENSATION COST HAS BEEN RECOGNIZED FOR THE STOCK OPTION GRANTS. COMPENSATION COST FOR THE RESTRICTED STOCK AWARDS IS MEASURED BY THE MARKET VALUE OF THE SHARES WHEN AWARDED AND IS AMORTIZED BY CHARGES TO OPERATIONS OVER THE PERIOD THAT THE EMPLOYEE PROVIDES THE SERVICE. The expense charged to operations was \$436,000 in 1997, \$350,000 in 1996, and \$238,000 in 1995. The company's net income and earnings per share would not be significantly affected if compensation cost for these Plans was determined based on fair value at grant dates consistent with the method provided in Statement of Financial Accounting Standards No. 123.

A summary of the two stock option plans follows:

	1997		1996		1995	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Outstanding at beginning of year.....	58,365	\$46.77	46,360	\$46.18	49,260	\$45.89
Granted.....	27,451	56.80	31,455	46.37	3,000	44.00
Exercised.....	(29,645)	48.51	(13,840)	43.49	(5,900)	42.62
Forfeited.....	(1,170)	56.64	(5,610)	47.50		
Outstanding at end of year.....	55,001	50.63	58,365	46.77	46,360	46.18
Options exercisable at year-end.....	55,001		58,365		44,473	

The options outstanding at December 31, 1997, have a weighted-average remaining contractual life of approximately 8 years and an exercise price range of \$40.43



Summary of Selected  
Financial Data

SUMMARY OF OPERATIONS (In thousands, except as noted)	1997	1996	1995	1994	1993
Net sales	\$494,324	\$500,985	\$487,668	\$459,607	\$429,220
Other income	5,085	5,870	4,191	5,463	5,885
Cost of products sold	302,225	307,112	296,845	286,725	273,350
Selling, general and administrative	134,444	133,071	138,187	124,714	121,529
Depreciation	21,516	22,373	20,002	18,527	17,294
Interest expense	2,781	1,595	1,730	2,224	1,713
Currency exchange losses	40	735	1,233	3,968	3,201
Unusual items	2,164	5,302	730	3,086	(223)
Taxes on income	14,385	13,606	14,220	10,497	7,686
Net income	21,854	23,061	18,912	15,329	10,555
Basic per common share (in dollars)	4.81	4.74	3.32	2.58	1.73
Diluted per common share (in dollars)	4.80	4.74	3.32	2.58	1.73
Dividends paid per common share (in dollars)	1.24	1.10	1.06	.94	.92
Weighted average number of common shares outstanding--basic	4,536	4,852	5,681	5,921	6,069
YEAR-END POSITION					
Working capital	\$116,373	\$136,593	\$156,641	\$166,494	\$164,199
Working capital ratio	2.1	2.5	3.2	3.4	3.7
Property, at cost	354,649	347,432	339,263	322,109	306,691
Total assets	406,404	407,682	406,600	417,051	407,884
Long-term debt	12,270	13,278	14,746	16,564	27,476
Common shareholders' equity	240,346	240,329	252,368	264,795	258,539
Equity per common share (in dollars)	53.94	52.12	48.69	45.53	43.00

QUARTERLY FINANCIAL INFORMATION (UNAUDITED)  
(In thousands, except earnings per share)

	1997					1996				
	Quarters				Year	Quarters				Year
	1st	2nd	3rd	4th		1st	2nd	3rd	4th	
Net sales	\$113,473	\$129,245	\$120,602	\$131,004	\$494,324	\$115,371	\$123,879	\$121,744	\$139,991	\$500,985
Gross profit	43,074	48,883	48,042	52,100	192,099	41,325	44,491	47,465	60,592	193,873

Net income.....	3,604	5,055	5,832	7,363	21,854	3,139	3,756	6,116	10,050	23,061
Basic earnings per share.....	.78	1.10	1.29	1.65	4.81	.61	.76	1.27	2.17	4.74
Diluted earnings per share...	.78	1.10	1.29	1.64	4.80	.61	.76	1.27	2.17	4.74

## MINE SAFETY APPLIANCES COMPANY

The registrant's present affiliates include the following:

Name	State or Other Jurisdiction of Incorporation
Compania MSA de Argentina S.A.	Argentina
MSA (Aust.) Pty. Limited	Australia
MSA Export Limited	Barbados
MSA Belgium NV	Belgium
MSA do Brasil Ltda.	Brazil
MSA Canada	Canada
MSA de Chile Ltda.	Chile
Baseline Industries, Inc.	Colorado
Rose Manufacturing Company	Colorado
MSA International, Inc.	Delaware
MSA de France	France
Auergesellschaft GmbH	Germany
MSA-Auer Safety Technology	Hungary
MSA Italiana S.p.A.	Italy
MSA Japan Ltd.	Japan
Better Breathing, Inc.	Massachusetts
MSA de Mexico, S.A. de C.V.	Mexico
MSA Nederland, B.V.	Netherlands
HAZCO Services, Inc.	Ohio
MSA del Peru S.A.	Peru
MSA-Auer Polska Sp. z o.o.	Poland
MSA (Britain) Limited	Scotland
MSA S.E. Asia Pte. Ltd.	Singapore
MSA Africa (Pty.) Ltd.	South Africa
MSA Espanola S.A.	Spain
AB Tegma	Sweden
MSA (Switzerland) Ltd.	Switzerland
Aritron Instrument A.G.	Switzerland
MSA Zimbabwe (Pvt.) Limited	Zimbabwe

The above-mentioned affiliated companies are included in the consolidated financial statements of the registrant filed as part of this annual report. The names of certain other affiliates, which considered in the aggregate as a single affiliate would not constitute a significant affiliate, have been omitted.

Consent of Independent Accountants

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 33-22284) of the 1987 Management Share Incentive Plan and the Registration Statement on Form S-8 (no 33-43696) of the 1990 Non-Employee Directors' Stock Option Plan of Mine Safety Appliances Company of our report dated February 18, 1998, appearing on page 13 of the 1997 Annual Report to Shareholders of Mine Safety Appliances Company, which is incorporated in this Annual Report on Form 10-K. We also consent to the incorporation by reference of our report on the Financial Statement Schedule, which appears on page F-1 of this Form 10-K.

PRICE WATERHOUSE LLP

600 Grant Street  
Pittsburgh, PA 15219  
March 26, 1998





THE SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM DECEMBER 1997  
 FINANCIAL STATEMENTS AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH  
 FINANCIAL STATEMENTS

12-MOS	
	DEC-31-1997
	DEC-31-1997
	5,264
	14,657
	95,092
	(3,704)
	81,066
	27,238
	354,649
	(199,465)
	406,404
103,240	
	12,270
0	
	3,569
	12,297
	225,583
406,404	
	494,324
	499,409
	302,225
	323,741
	2,204
	0
	2,781
	36,239
	14,385
21,854	
	0
	0
	0
	21,854
	4.81
	4.80