WASHINGTON, D.C. 20549

FORM 10-K

| (State or other jurisdiction of <br> incorporation or organization) | $25-1190$ <br> The Chrysler Building <br> 405 Lexington Avenue <br> New York, New York <br> (address of principal executive office) |
| :--- | ---: |

(212) 878-1800
(Registrant's telephone number including area code)
SECURITIES REGISTERED PURSUANT TO SECTION $12(\mathrm{~B})$ OF THE ACT:

| Title of each class | Name of each exchange on which registered |
| :---: | :---: |

Common Stock, $\$ .10$ par value New York Stock Exchange

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    Securities registered pursuant to Section \(12(\mathrm{~g})\) of the Act:
                        None
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    Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or $15(\mathrm{~d})$ 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.

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\begin{array}{cc}
\text { Yes } \begin{array}{c}
\mathrm{X} \\
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\end{array} & \text { No }
\end{array}
$$

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 $10-\mathrm{K}$ or any amendment to this Form $10-\mathrm{K}$. X
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The aggregate market value of the voting stock held by non-affiliates of the Registrant, based upon the closing price at which the stock was sold as of February 1,1999 was approximately $\$ 496.5$ million. Shares of common stock held by each officer and director and by each person who owns $5 \%$ or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.


ITEM 1. BUSINESS

Minerals Technologies Inc. (the "Company") is a resource- and technology-based company that develops, produces and markets on a worldwide basis a broad range of specialty mineral, mineral-based and synthetic mineral products. The Company has two operating segments: Specialty Minerals and Refractories. The Specialty Minerals segment produces and sells precipitated calcium carbonate ("PCC") and lime, and mines, processes and sells the natural mineral products limestone and talc. This segment's products are used principally in the paper, building materials, paints and coatings, glass, ceramic, polymers, food and pharmaceutical industries. The Refractories segment produces and markets monolithic and shaped refractory materials and services used primarily by the steel, cement and glass industries. The Company emphasizes research and development. The level of the Company's research and development spending as well as its history of developing and introducing technologically advanced new products has enabled the Company to anticipate and satisfy changing customer requirements and create new market opportunities through new product development and product application innovations.

## SPECIALTY MINERALS SEGMENT

PCC PRODUCTS AND MARKETS

## PCC PRODUCTS

Paper can be produced under either acid or alkaline conditions. Historically, in North America, paper was primarily produced using acid technologies. In the mid-1980's, North American producers of uncoated wood-free paper encountered significant increases in the cost of wood fiber and other materials, such as titanium dioxide, which are necessary in greater quantities in the acid process. In response, these paper producers sought to convert their paper production to lower-cost alkaline-based technologies, which permit mineral fillers to be substituted for more expensive wood fiber and pigments used to increase brightness, resulting in significant cost savings. As a result of these conditions, the Company believed that a significant opportunity existed to provide paper producers with a high performance filler product that could facilitate the transition to the alkaline papermaking process. The Company's four-year development effort culminated in the construction of the first commercial satellite PCC plant at the Wisconsin Rapids paper mill of Consolidated Papers, Inc. in 1986. The Company believes the competitive advantages offered by the improved economics and superior optical characteristics of the paper produced using the PCC products manufactured by the Company's satellite PCC plants resulted in the rapid growth in the number of the company's satellite PCC plants among uncoated wood-free paper producers. The Company has also built satellite PCC plants that replace ground calcium carbonate. In addition, the Company has constructed satellites for coating PCC, and more recently, satellites for the use of its patented acid-tolerant PCC technology. This technology provides higher performance qualities to manufacturers of groundwood paper like newsprint, magazine and catalogue papers. The following table shows the number of satellite PCC plants operated by the Company at the end of the periods indicated. For information with respect to the locations of the Company's satellite PCC plants at December 31, 1998, see Item 2, "Properties" below.

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SATELLITE PCC PLANTS AT END OF QUARTER
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CALENDAR YEAR
FIRST SECOND THIRD FOURTH

| 1994 | 36 | 36 | 36 | 36 |
| :--- | :--- | :--- | :--- | :--- |
| 1995 | 37 | 37 | 38 | 38 |
| 1996 | 41 | 42 | 43 | 44 |
| 1997 | 45 | 46 | 48 | 49 |
| 1998 | 50 | 53 | 53 | 53 |

In 1998, the Company commenced operations at four new satellite PCC plants in three different countries. These satellite PCC plants are located in France, Germany and two in the United States.

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During 1998, the Company signed agreements to construct two new satellite plants, both of which are now under construction. The satellite PCC plants under construction are located in China and in the United States. These PCC plants are scheduled to commence operations in the first half of 1999.

In addition, on April 30, 1998, the Company acquired a precipitated calcium carbonate manufacturing facility in the United Kingdom which allows the Company to establish a base for its specialty PCC business in Europe.

The Company staffs, operates and maintains all of its satellite PCC plants and owns the related technology used at its satellite PCC plants. The Company and its paper mill customers enter into long-term agreements, generally ten years in length, pursuant to which the Company supplies substantially all of a customer's precipitated calcium carbonate filler requirements. The Company is generally permitted to sell to third parties PCC produced at a satellite plant in excess of the host paper mill's requirements. The Company's satellite PCC plants and customers are listed in Item 2, "Properties."

The Company currently manufactures several customized PCC product forms through proprietary processes at its satellite PCC plants, each designed to provide optimum brightness, opacity, bulking and/or paper strength. While focusing on expanding sales at its existing satellite PCC plants, the Company's research and development and technical service staffs have pioneered a number of new technologies. These include acid-tolerant PCC, which allows PCC to be introduced to the large wood-containing segment of the printing and writing papers market, and PCC crystal morphologies for coating paper. The Company expects that research and development in coating technology will open up a larger market for PCC that will build slowly as paper companies begin to include PCC in their proprietary coating formulations.

The Company also produces a full range of slurry and dry PCC products sold on a merchant basis. In the paper industry, the Company's merchant PCC is used as a coating pigment and as a filler in the production of coated and uncoated wood-free printing and writing papers. The Company sells surface-treated and untreated grades of PCC to the polymers industry for use in rigid polyvinyl chloride products (pipe and profiles), thermoset polyesters (automotive body parts), sealants (automotive and construction applications), adhesives, printing inks and coatings. The Company's PCC is used by the food and pharmaceutical industries as a source of bio-available calcium in tablets and foodstuffs, as a buffering agent in tablets, and as a mild abrasive in toothpaste. The Company also sells PCC on a merchant basis to the paints and coatings industry.

The Company's PCC product line net sales were $\$ 349.5$ million, $\$ 299.9$ million, $\$ 263.1$ million for the years ended December 31, 1998, 1997 and 1996, respectively. See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

## KEY MARKETS

The principal market for the Company's satellite PCC products is the
paper industry. The Company also produces PCC on a merchant basis for sale to companies in the polymers, food and pharmaceutical and paints and coatings industries.

Sales of PCC to the paper industry have accounted for a steadily increasing percentage of the Company's total sales in the past five years, a trend the Company expects to continue. The Company's sales of PCC have been and are expected to continue to be made to the printing and writing papers segment of the paper industry. The Company's products are currently used primarily by paper mills producing uncoated wood-free paper.

NORTH AMERICAN WOOD-FREE PRINTING AND WRITING PAPERS. In the mid-1980's, North American producers of uncoated wood-free paper encountered significant increases in the costs of wood fiber and other materials. In response, these paper producers sought to convert their paper production to lower-cost alkaline-based technologies, thereby resulting in significant cost savings. Ground chalk has historically been used by European alkaline-based paper producers as a low-cost substitute for wood fiber. In North America, however, the use of ground chalk is not practical as there is no naturally occurring chalk.

PCC must compete with other fillers, such as ground limestone and clay. PCC costs more to produce than ground limestone or clay since the production process is inherently more complex. Limestone is mined, crushed and ground; clay is mined, ground and perhaps calcined. PCC is manufactured via a chemical process which takes lime (which itself is produced by calcining a mined product, limestone), dissolves it, combines it with carbon dioxide and separates the final product. Drying and transportation can add over $\$ 100$ per ton to the product cost. If shipped wet, additional freight costs are incurred. In many cases this added cost makes PCC from merchant plants uncompetitive with other fillers.

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In response to these conditions and as a result of a concentrated research and development effort, the Company developed the satellite PCC plant concept. The Company's satellite PCC plants have facilitated the conversion of a substantial percentage of the North American uncoated wood-free printing and writing paper producers to alkaline papermaking. The Company estimates that during 1998, more than $80 \%$ of North American wood-free paper was produced employing alkaline technology.

Presently, the Company owns and operates 35 commercial satellite PCC plants located at paper mills that produce wood-free printing and writing papers in North America. Based upon its experience, the Company anticipates that the aggregate volume of PCC used by these 35 paper mills will increase. The Company also estimates that a few additional North American paper mills producing wood-free paper are both suitable for conversion to the more economical and, in the Company's view, more ecologically sound, alkaline method and large enough to support a satellite PCC plant.

The Company is also placing increased emphasis on the use of PCC to coat paper. PCC increases gloss and printability of the sheet while decreasing paper's cost per ton. The coating market is large and the Company believes it will continue to grow at a higher average growth rate than the uncoated market, and therefore provides a substantial market opportunity for the Company. PCC coating products are produced at approximately ten satellite PCC plants.

WORLDWIDE WOOD-CONTAINING PRINTING AND WRITING PAPERS. To date, the Company's PCC products have primarily been used in wood-free alkaline papermaking processes. The groundwood paper market, which the Company is beginning to penetrate, represents nearly half of worldwide paper production. The wood-containing segments of the paper industry still
generally employ acid papermaking technology. The conversion to alkaline technology by these segments has been hampered by the phenomenon of alkaline darkening, the tendency of wood-containing papers to darken in an alkaline environment. In an attempt to introduce PCC to the wood-containing segments of the paper industry, the Company has developed and patented a process for the manufacture of an acid-tolerant form of PCC (AT-TM-PCC) that provides high-brightness, high-quality groundwood paper produced in an acid environment. The Company now supplies PCC to six groundwood paper mills, pursuant to long-term contracts.

The Company believes PCC filler levels for uncoated wood-containing paper generally will be less than those for uncoated wood-free paper. There can be no assurance as to the number of producers of wood-containing paper that will contract with the Company to purchase AT-TM- PCC.

INTERNATIONAL WOOD-FREE PRINTING AND WRITING PAPERS. The Company estimates the production of uncoated wood-free printing and writing papers outside of North America that can be served by its satellite PCC operations is approximately the same size (measured in tons of paper produced) as the North American uncoated wood-free paper market currently served by the Company. A number of factors have influenced the acceptance of the Company's satellite PCC technology in foreign markets. Although European wood-free paper producers predominantly use alkaline papermaking processes, PCC, although growing in use, is not the prevalent filler in this market. Ground limestone is readily available in Europe and commonly used as a low-cost filler product in alkaline systems. In addition, supplies of lime suitable for the manufacture of PCC generally are more expensive than such lime in North America. However, the Company believes that the superior brightness and opacity characteristics offered by its PCC products should allow it to compete with suppliers of ground limestone and other filler products in this market. In Latin America and Asia supplies of lime suitable for PCC production are generally readily available.

PROCESSED MINERAL PRODUCTS AND MARKETS

The Company mines and processes natural mineral products, limestone and talc, and manufactures lime, a mineral-based product.

Limestone and talc are mined, crushed, screened and beneficiated and, on occasion, subjected to surface chemical modification.

Lime, a mineral-based product, is used as a raw material for the manufacture of PCC at the Company's Adams, Massachusetts facility, and sold commercially to the steel and chemical industries.

In April 1998, the Company divested its Midwest limestone business in Port Inland, Michigan. Net sales of the Midwest limestone business in 1997 were $\$ 20.8$ million. Net sales from this facility in 1998, prior to the divestiture, were $\$ 1.6$ million. This was the Company's only business unit competing for sales of limestone aggregate, a commodity business. References to ongoing operations exclude the results from this facility.

Talc is mined, beneficiated and processed at the Company's Barretts site, located near Dillon, Montana, and is sold worldwide in finely ground form for paints and coatings, ceramics and polymers applications. Because of the exceptional chemical purity of the Barretts ore, virtually all of the automotive catalytic converter ceramic substrates manufactured in the United States, Japan and Western Europe utilize the Company's Barretts talc.

The Company's net sales of processed mineral products from ongoing operations were $\$ 77.9$ million, $\$ 82.4$ million and $\$ 79.1$ million for the years ended December 31, 1998, 1997 and 1996, respectively. See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of operations."

The Company's natural mineral products are supported by the Company's limestone reserves, which the Company believes are strategically located in the western and eastern parts of the United States, and talc reserves, which the Company believes are of outstanding quality. The Company estimates these reserves, at current usage levels, to be from 40 to over 70 years at its limestone production facilities and in excess of 40 years at its talc production facilities.

## REFRACTORIES SEGMENT

## REFRACTORY PRODUCTS AND MARKETS

REFRACTORY PRODUCTS.
The Company offers a broad range of monolithic refractory products as well as pre-cast monolithic refractory shapes. Product sales are usually combined with Company-supplied proprietary applications equipment and on-site technical services support. The Company's proprietary applications equipment is used to apply refractory materials to the walls of steelmaking furnaces and other high temperature vessels to maintain and extend their lives. Robotic-type shooters, including the Company's proprietary SEQUAD-RT- sprayer, allow for remote-controlled applications in steelmaking furnaces, as well as in steel ladles and blast furnaces. Since the steel-making industry is characterized by intense price competition, which results in a continuing emphasis by steel mills on increased productivity, the SEQUAD-RT- sprayer and the related technologically advanced blast furnace maintenance materials developed in the Company's research laboratories have been well accepted by the Company's customers. These products allow steel makers to improve their performance through, among other things, the application of monolithic refractories to furnace linings while the furnace is at operating temperature, thereby eliminating the need for furnace cool-down periods and steel-production interruption. This also results in a lower overall refractory cost to steel makers per ton of steel produced. The Company's experienced technical service staff and advanced applications equipment provide greater assurance that the desired productivity objectives of customers are achieved. In addition, laser measurement of refractory wear is conducted by the Company's technicians in certain plants. The Company believes that these services, together with its refractory product offerings, provide the Company with a strategic marketing advantage.

The patented KILNTEQ-RT- refractory technology system is a new concept for lining the interior of lime and cement kilns. The KILNTEQ-RT- system calls for lining the huge, tube-like kilns with refractory material in a polygonal shape. This shape, rather than the circular linings now generally used, is believed to increase raw material throughput and to decrease energy use.

The Company's refractory products are sold in the following three product groups:

STEEL FURNACE REFRACTORIES. The Company sells gunnable monolithic refractory products to users of basic oxygen furnaces and electric furnaces for application on furnace walls to prolong the life of furnace linings.

SPECIALTY PRODUCTS FOR IRON AND STEEL. The Company sells monolithic refractory materials and pre-cast refractory shapes for iron and steel ladles, vacuum degassers, continuous casting tundishes, blast furnaces and reheating furnaces. The Company is one of the few monolithic refractory companies offering a full line of materials to satisfy all continuous casting refractory applications. This full line consists of gunnable, sprayable, trowellable and vibratable materials as well as refractory shapes and permanent linings.

The Company uses proprietary processes to produce a number of products that are technologically enhanced. These include calcium metal, metallurgical wire and a number of metal treatment specialties. The Company
manufactures calcium metal at its Canaan, Connecticut facility and purchases calcium in international markets. Calcium metal is used in the manufacture of batteries and magnets. The Company sells metallurgical wires and fluxes for use in the production of steel. The Company's metallurgical wires are injected into molten steel to reduce imperfections. The steel produced is used for high-pressure pipeline and other premium-grade steel applications. The Company's fluxes are mineral products used to help purify steel.

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NON-STEEL REFRACTORY PRODUCTS. This product line encompasses refractory shapes and linings and pyrolytic graphite products that are sold to the glass, cement, aluminum, petrochemical and other non-steel industries.

The Company's refractory net sales were $\$ 180.2$ million, $\$ 199.2$ million and $\$ 196.7$ million for the years ended December 31, 1998, 1997 and 1996, respectively. See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

## KEY MARKETS

The principal market for the Company's refractory products is the steel industry. Raw steel production on a worldwide basis has shown only modest growth in the past ten years. However, management believes that certain trends in the steel-making industry will continue to provide growth opportunities for the Company. These trends include the development of improved manufacturing processes such as continuous casting, the need of steel producers for increased productivity and higher grade refractories, as well as a modest shift toward electric steel making.

The use of the continuous casting method, measured in tons of steel cast on a worldwide basis, has more than doubled in the past ten years. The need for high quality refractory products for this process has generated new market opportunities for the Company's refractory products. Product offerings for continuous casting include advanced maintenance coatings and original linings for tundishes and robotic applications equipment. The Company believes that the trend toward electric steel-making mini-mills and away from integrated steel mills has facilitated the acceptance of new refractory products and technologies. Mini-mills require a broad line of refractory products and certain metallurgical products that are also produced by the Company.

## MARKETING AND SALES

The Company principally relies on its worldwide direct sales force to market its products. The direct sales force is augmented by worldwide technical service teams, which are familiar with the industries to which the Company markets its products, and several regional distributors. The Company's sales force works closely with the Company's technical service staff to solve technical and other issues faced by the company's customers. The Company's technical service staff assists North American paper producers in their conversion to alkaline papermaking and provides postconversion assistance to customers. In addition, the Company's technical service personnel advise with respect to the use of monolithic refractory materials and, in many cases, apply the refractory materials to the customers' furnaces and other vessels pursuant to service agreements. Continued use of skilled technical service teams is an important component of the Company's business strategy.

The Company works closely with its customers to ensure that the customers' requirements are satisfied and often trains and supports customer personnel in the use of the Company's products. The Company conducts domestic marketing and sales from its headquarters in New York and from regional sales offices in the eastern and western United States. The

Company's international marketing effort is directed from Brussels, Belgium; Tokyo, Japan; and Singapore. The Company believes its refractory manufacturing facilities are strategically located to satisfy the stringent delivery requirements of the steel industry. The Company also believes that its worldwide network of sales personnel and manufacturing facilities facilitates the international expansion of its satellite PCC operations.

## RAW MATERIALS

The Company uses lime in the production of PCC, and is a significant purchaser of lime in North America. Generally, lime is purchased from unaffiliated suppliers located in close geographic proximity to the Company's satellite PCC plants, pursuant to long-term contracts, and to a lesser extent, supplied by the Company from its Adams, Massachusetts facility. If there were to be an interruption in the supply of lime from any particular lime supplier to the Company, the Company believes that alternative sources of lime would be available at effectively the same cost to the Company. In Europe, supplies of lime suitable for the manufacture of PCC are generally available.

The principal raw materials used in the Company's monolithic refractories products are refractory-grade magnesia and various forms of aluminosilicates. The Company also purchases calcium metal, calcium silicide, graphite, calcium carbide and various alloys for use in the production of metallurgical wires and uses lime and aluminum in the production of calcium metal. The Company purchases a significant portion of its magnesite requirements from sources in the People's Republic of China.

The Company believes that it could obtain adequate supplies from alternate sources in the event of supply interruptions of its raw material requirements.

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## COMPETITION

The Company is continually engaged in efforts to develop new products and technologies and refine existing products and technologies in order to remain competitive and, in certain circumstances, to position itself as a market leader.

With respect to its PCC products, the Company competes for sales to the paper industry based in large part upon technological know-how, patents and processes that allow the Company to deliver PCC that the Company believes imparts superior brightness and opacity properties to paper on an economical basis. The Company is the leading manufacturer and supplier of PCC to the North American paper industry. It competes with certain companies both in North America and abroad that sell PCC or offer alternative products for use in paper filling and coating applications. Competition with respect to the Company's PCC sales is based upon availability of materials, price, and optical characteristics such as brightness, opacity and paper strength.

With respect to the Company's refractory products, competitive conditions vary by geographic region. Competition is based upon the performance characteristics of the product (including strength, quality and consistency and ease of application), price, and the availability of technical support. The Company competes with different companies in different geographic areas and in separate aspects of its product line.

The Company competes in sales of its limestone and talc based primarily upon product quality, price, and the geographic location of the purchaser.

Many of the Company's product lines are technology-based, and the Company's business strategy for continued growth in sales and profitability depends, to a large extent, on the continued success of its research and development activities. Among the significant achievements of the Company's research and development effort have been the satellite PCC plant concept, acid-tolerant PCC, production of PCC crystal morphologies for coating paper, the SEQUAD-RT- sprayer, the KILNTEQ-RT- system, and numerous new refractory products.

The Company maintains its main research facilities in Bethlehem and Easton, Pennsylvania, with more than 170 employees engaged in research and development. It also has smaller research and development facilities in Finland, Ireland and Japan. Expertise in inorganic chemistry, crystallography and structural analysis, fine particle technology and other aspects of materials science applies to and supports all of the Company's product lines.

For the years ended December 31, 1998, 1997 and 1996, the Company expended approximately $\$ 21.0$ million, $\$ 20.4$ million, and $\$ 19.7$ million, respectively, on research and development. The Company believes, based upon its review of publicly available information regarding the reported research and development spending of certain of its competitors, that its investment in research and development as a percentage of net sales exceeds comparable industry norms. The Company's research and development spending for 1998 approximated $3.4 \%$ of net sales.

## PATENTS AND TRADEMARKS

The Company owns or has the right to use approximately 400 patents and approximately 800 trademarks related to its business. The Company believes that its rights under its existing patents, patent applications and trademarks are of value to its operations, but no one patent, application or trademark is material to the conduct of the Company's business as a whole.

## INSURANCE

The Company maintains liability and property insurance and insurance for business interruption in the event of damage to its production facilities and certain other insurance covering risks associated with its business. The Company believes such insurance is adequate for the operation of its business. From time to time various types of insurance for companies in the specialty minerals business have been very expensive or, in some cases, unavailable. There is no assurance that in the future the Company will be able to maintain the coverage initially obtained or that the premiums therefore will not increase substantially.

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## EMPLOYEES

At December 31, 1998, the Company employed approximately 2,260 persons, of whom approximately 700 were employed by the Company outside the United States. The Company believes its relationships with its employees are good.

ENVIRONMENTAL, HEALTH AND SAFETY MATTERS
The Company's operations are subject to federal, state, local and foreign laws and regulations relating to the environment and health and safety. Certain of the Company's operations involve and have involved the use and release of substances that are classified as toxic or hazardous substances within the meaning of these laws and regulations. Environmental operating permits are, or may be, required for certain of the Company's operations and such permits are subject to modification, renewal and revocation. The Company regularly monitors and reviews its operations,
procedures and policies for compliance with these laws and regulations. The Company believes its operations are in substantial compliance with these laws and regulations and that there are no violations which should have a material effect on the Company. Despite these compliance efforts, some risk of environmental and other damage is inherent in the operation of the business of the Company, as it is with other companies engaged in similar businesses, and there can be no assurance that material damage will not occur in the future. The cost of compliance with these laws and regulations is not expected to have a material adverse effect on the Company. However, future events, such as changes in or modifications of interpretations of existing laws and regulations or enforcement policies or further investigation or evaluation of the potential health hazards of certain products may give rise to additional compliance and other costs that could have a material adverse effect on the Company. The Company has a right of indemnification for certain potential environmental, health and safety liabilities under agreements entered into between the Company and Pfizer Inc ("Pfizer") or Quigley Company, Inc. ("Quigley"), a wholly-owned subsidiary of Pfizer, in connection with the reorganization. See "Certain Relationships and Related Transactions" in Item 13.

## CAUTIONARY FACTORS THAT MAY AFFECT FUTURE RESULTS

The disclosure and analysis set forth in this report contains certain forward-looking statements, particularly statements relating to future actions, performance or results of current and anticipated products, sales efforts, expenditures, and financial results. From time to time, the Company also provides forward-looking statements in other publicly-released materials, both written and oral. Forward-looking statements provide current expectations or forecasts of future events such as new products, revenues and financial performance, and are not limited to describing historical or current facts. They can be identified by their use of words such as "plans," "expects," "anticipated," "will" and other words and phrases of similar meaning.

Forward-looking statements are necessarily based on assumptions, estimates and limited information available at the time they are made. A broad variety of risks and uncertainties, both known and unknown, as well as the inaccuracy of assumptions and estimates, can affect the realization of the expectations or forecasts in these statements. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially.

The Company undertakes no obligation to update any forward-looking statements. Investors should refer to the Company's subsequent filings under the Securities Exchange Act of 1934 for further disclosures.

As permitted by the Private Securities Litigation Reform Act of 1995, the Company is providing the following cautionary statements which identify factors that could cause the Company's actual results to differ materially from historical and expected results. It is not possible to foresee or identify all such factors. Investors should not consider this list an exhaustive statement of all potential risks, uncertainties and inaccurate assumptions.

[^0]-     - CONTRACT RENEWALS
The Company's sales of $P C C$ are predominantly pursuant to long-term agreements, generally ten years in length, with paper mills at which the Company operates satellite PCC plants. The terms of many of these agreements have been extended, often in connection with an expansion of the satellite PCC plant. To date, the Company's experience with extensions and renewals of its satellite PCC agreements has been favorable. There is no assurance, however, that this will continue to be the case. Failure of a number of the Company's customers to renew existing agreements could cause the future growth rate of the Company to differ materially from its historical growth rate, and could have a substantial adverse effect on the Company's results of operations.
-     - LITIGATION; ENVIRONMENTAL EXPOSURES
The Company's operations are subject to international, federal, state and local environmental, tax and other laws and regulations, and potentially to claims for various legal, environmental and tax matters. The Company is currently a party to various litigation matters, including the Eaton litigation which has previously been disclosed in the Management's Discussion and Analysis sections of the Company's most recent filings under the Securities Exchange Act of 1934. While the Company carries liability insurance which it believes to be appropriate to its businesses, and has provided reserves for such matters which it believes to be adequate, an unanticipated liability arising out of such a litigation matter or a tax or environmental proceeding could have a material adverse effect on the Company's financial condition or results of operations.
-     - NEW PRODUCTS
The Company is engaged in a continuous effort to develop new products in all of its product lines. Difficulties, delays or failures in the development, testing, production, marketing or sale of such new products could cause its actual results of operations to differ materially from expected results.


## - - COMPETITION; PROTECTION OF INTELLECTUAL PROPERTY

Particularly in its PCC and Refractory product lines, the Company competes based in part upon proprietary knowledge, both patented and unpatented. The Company's ability to achieve anticipated results depends in part on its ability to defend its intellectual property against inappropriate disclosure as well as against infringement. In addition, development by the Company's competitors of new products or technologies that are more effective or less expensive than those the Company offers could have a material adverse effect on the Company's financial condition or results of operations.

-     - RISKS OF DOING BUSINESS ABROAD

As the Company expands its operations overseas, it faces the increased risks of doing business abroad, including inflation, fluctuations in interest rates and currency exchange rates, nationalization, expropriation, limits on repatriation of funds, unstable governments and legal systems, and other factors. Adverse developments in any of these areas could cause actual results to differ materially from historical and expected results.

-     - AVAILABILITY OF RAW MATERIALS

The Company's ability to achieve anticipated results depends in part on having an adequate supply of raw materials for its manufacturing operations, particularly lime and carbon dioxide for PCC operations and magnesia for refractory operations, and on having adequate access to the ore reserves at its mining operations. Unanticipated changes in the costs or availability of such raw materials, or in the Company's ability to have access to its ore reserves, could adversely affect the Company's results of operations.

The Company faces the risk that the transition to the year 2000 may cause its own systems and equipment, or the systems and equipment of other firms, to fail unexpectedly. The Company is taking steps to study and reduce this risk, as outlined in the Management's Discussion and Analysis section of this report. However, failure of the Company's efforts to repair or replace its information technology systems according to schedule; failure to identify a missioncritical, non-year 2000-compatible item of software or embedded control; failure of a significant vendor or customer to provide the Company with goods or services or to purchase or pay for goods or services, because of year 2000-related breakdowns; or widespread year 2000-related disruption of the electrical, banking, telecommunications or transportation systems or of the economy in general, could adversely affect the Company's financial position or results of operations.

-     - CYCLICAL NATURE OF CUSTOMERS' BUSINESS

The bulk of the Company's sales are to customers in two industries, paper and steel, which have historically been cyclical. The Company's exposure to variations in its customers' business has been reduced in recent years by the growth in the number of plants it operates; by the diversification of its portfolio of products and services; and by its geographic expansion, since economic problems are usually not equally felt in all parts of the world. In addition, the structure of some of the Company's long-term contracts gives it a degree of protection against declines in the quantity of product purchased, since the price per ton rises as the number of tons purchased declines. In addition, many of the Company's product lines lower its customers' cost of product or increase their productivity, which should encourage them to use its products. However, a sustained economic downturn in one or more of the industries or geographic regions which the Company serves, or in the worldwide economy, could cause actual results of operations to differ materially from historical and expected results.

-     - ADOPTION OF A COMMON EUROPEAN CURRENCY

On January 1, 1999, eleven European countries adopted the euro as their common currency. Adoption of the euro will require changes both to the Company's financial reporting systems and to commercial arrangements with third parties, including customers, suppliers and financial institutions. In addition, adoption of a single currency and a common monetary policy by the countries adopting the euro can be expected to have effects on competition in Europe and on the overall economy of the region. A failure on the Company's part to identify or to correct systems or agreements which require modification, or effects on the competition or the general economy of the region, could adversely affect its financial position or results of operations.

ITEM 2. PROPERTIES
Set forth below is the location of, and customer served by, each of the Company's satellite PCC plants at December 31, 1998. Generally, the land on which each satellite PCC plant is located is leased at a nominal amount by the Company from the host paper mill pursuant to a lease, the term of which runs concurrently with the term of the PCC production and sale agreement between the Company and the host paper mill.

LOCATION

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Alabama, Jackson Alabama, Mobile

## CUSTOMER

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Boise Cascade Corporation
International Paper Company

Alabama, Selma
Arkansas, Ashdown
Brazil, Jacarei
Brazil, Luiz Antonio
Brazil, Suzano
California, Anderson
Canada, Cornwall, Ontario
Canada, Dryden, Ontario
Canada, St. Jerome, Quebec
Canada, Windsor, Quebec
Finland, Aanekoskil
Finland, Anjalankoskil
Finland, Lappeenranta1,2
Finland, Tervakoskil
Florida, Pensacola
France, Docelles
France, Saillat Sur Vienne

Germany, Schongau
Indonesia, Perawang1
Israel, Hadera
Kentucky, Wickliffe
Louisiana, Port Hudson
Maine, Jay
Maine, Madison
Mexico, Chihuahua
Michigan, Plainwell
Michigan, Quinnesec
Minnesota, Cloquet

International Paper Company
Georgia-Pacific Corporation
Votorantim Celulose e Papel
Votorantim Celulose e Papel
Cia Suzano de Papel e Celulose
Shasta Acquisition, Inc.
Bowater, Inc.
Weyerhauser Canada Inc.
Rolland Paper Inc.
Domtar Inc.
Metsa-Serla Group
Myllykoski Paper Oy
Enzo-Gutzeit Group
Enzo-Gutzeit Group
Champion International Corporation
UPM Kymmene Corporation
Aussedat Rey (a subsidiary of
International Paper Company)
Haindl Papier Gmbh
PT Indah Kiat Pulp and Paper Corporation
American Israeli Paper Mills, Ltd.
Westvaco Corporation
Georgia-Pacific Corporation
International Paper Company
Madison Paper Industries
Corporativo Copamex, S.A. de C.V.
Plainwell Paper Company
Champion International Corporation
Potlatch Corporation

Minnesota, International Falls
New York, Oswego
New York, Ticonderoga
North Carolina, Plymouth
Ohio, Chillicothe
Ohio, West Carrollton
Pennsylvania, Erie
Pennsylvania, Lock Haven
Poland, Kwidzyn
Portugal, Figueira da Fozl

Slovakia, Ruzomberok

South Carolina, Eastover
South Africa, Merebankl
Tennessee, Kingsport
Texas, Pasadena
Thailand, Tha Toom1
Virginia, Franklin
Washington, Camas
Washington, Longview
Washington, Wallula
Wisconsin, Kimberly
Wisconsin, Park Falls
Wisconsin, Wisconsin Rapids

Boise Cascade Corporation
International Paper Company
International Paper Company
Weyerhaeuser Company
The Mead Corporation
Appleton Papers Inc.
International Paper Company
International Paper Company
International Paper Company
Soporcel - Sociedade Portuguesa de
Celulose, S.A.
Severoslovenske Cululozky a Papierne
s.p.

Union Camp Corporation
Mondi Paper Company Ltd.
Willamette Industries Inc.
Pasadena Paper Company LP
Advance Agro Public Co. Ltd.
Union Camp Corporation
James River Corporation
Weyerhaeuser Company
Boise Cascade Corporation
Repap Wisconsin Inc. (a subsidiary of
Repap Enterprises Corp., Inc.)
Cross Pointe Paper Corporation
Consolidated Papers, Inc.

1 These plants are owned through joint ventures.
2 This PCC plant is not located on-site at the paper mill.

The Company also owned at December 31,1998 six plants engaged in the mining, processing and/or production of lime, limestone, precipitated calcium carbonate, and talc and directly or indirectly owns or leases approximately 15 refractory manufacturing facilities worldwide. The Company's corporate headquarters, sales offices, research laboratories,
plants and other facilities are owned by the Company except as otherwise noted. Set forth below is certain information relating to the Company's plants and office and research facilities.

## LOCATION <br> UNITED STATES

Arizona, Pima County California, Los Angeles

California, Lucerne Valley
Connecticut, Canaan
Indiana, Highland
Massachusetts, Adams
Montana, Dillon
New Jersey, Old Bridge

New York, New York

Ohio, Bryan
Ohio, Dover
Pennsylvania, Bethlehem

Pennsylvania, Easton

Pennsylvania, Slippery Rock Plant

FACILITY
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Plant; Quarry4 Sales Office1

Plant; Quarry
Plant; Quarry
Plant
Plant; Quarry
Plant; Quarry
Plant

Headquarters1; Sales Offices1

Plant
Plant
Research
Laboratories;
Sales Offices
Research
Laboratories;
Plant

INTERNATIONAL
Australia, Carlingford
Belgium, Brussels
Brazil, Belo Horizonte
Brazil, Sao Paulo
Brazil, Volta Redonda
Canada, Lachine
China, Huzhou
Germany, Duisburg
Ireland, Cork
Italy, Brescia
Japan, Gamagori
Japan, Tokyo

Mexico, Gomez Palacio
Singapore.
Spain, Santander
South Africa,
Pietermaritzburg
South Korea, Yangsan
South Korea, Seoul
United Kingdom,
Lifford
United Kingdom, Rotherham

Sales Office1
Sales Office1
Sales Office1
Sales Office1
Sales Office1
Plant
Plant2
Sales Office
Plant; Sales
Office1
Sales Office;
Plant
Plant
Sales Office1

Plant1
Sales Office1
Sales Office1
Plant
Plant3
Sales Office1
Plant
Plant

PRODUCT LINE
------------
Limestone PCC, Lime, Limestone, Talc

Limestone
Limestone, Metallurgical Wire/Calcium Monolithic Refractories Limestone, Lime, PCC Talc
Monolithic
Refractories/Shapes
All Company Products

Monolithic Refractories
Refractories
PCC, Lime,Limestone, Talc, Pyrolytic Graphite

PCC, Lime, Limestone, Talc, Pyrolytic
Graphite, Refractories, Metallurgical
Wire
Refractory Shapes

Monolithic Refractories
Monolithic
Refractories/PCC
Monolithic Refractories
PCC
Monolithic Refractories
Refractory Shapes
Monolithic Refractories
Monolithic Refractories
Monolithic Refractories/ Metallurgical Wire
Monolithic Refractories/ Shapes
Monolithic Refractories/
Shapes, Calcium
Monolithic Refractories/ Shapes, Calcium, PCC, Talc
Monolithic Refractories
PCC
Monolithic Refractories
Monolithic Refractories
Monolithic Refractories
Monolithic Refractories
PCC, Lime
Monolithic Refractories/

1 Leased by the Company. The facilities in Cork, Ireland are operated pursuant to a 99-year lease, the term of which commenced in 1963. The Company's headquarters and sales offices in New York, New York are held under a lease which expires in 2010.
This plant is leased through a joint venture. This plant is owned through a joint venture. This plant is leased to another company.

The Company believes that its facilities, which are of varying ages and are of different construction types, have been satisfactorily maintained, are in good condition, are suitable for the Company's operations and generally provide sufficient capacity to meet the Company's production requirements. Based on past loss experience, the Company believes it is adequately insured in respect of these assets, and for liabilities which are likely to arise from its operations.

ITEM 3. LEGAL PROCEEDINGS
The Company and its subsidiary Specialty Minerals Inc. are defendants in a lawsuit captioned EATON CORPORATION V. PFIZER INC, MINERALS TECHNOLOGIES INC. AND SPECIALTY MINERALS INC. which was filed on July 31, 1996 and is pending in the U.S. District Court for the Western District of Michigan. The suit alleges that certain materials sold to Eaton for use in truck transmissions were defective, necessitating repairs for which Eaton seeks reimbursement. The amount of damages claimed by Eaton is approximately $\$ 20$ million plus interest. The Company believes it has insurance coverage for a substantial portion of the alleged damages, if it should be held liable. While all litigation contains an element of uncertainty, the Company and Specialty Minerals Inc. believe that they have valid defenses to the claims asserted by Eaton in this lawsuit, are continuing to vigorously defend all such claims, and believe that the outcome of this matter will not have a material adverse effect on the Company's consolidated financial position or results of operations.

The Company and its subsidiaries are not party to any other pending legal proceedings, other than ordinary routine litigation incidental to their businesses.

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

No matters were submitted to a vote of security holders during the fourth quarter of 1998.

## EXECUTIVE OFFICERS OF THE REGISTRANT

Set forth below are the names and ages of all Executive Officers of the Registrant indicating all positions and offices with the Registrant held by each such person, and each such person's principal occupations or employment during the past five years.

| NAME | AGE | POSITION |
| :---: | :---: | :---: |
| Jean-Paul Valles | 62 | Chairman of the Board and Chief Executive Officer |
| Paul R. Saueracker | 57 | Vice President of the Company and President, Specialty Minerals Inc. |
| Anton Dulski | 57 | Vice President of the Company and President, MINTEQ International Inc. |
| S. Garrett Gray | 60 | Vice President, General Counsel and Secretary |

Neil M. Bardach 50 Vice President, Finance and Chief Financial Officer; Treasurer (effective February 1, 1999)
Vice President, Organization \& Human

William A. Kromberg 53 Vice President, Taxes
Michael A. Cipolla
Controller
Stephen E. Hluchan
Treasurer (retired, effective February 1, 1999)

Jean-Paul Valles, Ph.D., has served as Chairman of the Board and a director of the Company since April 1989. He was elected Chief Executive Officer of the Company in August 1992. Until the completion of the initial public offering, Dr. Valles served as a Vice-Chairman of Pfizer, a position he had held since March 1992. At Pfizer, Dr. Valles had been responsible for a number of Pfizer's businesses, including, since 1989, the operations that comprise the Company, and had served in a number of other executive positions, including Executive Vice President from 1991 to 1992. Dr. Valles continues to serve as a director of Pfizer. In addition, he is a director of Junior Achievement of New York, Inc. and of The New York Chapter of the French-American Chamber of Commerce in the U.S., Inc., and a member of the American Economic Association and the Financial Executives Institute.

Paul R. Saueracker has served as Vice President of the Company and President of Specialty Minerals Inc. since February 1994. Prior to that time, he had been Executive Vice President of Specialty Minerals Inc. since October 1993. Since 1989, he served as Vice President of Marketing and Sales of Specialty Minerals Inc. Mr. Saueracker is a former President of the Pulverized Limestone Division of the National Stone Association and a member of the Technical Association of the Pulp and Paper Industry and the Paper Industry Management Association. He is also a member of the Board of Trustees of the Institute of Paper Science and Technology in Atlanta, Georgia.

Anton Dulski has served as Vice President of the Company and President of Minteq International Inc. since January 1, 1996. Previously, he served as Senior Vice President of Minteq with responsibility for European operations from 1993 to 1995 and; as Vice President of Minteq with responsibility for sales and marketing in Europe from 1992 to 1993.
S. Garrett Gray has served as Vice President and Secretary of the Company since April 1989. In August 1992, Mr. Gray was appointed General Counsel of the Company.

Neil M. Bardach has served as Vice President-Finance and Chief Financial Officer of the Company since August 1998. Prior to that time, Mr. Bardach was Chief Financial Officer of The Genlyte Group Incorporated, a publicly traded manufacturer of lighting fixtures, since July 1994, and held various positions with Anacomp, Inc. from 1983 to 1994.

Howard R. Crabtree was appointed Vice President-Organization \& Human Resources of the Company in January 1997, having served as Vice PresidentHuman Resources since August 1992.

William A. Kromberg has served as Vice President-Taxes of the Company since February 1993. From May 1989 to that time, he was Vice PresidentTaxes of Culbro Corporation, a distributor and manufacturer of consumer and industrial products.

Michael A. Cipolla has served as Controller of the Company since April 1, 1998. From December 1992 to March 1998 he served as Assistant Corporate Controller of the Company. Prior to joining the Company, Mr. Cipolla was with KPMG LLP from 1983; and served as a Senior Manager from 1987.

Stephen E. Hluchan served as Treasurer of the Company from August 1992 through January 1999.

PART II

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

The Company's common stock is traded on the NYSE under the symbol "MTX".

Information on market prices and dividends is set forth below:

| 1998 QUARTERS | FIRST | SECOND | THIRD | FOURTH |
| :---: | :---: | :---: | :---: | :---: |
| ----------- | -- | -- | ------ |  |

Market Price Range Per
Share of Common Stock

| High | \$52 5/16 | \$55 9/16 | \$ 54 | \$51 1/4 |
| :---: | :---: | :---: | :---: | :---: |
| Low | $4015 / 16$ | $483 / 8$ | $357 / 8$ | 36 |
| Close | $4915 / 16$ | $513 / 4$ | 39 1/4 | 40 15/16 |
| Dividends paid per common share | \$. 025 | \$. 025 | \$. 025 | \$. 025 |
| 1997 QUARTERS | FIRST | SECOND | THIRD | FOURTH |

Market Price Range Per
Share of Common Stock

| High | $\$ 427 / 8$ | $\$ 407 / 8$ | $\$ 4415 / 16$ | $\$ 461 / 8$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Low | 34 | $321 / 8$ | $361 / 8$ | 39 | $1 / 2$ |
| Close | $341 / 4$ | $371 / 4$ | 44 | $3 / 4$ | 45 |
|  |  |  |  |  |  |
| Dividends paid per <br> common share | $\$ .025$ | $\$ .025$ | $\$ .025$ | $\$ .025$ |  |

On March 3, 1999, the last reported sale price on the NYSE was $\$ 435 / 16$ per share. As of March 3, 1999, there were approximately 294 holders of record of the common stock.

On January 28, 1999, the Company's Board of Directors declared a quarterly dividend on its common stock of $\$ .025$ per share in respect of the quarter ended December 31, 1998. Subject to satisfactory financial results and declaration by the Board, the Company currently intends to pay quarterly cash dividends on its common stock of at least $\$ 025$ per share. Although the Company believes its historical earnings indicate that this dividend policy is appropriate, it will be reviewed by the Board from time to time in light of the Company's financial condition, results of operations, current and anticipated capital requirements, contractual restrictions and other factors deemed relevant by the Board. No dividend will be payable unless declared by the Board and unless funds are legally available for payment thereof.

On February 26, 1998, the Company's Board of Directors authorized a
$\$ 150$ million stock repurchase program. The stock will be purchased on the open market from time to time. As of January 19, 1999, the Company had repurchased approximately 909,000 shares under this program, at an average price of approximately $\$ 47$ per share.

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ITEM 6. SELECTED FINANCIAL DATA

THOUSANDS, EXCEPT
PER SHARE DATA

$$
\begin{array}{lllll}
1998 & 1997 & 1996 & 1995 & 1994 \\
---- & ---- & ---- & ---- & ----
\end{array}
$$

INCOME STATEMENT DATA:

| Net sales | \$609,193 | \$602,335 | \$555,988 | \$524,451 | \$472,637 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cost of goods sold | 416,558 | 424,612 | 396,345 | 375,655 | 335,327 |
| ```Marketing, distribution and administrative``` |  |  |  |  |  |
| expenses | 79,150 | 77,104 | 72,485 | 70,464 | 66,533 |
| Research and development expense | 21,038 | 20,391 | 19,740 | 19,658 | 18,187 |
| Income from operations | 92,447 | 80,228 | 67,418 | 58,674 | 52,590 |
| Net income | 57,224 | 50,312 | 43,097 | 39,529 | 33,346 |



Weighted average number of common shares outstanding

| Basic | 22,281 | 22,558 | 22,621 | 22,633 | 22,603 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Diluted | 22,926 | 23,113 | 23,132 | 23,001 | 22,805 |
| idends declared |  |  |  |  |  |
| r common share | $\$ 0.10$ | $\$ 0.10$ | $\$ 0.10$ | $\$ 0.10$ | $\$ 0.10$ |

BALANCE SHEET DATA:

| Working capital | $\$ 112,892$ | $\$ 132,364$ | $\$ 115,540$ | $\$ 86,746$ | $\$ 135,844$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Total assets | 760,912 | 741,407 | 713,861 | 649,144 | 588,124 |
| Long-term debt | 88,167 | 101,571 | 104,900 | 67,927 | 83,031 |
| Total debt | 101,678 | 115,560 | 130,239 | 95,817 | 83,031 |
| Total shareholders' |  |  |  |  |  |
| equity | 489,163 | 466,997 | 448,250 | 416,153 | 381,098 |

INCOME AND EXPENSE ITEMS AS
A PERCENTAGE OF NET SALES
YEAR ENDED DECEMBER 31,

| 1998 | 1997 | 1996 |
| :---: | :---: | :---: |
| ---- | ---- | ---- |
| $100.0 \%$ | $100.0 \%$ | $100.0 \%$ |
| 68.4 | 70.5 | 71.3 |
|  |  |  |
| 13.0 | 12.8 | 13.0 |
| 3.4 | 3.4 | 3.6 |
| --- | ---- | ---- |
| 15.2 | 13.3 | 12.1 |
| $9.4 \%$ | $8.4 \%$ | $7.8 \%$ |
| $====$ | $====$ | $====$ |

OVERVIEW OF 1998 AND OUTLOOK

In 1998, the Company adhered to its strategy of expanding its Precipitated Calcium Carbonate (PCC) product line within the Specialty Minerals segment. The Company commenced operations at four new satellite PCC plants in three different countries and signed agreements for construction of two large satellite plants, one in China and one in the United States. Together, the plants under construction have production capacity equivalent to approximately nine "satellite units" and are scheduled to begin operations in the first half of 1999. (A satellite unit is equivalent to annual production capacity of between 25,000 and 35,000 tons of PCC.) The Company also contracted for the addition of a large PCC coating facility at an existing satellite plant in Finland and acquired a PCC business in the United Kingdom. The patented acid-tolerant PCC technology continues to show growth and the groundwood sector of the worldwide paper industry continues to show widespread interest in this product. In addition, the Company expanded several satellite plants at various locations around the world. As a result, sales of PCC as a percentage of the Company's total net sales, which were $37.4 \%$ in 1992 , had risen to $57.4 \%$ by 1998. The Company expects this trend to continue as volume growth of PCC continues to outpace growth in the Processed Minerals product line and the Refractories segment.

The Company now operates or has under construction 55 satellite PCC plants in 15 countries worldwide. The Company is optimistic that volume growth will continue in 1999. The Company expects additional expansions at existing satellite PCC plants to occur in 1999 and also expects to sign contracts for additional satellite PCC plants.

In 1999, the Company plans to continue its focus on the following growth strategies for the PCC product line:

- Continued efforts to increase market penetration in North America, Europe, Latin America, and the Pacific Rim.
- Continued expansions of the capacity of existing satellite PCC plants in response to increased demand, which is resulting from either increased PCC filler levels in paper or the installation of new paper machines. - - Continued research and development and marketing efforts of acidtolerant PCC, coating PCC and other products.

However, there can be no assurance that the Company will achieve success in implementing any one or more of these strategies.

The Company's sales of PCC are predominantly pursuant to long-term agreements, generally ten years in length, with paper mills at which the Company operates satellite PCC plants. The terms of many of these agreements have been extended, often in connection with an expansion of the
satellite PCC plant. To date, the Company's experience with extensions and renewals of its satellite PCC agreements has been favorable. There is no assurance, however, that these contracts will be renewed prior to their respective expiration dates.

The Company will continue to emphasize specialty products in its Refractories segment product lines and to commercialize products, processes and equipment through research and development efforts.

As the Company continues to expand its operations overseas, it faces the inherent risks of doing business abroad, including exchange rate fluctuations, nationalization, expropriation, limits on repatriation of funds and other factors. In addition, the Company's performance depends to some extent on that of the industries it serves, particularly the paper, steel and construction industries.

RESULTS OF OPERATIONS

| NET SALES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| DOLLARS IN MILLIONS | 1998 | GROWTH | 1997 | GROWTH | 1996 |
| Net sales | \$609.2 | $1.1 \%$ | \$602. 3 | 8. 3 \% | \$556.0 |

Worldwide net sales in 1998 increased $1.1 \%$ over the previous year to $\$ 609.2$ million. The stronger U.S. dollar had an unfavorable impact of approximately $\$ 12$ million (or 2 percentage points) on sales growth. Sales in the Specialty Minerals segment, which includes the PCC and Processed Minerals product lines, grew $6.4 \%$ while sales in the Refractories segment declined 9.5\%. In 1997, worldwide net sales increased 8.3\% over the prior year to $\$ 602.3$ million. The Specialty Minerals segment sales increased 12. $2 \%$ and the Refractories segment sales increased $1.3 \%$ in 1997.

Worldwide net sales of PCC in 1998 increased $16.5 \%$ to $\$ 349.5$ million from $\$ 299.9$ million in the prior year. This increase was primarily attributable to the commencement of operations at four new satellite PCC plants in 1998 and to the acquisition of a PCC business in the United Kingdom. In addition, a full year of operations at several satellite PCC plants that began operations in 1997 and volume increases from the Company's long-standing satellite PCC plants also contributed to the sales growth. Foreign exchange had an unfavorable impact of approximately $\$ 5$ million on sales growth. PCC sales in 1997 increased $14.0 \%$ to $\$ 299.9$ million from $\$ 263.1$ million in 1996 . This growth was primarily attributable to the start-up of operations at five new satellite plants that began operations in 1997 and volume increases generated by the Company's long-standing satellite PCC plants.

Net sales of Processed Minerals decreased 23.0\% in 1998. In April 1998, the Company divested its Midwest limestone business in Port Inland, Michigan. References to ongoing operations exclude the results from this facility. Net sales from the Midwest limestone business in 1997 were $\$ 20.8$ million. Net sales from this facility in 1998, prior to the divestiture, were $\$ 1.6$ million. Net sales of Processed Mineral products from ongoing operations decreased $5.5 \%$ to $\$ 77.9$ million from $\$ 82.4$ million in 1997 . This decrease was due largely to the refocus of the talc product line on higher margin customers and products and to the use of the Company's lime to produce $P C C$ instead of selling the lime to third parties. Net sales of Processed Minerals in 1997 rose $7.3 \%$. This growth was primarily
attributable to higher volumes.

In 1998, sales of pyrolytic graphite products, previously reported in the Processed Minerals product line, were reported in the Refractories segment. Prior year's sales have been reclassified to reflect this change.

Net sales in the Refractories segment in 1998 decreased $9.5 \%$ to $\$ 180.2$ million from $\$ 199.2$ million in the prior year. Excluding the impact of foreign exchange, the sales decrease was approximately $6.0 \%$. In the second half of 1998, the economic conditions in the worldwide steel industry deteriorated, which had a negative effect on the Refractories segment sales. In both 1998 and 1997 , strategic replacement of commodity products with specialty products and systems increased the profitability of this product line. In 1997, net sales in the Refractories segment increased 1.3\% from the prior year.

Net sales from ongoing operations in the United States in 1998 increased $4.2 \%$. This increase was attributable to the growth in the PCC product line. Foreign sales in 1998 increased $5.1 \%$ primarily as a result of the continued international expansion of the Company's PCC product line. In 1997, domestic net sales were $8.2 \%$ higher than in the prior year as a result of increased sales in the Specialty Minerals segment. Foreign sales were approximately $8.6 \%$ greater than in the prior year, primarily due to growth in the PCC product line.

OPERATING COSTS
AND EXPENSES

| Cost of goods sold | \$416. 6 | (1.9\%) | \$424.6 | $7.1 \%$ | \$396.3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Marketing, distribution and administrative | \$79.2 | $2.7 \%$ | \$77.1 | $6.4 \%$ | \$ 72.5 |
| Research and development | \$21.0 | $3.2 \%$ | \$20.4 | 3.3\% | \$19.7 |

Cost of goods sold was $68.4 \%$ of sales. This ratio was lower than the prior year and was primarily attributable to improved profitability in the Refractories segment and the Processed Minerals product lines within the Specialty Minerals segment. Cost of goods sold in 1997 was $70.5 \%$ of sales, which was lower than the prior year. This was attributable to the improved profitability of the Refractories segment.

Marketing, distribution and administrative costs increased 2.7\% to $\$ 79.2$ million and were $13.0 \%$ of sales. In 1997 , marketing, distribution and administrative costs increased $6.4 \%$ to $\$ 77.1$ million and were $12.8 \%$ of sales.

Research and development expenses during 1998 increased $3.2 \%$ to $\$ 21.0$ million and represented $3.4 \%$ of sales, comparable to the 1997 ratio. In 1997 and 1996 research and development spending was $\$ 20.4$ million and $\$ 19.7$ million, respectively.



#### Abstract

Income from operations in 1998 increased $15.2 \%$ to $\$ 92.4$ million from $\$ 80.2$ million in 1997. This increase was due primarily to improved profitability in both the Specialty Minerals segment and the Refractories segment and to solid growth in the PCC product line within the Specialty Minerals segment. The Specialty Minerals segment's improved profitability was primarily due to the turnaround in the Processed Minerals product line. The Refractories segment's improved profitability was due to the continued emphasis on new higher margin specialty products and delivery systems. However, the recent downturn in the worldwide steel industry has negatively affected the sales and profitability of the Refractories segment. In 1997, income from operations rose $19.0 \%$ to $\$ 80.2$ million from $\$ 67.4$ million in 1996. This increase was due primarily to solid growth in the PCC product line within the Specialty Minerals segment, and to improved profitability in the Refractories segment. Operating profits were negatively impacted by startup costs associated with the five new satellite PCC plants and some weakness in the Processed Minerals product line, specifically in talc products.




Non-operating deductions in 1998 decreased from the prior year due to lower net interest expense and lower foreign exchange losses. Gross interest expense decreased $14.0 \%$ from the prior year to $\$ 7.0$ million. Nonoperating deductions in 1997 increased from 1996 due to foreign exchange losses and higher net interest expense which resulted from a reduction in capitalized interest costs. These deductions were partially offset by higher interest income. Gross interest expense in 1997 decreased $2.6 \%$ from the prior year to $\$ 8.2$ million. The foreign exchange losses were approximately $\$ 1.7$ million in 1997 and occurred primarily in the joint ventures in Thailand, Indonesia and Korea.

PROVISION FOR TAXES ON INCOME

| DOLLARS IN MILLIONS | 1998 | GROWTH | 1997 | GROWTH | 1996 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Provision for taxes on income | \$27.4 | 18.4\% | \$23.1 | $18.6 \%$ | \$19.5 |

The effective tax rate decreased to $31.7 \%$ in 1998 compared to $32.0 \%$
in 1997. This decrease was due to lower state and local taxes and utilization of foreign tax credits. The effective tax rate was $31.1 \%$ in 1996.

MINORITY INTERESTS


In 1998, the consolidated joint ventures reflected increased profits as compared to the prior year, and foreign exchange losses had less of an effect on joint venture profits in 1998 as compared to 1997.

NET INCOME


Net income increased $13.7 \%$ in 1998 to $\$ 57.2$ million. In 1997, net income increased $16.7 \%$ to $\$ 50.3$ million. Earnings per common share, on a diluted basis, increased $14.7 \%$ to $\$ 2.50$ in 1998 as compared to $\$ 2.18$ in the prior year.

## LIQUIDITY AND CAPITAL RESOURCES

The Company's financial position remained strong during 1998. Cash flows in 1998 were provided from operations and the sale of the Midwest limestone business. The cash was applied principally to fund approximately $\$ 82.5$ million of capital expenditures, acquire a specialty PCC business, repurchase $\$ 42.6$ million of common shares for treasury, and remit the required per annum principal payment of $\$ 13$ million under the Company's Guarantied Senior Notes due June 11, 2000. Cash provided from operating activities was the primary source of liquidity and amounted to \$117.0 million in 1998, $\$ 120.6$ million in 1997 and $\$ 69.9$ million in 1996.

The Variable/Fixed Rate Industrial Development Revenue Bonds due April 1, 2012 are tax-exempt 15-year instruments and were issued on April 1, 1997 to finance the construction of a PCC plant in Jackson, Alabama. The bonds bear interest at either a variable rate or fixed rate, at the option of the Company. Interest is payable semi-annually under the fixed rate option and
monthly under the variable rate option. The Company has selected the variable rate option on these borrowings and the average interest rate for the year ending December 31,1998 was approximately $3.7 \%$.

On August 4, 1997, the Company redeemed $\$ 1,455,000$ of the Variable/Fixed Rate Industrial Development Revenue Bonds due April 1, 2012. This represented the unused portion of the original bond issuance proceeds received on April 1, 1997 to finance the construction of a PCC plant in Jackson, Alabama.

The Variable/Fixed Rate Industrial Development Revenue Bonds due August 1, 2012 are tax-exempt 15 -year instruments that were issued on August 1, 1997 to finance the construction of a PCC plant in Courtland, Alabama. The bonds bear interest at either a variable rate or fixed rate, at the option of the Company. Interest is payable semi-annually under the fixed rate option and monthly under the variable rate option. The Company has selected the variable rate option on these borrowings and the average interest rate for the year ending December 31, 1998 was approximately $3.7 \%$.

On February 26, 1998, the Company's Board of Directors authorized a $\$ 150$ million stock repurchase program. The stock will be purchased on the open market from time to time. As of January 19, 1999, the Company had repurchased approximately 909,000 shares under this program, at an average price of approximately $\$ 47$ per share.

On April 28, 1998, the Company sold its limestone operation in Port Inland, Michigan, to Oglebay Norton Company for approximately $\$ 34$ million, which approximated its net book value. This high volume commodity operation no longer complemented the Company's long-term strategic vision.

On April 30, 1998, the Company acquired for approximately $\$ 34$ million a PCC manufacturing facility located near Birmingham in Kings Norton, England, from Rhodia Limited, a specialty chemicals company. This acquisition allows the Company to establish a base for its specialty PCC business in Europe. This facility produces specialty PCC products for food and pharmaceutical applications, as well as for use in plastics, sealants and coatings, and paper.

The Company has approximately $\$ 110$ million in uncommitted, short-term bank credit lines, none of which were in use at December 31, 1998 or December 31, 1997. The Company anticipates that capital expenditures for 1999 will be approximately $\$ 90$ million, principally related to the construction of satellite PCC plants, expansion projects at existing satellite PCC plants and other opportunities that meet the strategic growth objectives of the Company. The Company expects to meet its long-term financing requirements from internally generated funds, the aforementioned uncommitted bank credit lines and, where appropriate, project financing of certain satellite plants.

PROSPECTIVE INFORMATION AND FACTORS THAT MAY AFFECT FUTURE RESULTS
The Securities and Exchange Commission encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This annual report contains such forward-looking statements that set out anticipated results based on management's plans and assumptions. Words such as "anticipate," "estimate," "expects," "projects," and words and terms of similar substance used in connection with any discussion of future operating or financial performance identify these forward-looking statements.

The Company cannot guarantee that any forward-looking statement will be realized, although it believes it has been prudent in its plans and assumptions. Achievement of future results is subject to risks, uncertainties and inaccurate assumptions. Should known or unknown risks or uncertainties materialize, or should underlying assumptions prove inaccurate, actual results could vary materially from those anticipated, estimated or projected. Investors should bear this in mind as they consider forward-looking statements. Discussion of certain risks, uncertainties and assumptions follow and are discussed under the heading entitled "Cautionary Factors That May Affect Future Results" in Item 1.

INFLATION
Historically, inflation has not had a material adverse impact on the Company. The contracts pursuant to which the Company constructs and operates its satellite PCC plants generally adjust pricing to reflect increases in costs resulting from inflation.

CYCLICAL NATURE OF CUSTOMERS' BUSINESSES
The bulk of the Company's sales are to customers in the paper and steel industries, which have historically been cyclical. Both industries encountered difficulties in 1998, which in most markets have been more price-driven than volume-driven. The pricing structure of some of our long-term PCC contracts makes our PCC business less sensitive to declines in the quantity of product purchased. For this reason, and because of the geographical diversification of our business, the Company's operating results to date have not been materially affected by the difficult economic environment. However, we cannot predict the economic outlook in the
countries in which we do business, nor in the key industries we serve. There can be no assurance that a
recession, in some markets or worldwide, would not have a significant negative impact on the Company's financial position or results of operations.

RECENTLY ISSUED ACCOUNTING STANDARDS
In February 1998, the Financial Accounting Standards Board issued SFAS No. 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits," which revised employers' disclosures about pension and other postretirement benefit plans. It does not change the measurement or recognition of those plans. The statement is effective for fiscal years beginning after December 15, 1997. The adoption of this statement has no impact on the consolidated financial statements.

In March 1998, the American Institute of Certified Public Accountants issued Statement of Position 98-1 ("SOP 98-1"), "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use." The statement is effective for fiscal years beginning after December 15, 1998. Earlier application is encouraged in fiscal years for which annual financial statements have not been issued. The statement defines which costs of computer software developed or obtained for internal use are capitalized and which costs are expensed. The Company adopted SOP 98-1 in 1998. The adoption of SOP 98-1 did not materially affect the consolidated financial statements.

In April 1998, the American Institute of Certified Public Accountants issued Statement of Position 98-5 ("SOP 98-5"), "Reporting on the Costs of Start-Up Activities." The statement is effective for fiscal years beginning after December 15, 1998. The statement requires costs of startup activities and organization costs to be expensed as incurred. The Company will adopt SOP 98-5 for calendar year 1999. The adoption of SOP 98-5 will not materially affect the consolidated financial statements.

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." The statement establishes accounting and reporting standards for derivative instruments and for hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the statement of financial position and measure those instruments at fair value. The statement is effective for all fiscal quarters of fiscal years beginning after June 15, 1999. The Company will adopt SFAS 133 by January 1, 2000. Adoption of SFAS 133 is not expected to have a material effect on the consolidated financial statements.

YEAR 2000
The "year 2000 issue" arises because many computer programs and electronically controlled devices denote years using only the last two digits. Because these programs and devices may fail to recognize the year 2000 correctly, calculations or other tasks that involve the year 2000 may cause them to produce erroneous results or to fail altogether. Like other companies, the Company uses operating systems, applications and electronically controlled devices that were produced by many different vendors at different times, and many of which were not originally designed to be year 2000 compatible.

In 1996, the Company began the installation of new computer hardware and software to improve the capability of the Company's information systems, to harmonize the various information technology platforms in use, and to centralize certain financial functions. The project encompasses corporate financial and accounting functions as well as manufacturing and costing, procurement, planning and scheduling of production and maintenance, and customer order management.

The Company has acquired much of the hardware and software required to implement this project, and is currently bringing its domestic business locations on to the new systems sequentially. This is proceeding according to schedule, and the Company expects the new systems to be operational in all affected U.S. locations no later than the third quarter of 1999 . Other U.S. manufacturing locations are currently year 2000 ready, with the exception of three locations which are serviced by an information technology system which is in the process of being upgraded. This upgrade is scheduled to be completed no later than the second quarter of 1999.

Other preparations for the year 2000 are being carried out by the relevant business units on a decentralized basis. Information technology systems outside the United States are in the process of being evaluated and repaired or replaced as required. The Company expects this process to be completed by all non-U.S. locations no later than the third quarter of 1999.

The Company's exposures to the year 2000 issue other than in the area of information technology arise mostly with respect to process control systems and instrumentation at the Company's manufacturing locations, and in equipment used at customer locations. Telephone and e-mail systems, operating systems and applications in free-standing personal computers, local area networks and site services such as electronic security systems and elevators may also be affected. A failure of these systems, which interrupted the Company's ability to supply products to its customers, could have a material adverse impact on its results of operations. These issues are being addressed by the individual business units, by obtaining from vendors and service providers

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either necessary modifications to the software or assurance that the system will not be disrupted by the year 2000 issue. This process is expected to be completed no later than the third quarter of 1999.

The Company expects to spend approximately $\$ 15-17$ million, including internal costs, before January 1, 2000, for new computer hardware and software, other information technology upgrades and replacements, and upgrades and replacements to non-IT systems worldwide. These expenditures will provide benefits to the Company which include but are not limited to the achievement of year 2000 readiness. Of this amount approximately $\$ 13$ million had been expended as of December 31, 1998. These expenditures will be capitalized or expensed in accordance with Statement of Position 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use," which the Company has adopted.

The Company expects to finance these expenditures solely from working capital, and does not expect the total cost associated with its plans to address the year 2000 issue to have a material adverse impact on its financial position or results of operations.

None of the Company's other information technology projects have been delayed due to the implementation of year 2000 solutions.

Like other companies, the Company relies on its customers for revenues, on its suppliers for raw materials and on its other vendors for products and services of all kinds; these third parties all face the year 2000 issue. An interruption in the ability of any of them to provide goods or services, or to pay for goods or services provided to them, or an interruption in the business operations of customers causing a decline in demand for the Company's products, could have a material adverse effect on the Company in turn. In particular, each of the Company's satellite PCC plants relies on one customer for most or all of its business, and in many cases for raw materials as well, so that a shutdown of the host paper mill's operation would also cause the satellite PCC plant to shut down.

The Company's divisions are communicating with their principal
customers and vendors about their year 2000 readiness, and expect this process to be completed no later than the third quarter of 1999. None of the responses received to date suggests that any significant customer or vendor expects the year 2000 issue to cause an interruption in its operations, which would have a material adverse impact on the Company. However, because so many firms are exposed to the risk of failure not only of their own systems, but of the systems of other firms, the ultimate effect of the year 2000 issue is subject to a very high degree of uncertainty.

The Company believes that its preparations currently under way are adequate to assess and manage the risks presented by the year 2000 issue, and does not have a formal contingency plan at this time.

The statements in this section regarding the effect of the year 2000 and the Company's responses to it are forward-looking statements. They are based on assumptions that the Company believes to be reasonable in light of its current knowledge and experience. A number of contingencies could cause actual results to differ materially from those described in forwardlooking statements made by or on behalf of the Company. Please see "Cautionary Factors That May Affect Future Results" in Item 1.

ADOPTION OF A COMMON EUROPEAN CURRENCY
On January 1, 1999, eleven European countries adopted the euro as their common currency. From that date until January 1, 2002, debtors and creditors may choose to pay or be paid in euros or in the former national currencies. On and after January 1, 2002, the former national currencies will cease to be legal tender.

The Company is currently reviewing its information technology systems and upgrading them as necessary to ensure that it will be able to convert among the former national currencies and the euro, and process transactions and balances in euros, as required. The Company has sought and received assurances from the financial institutions with which it does business that they are capable of receiving deposits and making payments both in euros and in the former national currencies. The Company does not expect that adapting its information technology systems to the euro will have a material impact on its financial condition or results of operations. The Company is also reviewing contracts with customers and vendors calling for payments in currencies that are to be replaced by the euro, and intends to complete in a timely way any required changes to those contracts.

Adoption of the euro is likely to have competitive effects in Europe, as prices that had been stated in different national currencies become directly comparable to one another. In addition, the adoption of a common monetary policy throughout the countries adopting the euro can be expected to have an effect on the economy of the region. These competitive and economic effects cannot be predicted with certainty, and there can be no assurance that they will not have a material effect on the Company's business in Europe.

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK
MARKET RISK
The Company is exposed to various market risks, including the potential loss arising from adverse changes in foreign currency exchange rates. The Company does not enter into derivatives or other financial instruments for trading or speculative purposes. When appropriate, the Company enters into derivative financial instruments, such as forward exchange contracts, to mitigate the impact of foreign exchange rate movements on the Company's operating results. The counterparties are major financial institutions. Such forward exchange contracts would not subject the Company to additional risk from exchange rate movements because gains and losses on these contracts would offset losses and gains on the assets, liabilities and transactions being hedged. There were no open forward
exchange contracts outstanding at December 31, 1998 or December 31, 1997.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial information required by Item 8 is contained in Item 14 of Part IV 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

The information concerning the Company's Board of Directors required by this Item is incorporated herein by reference to the Company's Proxy Statement.

The information concerning the Company's Executive Officers required by this Item is incorporated herein by reference to the Section in Part I under the caption "Executive Officers of the Registrant."

The information regarding compliance with Section 16(a) of the Securities Exchange Act of 1934 required by this Item is incorporated herein by reference to the Company's Proxy Statement.

## ITEM 11. EXECUTIVE COMPENSATION

The information appearing in the Company's Proxy Statement under the caption "Compensation of Executive Officers," excluding the information under the captions "Performance Graph" and "Report of the Compensation and Nominating Committee on Executive Compensation," is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information appearing under the caption "Security Ownership of Certain Beneficial Owners and Management as of February 1, 1999" set forth in the Company's Proxy Statement is incorporated herein by reference.

## ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information appearing under the caption "Certain Relationships and Related Transactions" set forth in the Company's Proxy Statement is incorporated herein by reference.

Under the terms of certain agreements entered into in connection with the reorganization, Pfizer Inc. ("Pfizer") and its wholly-owned subsidiary Quigley Company, Inc. ("Quigley") agreed to indemnify the Company against certain liabilities being retained by Pfizer and its subsidiaries including, but not limited to, pending lawsuits and claims, and any lawsuits or claims brought at any time in the future alleging damages or injury from the use, handling of or exposure to any product sold by Pfizer's specialty minerals business prior to the closing of the initial public offering in October 1992.

Pfizer and Quigley also agreed to indemnify the Company against any liability arising from on-site remedial waste site claims and for other claims that may be made in the future with respect to waste disposed of
prior to the closing of the initial public offering. Further, Pfizer and Quigley agreed to indemnify the Company for $50 \%$ of the liabilities in excess of $\$ 1$ million up to $\$ 10$ million that may arise or accrue within ten years after the closing of the initial public offering with respect to remediation of on-site conditions existing at the time of the closing of the initial public offering. The Company will be responsible for the first \$1 million of such liabilities, $50 \%$ of all such liabilities in excess of $\$ 1$ million up to $\$ 10$ million, and all such liabilities in excess of $\$ 10$ million.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULE AND REPORTS ON FORM 8-K
(a) The following documents are filed as part of this Report:

1. Financial Statements. The following Consolidated Financial Statements of Minerals Technologies Inc. and Independent Auditors' Report are set forth on pages $F-2$ to $F-20$.
```
Consolidated Balance Sheet as of December 31, 1998 and 1997
Consolidated Statement of Income for the years ended
December 31, 1998, 1997 and 1996
Consolidated Statement of Cash Flows for the years ended
December 31, 1998, 1997 and 1996
Consolidated Statement of Shareholders' Equity for the years
ended December 31, 1998, 1997 and 1996
Notes to the Consolidated Financial Statements
Independent Auditors' Report
```

2. Financial Statement Schedule. The following financial statement schedule is filed as part of this Report:

Schedule II - Valuation and Qualifying Accounts | Page |
| :---: |
| ----1 |

All other schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted.
3. Exhibits. The following exhibits are filed as part of or incorporated by reference into this Report.
3.1 - Restated Certificate of Incorporation of the Company (1)
3.2 - Restated By-Laws of the Company (2)
3.3 - Certificate of Designations authorizing issuance and establishing designations, preferences and rights of Series A Junior Preferred Stock of the Company
4.1 - Specimen Certificate of Common Stock (1)
10.1 - Asset Purchase Agreement, dated as of September 28, 1992, by and between Specialty Refractories Inc. and Quigley Company Inc. (3)
10.1(a) - Agreement dated October 22, 1992 between Specialty Refractories Inc. and Quigley Company Inc., amending Exhibit 10.1 (4)

| (b) | - Letter Agreement dated October 29, 1992 between Specialty Refractories Inc. and Quigley Company Inc., amending Exhibit 10.1 (4) |
| :---: | :---: |
| 10.2 | - Reorganization Agreement, dated as of September 28, 1992, by and between the Company and Pfizer Inc (3) |
| 10.2(a) | - Letter Agreement dated October 29, 1992 between the Company and Pfizer Inc, amending Exhibit 10.2 |
| 10.3 | - Asset Contribution Agreement, dated as of September 28, 1992, by and between Pfizer Inc and Specialty Minerals Inc. (3) |
| 10.4 | - Asset Contribution Agreement, dated as of September 28, 1992, by and between Pfizer Inc and Barretts Minerals Inc. (3) |
| 10.4(a) | - Agreement dated October 22, 1992 between Pfizer Inc, Barretts Minerals Inc. and Specialty Minerals Inc., amending Exhibits 10.3 and 10.4 (4) |
| 10.5 | - Form of Employment Agreement (1), together with schedule relating to executed Employment Agreements (2) |
| 10.6 | - Form of Severance Agreement (5), together with schedule relating to executed Severance Agreements |
| 10.7 | - Company Employee Protection Plan, as amended August $25,1994 \text { (5) }$ |
| 10.8 | - Company Nonfunded Deferred Compensation and Unit Award Plan for Non-Employee Directors, as amended January 25, 1996 (6) |
| 10.9 | - Company Stock and Incentive Plan, as amended and restated as of August 28, 1998 (7) |
| 10.10 | - Company Retirement Annuity Plan, as amended May 25, 1995 (6) |
| 10.11 | - Company Nonfunded Supplemental Retirement Plan, as amended October 27, 1994 (8) |
| 10.12 | - Company Savings and Investment Plan, as amended December 19, 1994 (9) |
| 10.13 | - Company Nonfunded Deferred Compensation and Supplemental Savings Plan, as amended October 27, 1994 (8) |
| 10.14 | - Rights Agreement, dated as of October 26, 1992, by and between the Company and Chemical Bank, as Rights Agent (1) |
| 10.14 (a) | - First Amendment of Rights Agreement, dated as of November 2, 1998 by and between the Company and Chase Mellon Shareholder Services L.L.C., amending Rights Agreement, dated as of October 26, 1992. (2) |
| 10.15 | - Grantor Trust Agreement, dated as of December 29, 1994, between the Company and The Bank of New York, as Trustee |
| 10.16 | - Note Purchase Agreement, dated as of June 28, 1993, between the Company and Metropolitan Life Insurance Company with respect to the Company's issuance of $\$ 65,000,000$ in aggregate principal amount of its 6.04\% Guarantied Senior Notes Due June 11, 2000;together with a schedule regarding other contracts substantially identical in all material respects to the foregoing (10) |
| 10.17 | - Note Purchase Agreement, dated as of July 24, 1996, between the Company and Metropolitan Life Insurance Company with respect to the Company's issuance of $\$ 50,000,000$ in aggregate principal amount of its 7.49\% Guaranteed Senior Notes due July 24, 2006 (11) |
| 10.18 | - Indenture, dated July 22, 1963, between the Cork Harbour Commissioners and Roofchrome Limited (3) |
| 10.19 | - Agreement of Lease, dated as of May 24, 1993, between the Company and Cooke Properties Inc (10) |
| 10.20 | - Sale of Business Agreement, dated 5 April 1998 among Minteq U.K. Limited, Specialty Minerals Inc., John \& E. Sturge Limited and Rhodia Limited. (12) |
| 10.21 | - Asset Sale Agreement, dated as of April 27, 1998 between Specialty Minerals (Michigan) Inc. and Oglebay Norton Limestone Company. (12) |

21.1 - Subsidiaries of the Company
23.1 - Report and Consent of Independent Auditors

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- Financial Data Schedule
(1) Incorporated by reference to exhibit so designated filed with the Company's Annual Report on Form $10-\mathrm{K}$ for the year ended December 31, 1997.
(2) Incorporated by reference to the exhibit so designated filed with the Company's Quarterly Report on Form 10-Q for the quarter ended September 27, 1998.
(3) Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992.
(4) Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1
(Registration No. 33-59510), originally filed on March 15, 1993.
(5) Incorporated by reference to the exhibit so designated filed with the Company's Annual Report on Form 10-K for the year ended December 31, 1996.
(6) Incorporated by reference to the exhibit so designated filed with the Company's Annual Report on Form $10-\mathrm{K}$ for the year ended December 31, 1995.
(7) Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-8 (Registration No. 333-62739), originally filed September 2, 1998.
(8) Incorporated by reference to the exhibit so designated filed with the Company's Annual Report on Form 10-K for the year ended December 31, 1994.
(9) Incorporated by reference to the exhibit so designated filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 29, 1997.
(10) Incorporated by reference to the exhibit so designated filed with the Company's Quarterly Report on Form 10-Q for the quarter ended July 4, 1993.
(11) Incorporated by reference to the exhibit so designated filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1996.
(12) Incorporated by reference to the exhibit so designated filed with the Company's Quarterly Report on Form 10-Q for the quarter ended June 28, 1998.
(b) Reports on Form 8-K

There were no reports on Form $8-\mathrm{K}$ filed by the Company during the fourth quarter of 1998.

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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.

```
By: /s/ Jean-Paul Valles
    ------------------------------
        Jean-Paul Valles
        Chairman of the Board
        and Chief Executive Officer
```

March 15, 1999
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 in the capacities and on the dates
indicated.
SIGNATURE
/s/Jean-Paul Valles

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- --------------------
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Jean-Paul Valles $\begin{gathered}\text { Chairman of the Board } \\ \text { and Chief Executive Officer }\end{gathered} \quad$ March 15, 1999
(principal executive officer)
and Director
/s/Neil M. Bardach

- ------------------
Neil M. Bardach Vice President-Finance March 15, 1999
and Chief Financial Officer;
Treasurer (principal
financial officer)
/s/ Michael A. Cipolla
- ----------------------
Michael A. Cipolla
SIGNATURE
TITLE
- ---------
Controller and Chief March 15, 1999
Accounting Officer
(principal accounting
officer)
25
/s/John B. Curcio
- -----------------
John B. Curcio
Director
March 15, 1999
/s/Steven J. Golub
- ------------------

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/s/William L. Lurie
- -------------------
William L. Lurie Director March 15, 1999
/s/Paul M. Meister
- ------------------
Paul M. Meister Director March 15, 1999
/s/Michael F. Pasquale
- ------------------------
Michael F. Pasquale Director March 15, 1999
/s/William C. Steere, Jr.
- --------------------------
William C. Steere, Jr. Director March 15, 1999
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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS
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Audited Financial Statements:

```
    Consolidated Balance Sheet as of December 31, 1998 and 1997 F-2
    Consolidated Statement of Income for the years ended December
    31, 1998, 1997 and 1996
    Consolidated Statement of Cash Flows for the years endedDecember 31, 1998, 1997 and 1996
    Consolidated Statement of Shareholders' Equity for the years
    ended December 31, 1998, 1997 and 1996 F-5
    Notes to Consolidated Financial Statements F-6
    Independent Auditors' Report F-20
```

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEET
(thousands of dollars)

| DECEMBER | 31, |
| :---: | ---: |
| -------------1 |  |

## ASSETS

| Current assets: |  |  |
| :---: | :---: | :---: |
| Cash and cash equivalents | \$20,697 | \$41,525 |
| Accounts receivable, less allowance for doubtful accounts: |  |  |
| 1998--\$3,720; 1997--\$3,266 | 110,192 | 108,146 |
| Inventories | 63,657 | 61,166 |
| Other current assets | 16,284 | 15,745 |
| Total current assets | 210,830 | 226,582 |
| Property, plant and equipment, |  |  |
| Other assets and deferred charges | 25,553 | 14,094 |
| Total assets | \$760,912 | \$741,407 |

## LIABILITIES AND SHAREHOLDERS' EQUITY

| Current liabilities: |  |  |
| :---: | :---: | :---: |
| Short-term debt | \$ -- | \$501 |
| Current maturities of long-term debt | 13,511 | 13,488 |
| Accounts payable | 32,084 | 33,163 |
| Income taxes payable | 17,081 | 11,101 |
| Accrued compensation and related items | 14,329 | 15,923 |
| Other current liabilities | 20,933 | 20,042 |
| Total current liabilities | 97,938 | 94,218 |
| Long-term debt | 88,167 | 101,571 |
| Accrued postretirement benefits | 19,376 | 19,746 |
| Deferred taxes on income | 46,316 | 44,664 |
| Other noncurrent liabilities | 19,952 | 14,211 |
| Total liabilities | 271,749 | 274,410 |
| Commitments and contingent liabilities |  |  |
| Shareholders' equity: |  |  |
| Preferred stock, without par value; |  |  |
| 1,000,000 shares authorized; none issued | -- | -- |
| Common stock at par, \$0.10 par value; 100,000,000 shares authorized; |  |  |



See Notes to Consolidated Financial Statements which are an integral part of these statements.

$$
\mathrm{F}-2
$$

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES CONSOLIDATED STATEMENT OF INCOME (thousands of dollars, except per share data)


| Basic earnings per share | \$2.57 | \$2. 23 | \$1.91 |
| :---: | :---: | :---: | :---: |
| Diluted earnings per share | \$2. 50 | \$2. 18 | \$1.86 |

See Notes to Consolidated Financial Statements which are an integral part of these statements.

$$
\mathrm{F}-3
$$

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF CASH FLOWS (thousands of dollars)


FINANCING ACTIVITIES
Proceeds from issuance of short-term and

| long-term debt | 743 | 20,089 | 111,659 |
| :---: | :---: | :---: | :---: |
| Repayment of short-term and long-term debt | $(14,380)$ | $(34,679)$ | $(77,237)$ |
| Purchase of common shares for treasury | $(42,550)$ | $(6,688)$ | $(5,885)$ |
| Cash dividends paid | $(2,231)$ | $(2,258)$ | $(2,262)$ |
| Proceeds from issuance of stock under option plan | 4,091 | 2,436 | 2,466 |
| Equity and debt proceeds from minority interests | 2,405 | 3,214 | 2,500 |
| Net cash (used in)/provided by financing activities | $(51,922)$ | $(17,886)$ | 31,241 |
| Effect of exchange rate changes on cash and cash equivalents | (239) | $(3,234)$ | (826) |
| Net increase (decrease) in cash and cash equivalents | $(20,828)$ | 26,079 | 4,128 |
| Cash and cash equivalents at beginning of year | 41,525 | 15,446 | 11,318 |
| Cash and cash equivalents at end of year | \$20,697 | \$41,525 | \$15,446 |

See Notes to Consolidated Financial Statements which are an integral part of these statements.


| transactions | 107 | 11 | 2,455 | -- |
| :---: | :---: | :---: | :---: | :---: |
| Purchase of common stock | -- | -- | -- | -- |
| Balance as of |  |  |  |  |
| December 31, 1996 | 25,260 | 2,526 | 135,676 | 364,210 |
| Comprehensive income: |  |  |  |  |
| Net income | -- | -- | -- | 50,312 |
| Currency translation adjustment | -- | -- | -- | -_ |
| Unrealized holding |  |  |  |  |
| Minimum pension |  |  |  |  |
| liability adjustment | -- | -- | -- | -- |
| Total comprehensive |  |  |  |  |
| Dividends declared -- -- -- (2,258) |  |  |  |  |
| Employee benefit transactions | 110 | 11 | 2,837 | - - |
| ```Income tax benefit arising from employee stock option plans -- -- 600``` |  |  |  |  |
| Purchase of common stock | -- | -- | -- | -- |
| Balance as of |  |  |  |  |
| Comprehensive income: |  |  |  |  |
| Net income | -- | -- | -- | 57,224 |
| Currency translation adjustment | -- | -- | -- | -- |
| Unrealized holding |  |  |  |  |
| losses, net of tax | -- | -- | -- | -- |
| Total comprehensive |  |  |  |  |
| Dividends declared -- -- -- $(2,231)$ |  |  |  |  |
| Employee benefit transactions | 164 | 16 | 4,075 | -- |
| ```Income tax benefit arising from employee stock option plans -- -- 900 Purchase of``` |  |  |  |  |
|  |  |  |  |  |
| Balance as of |  |  |  |  |
| December 31, 1998 | 25,534 | \$2,553 | \$144,088 | \$467,257 |

(Table continues...)
MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY
(In thousands)

Accumulated Other Comprehensive Income (Loss)
-------------

| Treasury Stock |  |  |
| :---: | ---: | :---: |
| ---------------- |  |  |
| Shares | Cost | Total |


| Balance as of January 1, 1996 | \$17,042 | $(2,500)$ | \$ (60,000) | \$416,153 |
| :---: | :---: | :---: | :---: | :---: |
| Comprehensive income: |  |  |  |  |
| Net income | -- | -- | -- | 43,097 |
| Currency translation adjustment | $(5,371)$ | -- | -- | $(5,371)$ |
| Unrealized holding gains, net of tax | 52 | -- | -- | 52 |
| Total comprehensive income | $(5,319)$ | -- | -- | 37,778 |
| Dividends declared | -- | -- | -- | $(2,262)$ |
| Employee benefit transactions | -- | -- | -- | 2,466 |
| Purchase of common stock | -- | (160) | $(5,885)$ | $(5,885)$ |
| Balance as of December 31, 1996 | 11,723 | $(2,660)$ | $(65,885)$ | 448,250 |
| Comprehensive income: Net income | -- | -- | -- | 50,312 |
| Currency translation adjustment | $(25,016)$ | -- | -- | $(25,016)$ |
| Unrealized holding losses, net of tax | (50) | -- | -- | (50) |
| Minimum pension <br> liability adjustment | (1,001) | -- | -- | (1,001) |
| Total comprehensive income | $(26,067)$ | -- | -- | 24,245 |
| Dividends declared | -- | -- | -- | $(2,258)$ |
| Employee benefit transactions | -- | -- | -- | 2,848 |
| Income tax benefit arising from employee stock option plans | -- | -- | --- | 600 |
| Purchase of common stock | k | (170) | $(6,688)$ | $(6,688)$ |
| Balance as of December 31, 1997 | $(14,344)$ | $(2,830)$ | $(72,573)$ | 466,997 |
| Comprehensive income: Net income | -- | -- | -- | 57,224 |
| Currency translation adjustment | 4,759 | -- | -- | 4,759 |
| Unrealized holding losses, net of tax | (27) | -- | -- | (27) |
| Total comprehensive income | 4,732 | -- | -- | 61,956 |


| Dividends declared | -- | -- | -- | $(2,231)$ |
| :---: | :---: | :---: | :---: | :---: |
| Employee benefit transactions | -- | -- | -- | 4,091 |
| Income tax benefit arising from employee stock option plans | -- | -- | -- | 900 |
| Purchase of common stock | -- | (891) | $(42,550)$ | $(42,550)$ |
| Balance as of December 31, 1998 | \$ $(9,612)$ | $(3,721)$ | \$ 115,123 ) | \$489,163 |

See Notes to Consolidated Financial Statements which are an integral part of these statements.

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF PRESENTATION
The accompanying consolidated financial statements include
the accounts of Minerals Technologies Inc. (the "Company")
and its wholly and majority owned subsidiaries. All
intercompany balances and transactions have been eliminated
in consolidation.
USE OF ESTIMATES
The Company employs accounting policies that are in accordance with generally accepted accounting principles in the United States and require management to make estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent liabilities at the date of the financial statements. Actual results could differ from those estimates.

BUSINESS
The Company is a resource- and technology-based company that develops, produces and markets on a worldwide basis a broad range of specialty mineral, mineral-based and synthetic mineral products. The Company's products are used in manufacturing processes of the paper and steel industries, as well as by the building materials, polymers, ceramics, paints and coatings, glass and other manufacturing industries.

CASH EQUIVALENTS
The Company considers all highly liquid investments with maturities of three months or less at the date of purchase to be cash equivalents. Cash equivalents amounted to $\$ 4.1$ million and $\$ 8.6$ million at December 31 , 1998 and 1997, respectively.

INVENTORIES
Inventories are valued at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method.

PROPERTY, PLANT AND EQUIPMENT
Property, plant and equipment are recorded at cost. Significant improvements are capitalized. In general, the straight-line method of depreciation is used for financial reporting purposes and accelerated methods are used for U.S. and certain foreign tax reporting purposes. The annual rates of depreciation are $4 \%-8 \%$ for buildings, $8 \%-12 \%$ for machinery and equipment and $8 \%-12 \%$ for furniture and fixtures.

Depletion of the mineral and quarry properties is provided on a unit-of-extraction basis as the related materials are mined for financial reporting purposes and on a percentage depletion basis for tax purposes.

Mining costs associated with waste gravel and rock removal in excess of the expected average life of mine stripping ratio are deferred. These costs are charged to production on a unit-of-production basis when the ratio of waste to ore mined is less than the average life of mine stripping ratio.

GOODWILL
Goodwill represents the excess of purchase price and related costs over the value assigned to the net tangible assets of businesses acquired. Goodwill is amortized on a straight-line basis over 25 years. Periodically, the Company reviews the recoverability of goodwill. The measurement of possible impairment is based primarily on the ability to recover the balance of the goodwill from expected future operating cash flows on an undiscounted basis. In management's opinion, no material impairment existed at December 31, 1998.

## FOREIGN CURRENCY

The assets and liabilities of most of the Company's international subsidiaries are translated into U.S. dollars using current exchange rates at the respective balance sheet date. The resulting translation adjustments are recorded in the currency translation adjustment account in shareholders' equity. Income statement items are generally translated at average exchange rates prevailing during the period. Other foreign currency gains and losses are included in net income.

International subsidiaries operating in highly inflationary economies translate non-monetary assets at historical rates, while net monetary assets are translated at current rates, with the resulting translation adjustments included in net income.

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

INCOME TAXES
Income taxes are provided for based on the asset and liability method of accounting pursuant to Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" ("SFAS 109"). Under SFAS 109, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. Under SFAS 109, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The accompanying financial statements generally do not include a provision for U.S. income taxes on international subsidiaries' unremitted earnings which, for the most part, are expected to be reinvested overseas.

STOCK-BASED COMPENSATION
The Company has adopted Statement of Financial Accounting Standards No. 123, "Accounting for Stock Based Compensation" ("SFAS 123"), which requires expanded disclosures of stockbased compensation arrangements with employees. SFAS No. 123 establishes an alternative method of accounting for stockbased compensation awarded to employees which provides for

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the recognition of compensation cost to be measured based on
the fair value of the equity instrument awarded. The
Company, however, has elected to continue to recognize
compensation cost based on the intrinsic value of the equity
instrument awarded as promulgated in Accounting Principles
Board Opinion No. 25, "Accounting for Stock Issued to
Employees." The Company has disclosed below under "Capital
Stock -- Stock and Incentive Plan" the pro forma effect of
the fair value method on net income and earnings per share.
    POSTRETIREMENT BENEFITS
    The Company accrues the cost of postretirement benefits
during the employee's active working career as required by
Statement of Financial Accounting Standards No. 106,
"Employers' Accounting for Postretirement Benefits Other Than
Pensions" ("SFAS 106").
    EARNINGS PER SHARE
    Basic earnings per share have been computed based upon the weighted
average number of common shares outstanding during the period.
    Diluted earnings per share have been computed based upon
the weighted average number of common shares outstanding during the period
assuming the issuance of common shares for all dilutive potential common
shares outstanding.
INCOME TAXES
    Income before provision for taxes, by domestic and foreign
source is as follows:
\begin{tabular}{|c|c|c|c|}
\hline THOUSANDS OF DOLLARS & 1998 & 1997 & 1996 \\
\hline Domestic & \$59,428 & \$48,746 & \$47,410 \\
\hline Foreign & 26,914 & 23,442 & 15,214 \\
\hline Total income before provision & & & \\
\hline for income taxes & \$86,342 & \$72,188 & \$62,624 \\
\hline
\end{tabular}
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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
                NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
The provision for taxes on income consists of the following:
    THOUSANDS OF DOLLARS
\(1998 \quad 19971996\)
    DOMESTIC
    Taxes currently payable
    Federal
    State and local 3,084 2,938 3,593
    Deferred income taxes (524) 4,634 3,291
```

| Domestic tax provision | 18,274 | 15,434 | 14,729 |
| :---: | :---: | :---: | :---: |
| FOREIGN |  |  |  |
| Taxes currently payable | 7,350 | 8,615 | 4,689 |
| Deferred income taxes | 1,736 | (945) | 70 |
| Foreign tax provision | 9,086 | 7,670 | 4,759 |
| Total tax provision | \$27,360 | \$23,104 | \$19,488 |

The provision for taxes on income shown in the previous table is classified based on the location of the taxing authority, regardless of the location in which the taxable income is generated.

The major elements contributing to the difference between the U.S. federal statutory tax rate and the consolidated effective tax rate are as follows:

| PERCENTAGES | 1998 | 1997 | 1996 |
| :---: | :---: | :---: | :---: |
| U.S. statutory tax rate | 35.0\% | 35.0\% | $35.0 \%$ |
| Depletion | (3.5) | (3.7) | (5.5) |
| Difference between tax provided on foreign earnings and the U.S. statutory rate | (0.4) | (0.8) | (0.9) |
| State and local taxes | 2.0 | 2.9 | 3.9 |
| Tax credits | (2.2) | (0.8) | (2.4) |
| Other | 0.8 | (0.6) | 1.0 |
| Consolidated effective tax rate | $31.7 \%$ | $32.0 \%$ | $31.1 \%$ |

The Company believes that its accrued liabilities are sufficient to cover its U.S. and foreign tax contingencies. The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

| THOUSANDS OF DOLLARS | 1998 | 1997 |
| :---: | :---: | :---: |
| Deferred tax assets: |  |  |
| Pension and postretirement benefits cost reported for financial statement purposes in excess of amounts deductible for |  |  |
| tax purposes | \$7,245 | \$7,196 |
| State and local taxes | 2,594 | 2,789 |
| Accrued expenses | 2,812 | 3,121 |
| Alternative minimum tax | - | 3,686 |
| Other | 3,749 | 2,060 |
| Total deferred tax assets | 16,400 | 18,852 |


| Deferred tax liabilities: <br> Plant and equipment, principally |  |  |
| :---: | :---: | :---: |
| Plant and equipment, principally due to differences in depreciation | 60,956 | 61,093 |
| Other | 1,760 | 2,423 |
| Total deferred tax liabilities | 62,716 | 63,516 |
| Net deferred tax liability | \$46,316 | \$44,664 |

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A valuation allowance for deferred tax assets has not been recorded since management believes it is more likely than not that the existing net deductible temporary differences will reverse during periods in which the Company generates net taxable income.

Net cash paid for income taxes was \$18.3 million, \$14.2 million and $\$ 15.4$ million for the years ended December 31, 1998, 1997 and 1996, respectively.

## FOREIGN OPERATIONS

The Company has not provided for U.S. federal and foreign withholding taxes on $\$ 69.0$ million of foreign subsidiaries' undistributed earnings as of December 31, 1998 because such earnings, for the most part, are intended to be reinvested overseas. To the extent the parent company has received foreign earnings as dividends, the foreign taxes paid on those earnings have generated tax credits which have substantially offset related U.S. income taxes. On repatriation, certain foreign countries impose withholding taxes. The amount of withholding tax that would be payable on remittance of the entire amount of undistributed earnings would approximate $\$ 2.0$ million.

Net foreign currency exchange gains (losses), included in other income (deductions) in the Consolidated Statement of Income, were $\$(932,000), \$(1,721,000)$ and $\$ 296,000$ for the years ended December 31, 1998, 1997 and 1996 , respectively.

## INVENTORIES

The following is a summary of inventories by major category:

| THOUSANDS OF DOLLARS | 1998 | 1997 |
| :--- | ---: | ---: |
|  | ---- | ---- |
| Raw materials | $\$ 21,681$ | $\$ 19,605$ |
| Work in process | 5,483 | 5,858 |
| Finished goods | 19,650 | 19,812 |
| Packaging and supplies | 16,843 | 15,891 |
|  | ------- | ------ |
| Total inventories | $\$ 63,657$ | $\$ 61,166$ |
|  | $=======$ | $=======$ |

The major categories of property, plant and equipment and accumulated depreciation and depletion are presented below:

| THOUSANDS OF DOLLARS | 1998 | 1997 |
| :---: | :---: | :---: |
| Land | \$21,224 | \$22,697 |
| Quarries/mining properties | 19,256 | 24,148 |
| Buildings | 118,223 | 107,865 |
| Machinery and equipment | 642,767 | 598,190 |
| Construction in progress | 52,709 | 47,594 |
| Furniture and fixtures and other | 52,040 | 49,775 |
|  | 906,219 | 850,269 |
| Less: Accumulated depreciation and depletion | 381,690 | 349,538 |
|  | \$524,529 | \$500,731 |

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

## ACQUISITION AND DIVESTITURE

On April 30, 1998 the Company acquired, for approximately \$34 million in cash, a precipitated calcium carbonate (PCC) manufacturing facility in the United Kingdom from Rhodia Limited. This acquisition allows the Company to establish a base for its specialty PCC business in Europe. The transaction was accounted for as a purchase. The purchase price exceeded the fair value of net assets acquired by approximately $\$ 8$ million, which is being amortized on a straight-line basis over 25 years.

On April 28, 1998 the Company sold its limestone operation in Port Inland, Michigan, to Oglebay Norton Company for cash and receivables approximating $\$ 34$ million. The sales price approximated the net book value of the assets.

FINANCIAL INSTRUMENTS AND CONCENTRATIONS OF CREDIT RISK

The following methods and assumptions were used to estimate the fair value of each class of financial instrument:

CASH AND CASH EQUIVALENTS, ACCOUNTS RECEIVABLE AND PAYABLE, AND ACCRUED LIABLILITIES:

The carrying amounts approximate fair value because of the short maturity of these instruments.

AVAILABLE-FOR-SALE SECURITIES:
The available-for-sale securities are presented in accordance with SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities."

The fair values are based on quoted market prices and are as follows:

|  | 1998 |  | 1997 |  | 1996 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| THOUSANDS | MARKET | GROSS | MARKET | GROSS | MARKET | GROSS |
| OF DOLLARS | VALUE | UNREALIZED | VALUE | UNREALIZED | VALUE | UNREALIZED |
|  |  | HoLDING |  | HoLDING |  | HOLDING |
|  |  | GAINS |  | GAINS |  | GAINS |
| Common Stock | \$389 | \$174 | \$424 | \$230 | \$558 | \$340 |

The unrealized holding gains, net of taxes, were $\$ 86,000$, $\$ 113,000$ and $\$ 163,000$, respectively, at December 31, 1998, 1997 and 1996 and are included in accumulated other comprehensive loss in the statement of shareholders' equity.

SHORT-TERM DEBT AND LIABILITIES:
The carrying amounts of short-term debt and other liabilities approximate fair value because of the short maturity of these instruments.

LONG-TERM DEBT:
The fair value of the long-term debt of the Company is estimated based on the quoted market prices for that debt or similar debt which approximates the carrying amount.

FORWARD EXCHANGE CONTRACTS:
The fair value of forward exchange contracts (used for hedging purposes) is estimated by obtaining quotes from brokers.

When appropriate, the Company enters into forward exchange contracts to mitigate the impact of foreign exchange rate movements on the Company's operating results. It does not engage in speculation. Such foreign exchange contracts would not subject the Company to additional risk from exchange rate movements because gains and losses on these contracts would offset losses and gains on the assets, liabilities and transactions being hedged. There were no open forward exchange contracts outstanding at December 31, 1998 or December 31, 1997.

CREDIT RISK:
Substantially all of the Company's accounts receivable are due from companies in the paper, construction and steel industries. Credit risk results from the possibility that a loss may occur from the failure of another party to perform according to the terms of the contract. The Company regularly monitors the credit risk exposures and takes steps to mitigate the likelihood of these exposures resulting in actual loss. The Company's extension of credit is based on an evaluation of the customer's financial condition and collateral is generally not required. Credit losses are provided for in the financial statements and consistently have been within management's expectations.

LONG-TERM DEBT AND COMMITMENTS<br>The following is a summary of long-term debt:

| THOUSANDS OF DOLLARS | 1998 | 1997 |
| :---: | :---: | :---: |
| 7.75\% Economic Development Revenue |  |  |
| Bonds Series 1990 Due 2010 (secured) | \$4,600 | \$4,600 |
| Variable/Fixed Rate Industrial |  |  |
| Development Revenue Bonds Due 2009 | 4,000 | 4,000 |
| Variable/Fixed Rate Industrial |  |  |
| Development Revenue Bonds Due April 1, 2012 | 7,545 | 7,545 |
| Variable/Fixed Rate Industrial |  |  |
| Development Revenue Bonds Due August 1, 2012 | 8,000 | 8,000 |
| 6.04\% Guarantied Senior Notes Due June 11, 2000 | 26,000 | 39,000 |
| $7.49 \%$ Guaranteed Senior Notes Due July 24, 2006 | 50,000 | 50,000 |
| Other borrowings | 1,533 | 1,914 |
|  | 101,678 | 115,059 |
| Less: Current maturities | 13,511 | 13,488 |
| Long-term debt | \$88,167 | \$101, 571 |

The 7.75\% Economic Development Revenue Bonds Due 2010 are tax-exempt, 20-year instruments issued to finance a PCC plant in Eastover, South Carolina. The bonds are dated September 1, 1990. They are currently subject to redemption at face value at the option of the issuer and to redemption at the option of the holder in the event of a downgrade in the rating of the bonds below "A." Pfizer Inc is a guarantor of these bonds.

The Variable/Fixed Rate Industrial Development Revenue Bonds Due 2009 are tax-exempt 15 -year instruments issued to finance the expansion of a PCC plant in Selma, Alabama. The bonds are dated November 1, 1994, and provide for an optional put by the holder (during the Variable Rate Period) and a mandatory call by the issuer. The bonds bear interest at either a variable rate or fixed rate, at the option of the Company. Interest is payable semi-annually under the fixed rate option and monthly under the variable rate option. The Company has selected the variable rate option on these borrowings and the average interest rate was approximately 3.7\% for the year ending December 31, 1998.

The Variable/Fixed Rate Industrial Development Revenue Bonds due April 1, 2012 are tax-exempt 15 -year instruments and were issued on April 1, 1997 to finance the construction of a PCC plant in Jackson, Alabama. The bonds bear interest at either a variable rate or fixed rate, at the option of the company. Interest is payable semi-annually under the fixed rate option and monthly under the variable rate option. The Company has selected the variable rate option on these borrowings and the average interest rate was approximately $3.7 \%$ for the year ending December 31, 1998.

On August 4, 1997, the Company redeemed $\$ 1,455,000$ of the Variable/Fixed Rate Industrial Development Revenue Bonds due

April 1, 2012. This represented the unused portion of the original bond issuance proceeds received on April 1, 1997 to finance the construction of a PCC plant in Jackson, Alabama.

The Variable/Fixed Rate Industrial Development Revenue Bonds due August 1, 2012 are tax-exempt 15 -year instruments that were issued on August 1, 1997 to finance the construction of a PCC plant in Courtland, Alabama. The bonds bear interest at either a variable rate or fixed rate, at the option of the Company. Interest is payable semi-annually under the fixed rate option and monthly under the variable rate option. The Company has selected the variable rate option on these borrowings and the average interest rate was approximately 3.7\% for the year ending December 31, 1998.

On June 28, 1993, through a private placement, the Company issued $\$ 65$ million of $6.04 \%$ Guarantied Senior Notes (the "Notes") due June 11, 2000. The proceeds from the sale of the Notes were used to finance the purchase of 2.5 million shares of treasury stock, and for other corporate purposes. Interest on the Notes is payable semi-annually.

On July 24, 1996, through a private placement, the Company issued $\$ 50$ million of $7.49 \%$ Guaranteed Senior Notes due July 24, 2006. The proceeds from the sale of the notes were used to refinance a portion of the short-term commercial bank debt outstanding. These notes rank pari passu with the Company's other unsecured senior obligations. No required principal payments are due until July 24,2006 . Interest on the notes is payable semi-annually.

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The aggregate maturities of long-term debt are as follows: 1999 - \$13.5 million; 2000 - \$13.5 million; 2001 - \$0.5 million; 2002 - \$-- million; 2003 - \$-- million; thereafter \$74.2 million.

The Company has approximately $\$ 110$ million in uncommitted, short-term bank credit lines. There were no borrowings on these credit lines on December 31, 1998 and December 31, 1997.

During 1998, 1997 and 1996, respectively, the Company incurred interest costs of $\$ 7,047,000, \$ 8,198,000$ and $\$ 8,417,000$ including $\$ 1,129,000, \$ 990,000$ and $\$ 2,518,000$, respectively, which were capitalized. Interest paid approximated the incurred interest costs.

## BENEFIT PLANS

PENSION PLANS AND OTHER POSTRETIREMENT BENEFIT PLANS
The Company and its subsidiaries have pension plans covering substantially all eligible employees on a contributory or non-contributory basis.

The funded status of the Company's pension plans and other postretirement benefit plans at December 31, 1998 and 1997 is as follows:

|  | PENSION BENEFITS |  | OTHER BENEFITS |  |
| :---: | :---: | :---: | :---: | :---: |
| MILLIONS OF DOLLARS | 1998 | 1997 | 1998 | 1997 |
| CHANGE IN BENEFIT OBLIGATION |  |  |  |  |
| Benefit obligation at beginning of year | \$80.4 | \$71.6 | \$14.0 | \$12.2 |
| Service cost | 4.8 | 4.1 | 0.9 | 0.8 |
| Interest cost | 5.7 | 5.2 | 1.0 | 0.9 |
| Amendments | 4.0 | -- | -- | - - |
| Actuarial gain | 7.4 | 4.9 | 1.5 | 0.4 |
| Benefits paid | (10.4) | (4.6) | (0.6) | (0.3) |
| Other | 0.8 | (0.8) | -- | -- |
| Benefit obligation at end of year | \$ 92.7 | \$80.4 | \$16.8 | \$14.0 |
| CHANGE IN PLAN ASSETS |  |  |  |  |
| Fair value of plan assets at beginning of year | \$84.6 | \$70.4 | \$ -- | \$ -- |
| Actual return on plan assets | 13.2 | 12.6 | -- | -- |
| Employer contribution | 3.9 | 5.7 | 0.6 | 0.3 |
| Plan participants' contributions | 0.7 | 0.7 | -- | -- |
| Benefits paid | (10.4) | (4.6) | (0.6) | (0.3) |
| Other | -- | (0.2) | -- | -- |
| Fair value of plan assets at end of year | \$ 92.0 | \$84.6 | \$ -- | \$ -- |
| Funded status | \$(0.7) | \$ 4.2 | \$(16.8) | \$(14.0) |
| Unrecognized transition amount | 2.3 | 3.3 | -- | -- |
| Unrecognized net actuarial loss | (4.0) | (6.3) | 2.8 | 1.4 |
| Unrecognized prior service cost | 6.5 | 2.9 | (5.4) | (7.1) |
| Prepaid (accrued) benefit cost | \$ 4.1 | \$ 4.1 | \$(19.4) | \$(19.7) |
| Amounts recognized in the consolidated balance sheet consist of: |  |  |  |  |
| Prepaid benefit cost | \$10.5 | \$9.5 | \$ -- | \$ -- |
| Accrued benefit liabilities | (9.4) | (7.3) | (19.4) | (19.7) |
| Intangible asset | 2.0 | 0.9 | -- | -- |
| Accumulated other comprehensive loss | 1.0 | 1.0 | -- | -- |
| Net amount recognized | \$4.1 | \$4.1 | \$(19.4) | \$(19.7) |

The weighted average assumptions used in the accounting for the pension benefit plans and other benefit plans as of December 31 are as follows:

|  | 1998 | 1997 |
| :--- | :--- | :--- |
| Discount rate | ---- | ---- |
| Expected return on plan assets | $6.75 \%$ | $7.25 \%$ |
| Rate of compensation increase | $9.00 \%$ | $9.25 \%$ |

For measurement purposes, a health care cost trend rate of approximately $9.8 \%$ for pre-age- 65 benefits and $8.1 \%$ trend for post-age-65 benefits were used. These trend rates were assumed to decrease gradually to 5.3\% for 2005 and remain at that level thereafter.

The components of net periodic benefit costs are as follows:

|  | PENSION BENEFITS |  |  | OTHER BENEFITS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MILLIONS OF DOLLARS | 1998 | 1997 | 1996 | 1998 | 1997 | 1996 |
| Service cost | \$4.8 | \$ 4.1 | \$4.6 | \$0.9 | \$0.8 | \$0.8 |
| Interest cost | 5.7 | 5.2 | 5.0 | 1.0 | 0.9 | 0.8 |
| Expected return on plan assets | (7.3) | (6.2) | (5.3) | -- | -- | -- |
| Amortization of transition amount | 0.7 | 0.7 | 0.7 | -- | -- | -- |
| Amortization of prior service cost | 0.4 | 0.2 | 0.4 | (1.7) | (1.7) | (1.7) |
| Recognized net actuarial gain | (0.6) | -- | -- | -- | -- | -- |
| Net periodic benefit cost | \$3.7 | \$ 4.0 | \$5.4 | \$ 0.2 | \$ -- | \$(0.1) |

Benefits under defined benefit plans are generally based on years of service and the employee's career earnings. Employees become fully vested after five years.

The Company's funding policy for U.S. plans generally is to contribute annually into trust funds at a rate that is intended to remain at a level percentage of compensation for covered employees. The funding policy for the international plans conforms to local governmental and tax requirements. The plans' assets are invested primarily in stocks and bonds.

The Company provides postretirement health care and life insurance benefits for substantially all of its U.S. retired employees. Employees are generally eligible for benefits upon retirement and completion of a specified number of years of creditable service. The Company does not pre-fund these benefits and has the right to modify or terminate the plan in the future.

Assumed health care cost trend rates could have a significant effect on amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

| Increase | Decrease |
| :---: | ---: |
| $\$ 4,000$ | $\$(5,000)$ |
| $\$ 60,000$ | $\$(70,000)$ |

Effect on total
service and interest cost components
Effect on postretirement
benefit obligation
$\$ 60,000$
$\$(70,000)$

SAVINGS AND INVESTMENT PLANS

The Company maintains a voluntary Savings and Investment Plan for most non-union employees in the U.S. Within prescribed limits, the Company bases its contribution to the Plan on employee contributions. The Company's contributions amounted to $\$ 3.1$ million, $\$ 3.1$ million and $\$ 3.0$ million for the years ended December 31, 1998, 1997 and 1996 , respectively.

LEASES

Rent expense amounted to approximately $\$ 3.4$ million, $\$ 4.2$ million and $\$ 4.2$ million for the years ended December 31, 1998, 1997 and 1996, respectively. Total future minimum rental commitments under all noncancelable leases for the years 1999 through 2003 and thereafter are approximately $\$ 1.5$ million, $\$ 1.5$ million, $\$ 1.4$ million, $\$ 1.3$ million, $\$ 1.3$ million and \$11.5 million, respectively.

In 1997, the Company entered into a long-term direct financing lease of its Pima County, Arizona, limestone facility with another company. Total future minimum payments to be received under direct financing leases for the years 1999 through 2003 and thereafter are approximately $\$ 0.2$ million, $\$ 0.2$ million, $\$ 0.2 \mathrm{million}$, 0.2 million, $\$ 0.2$ million and $\$ 3.1$ million, respectively.

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

## LITIGATION

Under the terms of certain agreements entered into in connection with the reorganization prior to the initial public offering of the Company's common stock in October 1992, Pfizer and its wholly owned subsidiary, Quigley Company, Inc. ("Quigley") agreed to indemnify the Company against certain liabilities being retained by Pfizer and its subsidiaries including, but not limited to, pending lawsuits and claims and any lawsuits or claims brought at any time in the future alleging damages or injury from the use, handling of or exposure to any product sold by Pfizer's specialty minerals business prior to the closing of the initial public offering.

Pfizer and Quigley also agreed to indemnify the Company against any liability arising from on-site remedial waste site claims and for other claims that may be made in the future with respect to wastes disposed of prior to the closing of the initial public offering. Further, Pfizer and Quigley agreed to indemnify the Company for $50 \%$ of the liabilities in excess of $\$ 1$ million up to $\$ 10$ million that may arise or accrue within ten years after the closing of the initial public offering with respect to remediation of on-site conditions existing at the time of the closing of the initial public offering. The Company will be responsible for the first $\$ 1$ million of such liabilities, $50 \%$ of such liabilities in excess of $\$ 1$ million up to $\$ 10$ million, and all such liabilities in excess of $\$ 10$ million.

The transfer by Quigley of certain real property in New Jersey to the Company pursuant to the reorganization, including the former Quigley facility in Old Bridge, triggered certain obligations under the New Jersey Environmental Cleanup Responsibility Act ("ECRA"). Quigley retained liability for compliance with ECRA including the assessment and, if necessary, remediation of the Old Bridge property. Quigley's obligations under ECRA are embodied in an Administrative Consent Order with the New Jersey Department of Environmental Protection and Energy ("NJDEPE") that requires Quigley to perform any necessary remediation and to provide financial assurance of its ability to cover the costs of remediation as estimated by NJDEPE with no obligation to the Company.

The Company and its subsidiary, Specialty Minerals Inc., are defendants in a lawsuit, captioned EATON CORPORATION V. PFIZER INC, MINERALS TECHNOLOGIES INC. AND SPECIALTY MINERALS INC. which was filed on July 31, 1996 and is pending in the U.S. District Court for the Western District of Michigan. The suit alleges that certain materials sold to Eaton for use in truck transmissions were defective, necessitating repairs for which Eaton seeks reimbursement. The amount of damages claimed by Eaton is approximately $\$ 20$ million plus interest. The Company believes it has insurance coverage for a substantial portion of the alleged damages, if it should be held liable. While all litigation contains an element of uncertainty, the Company and Specialty Minerals Inc. believe that they have valid defenses to the claims asserted by Eaton in this lawsuit, are continuing to vigorously defend all such claims, and believe that the outcome of this matter will not have a material adverse effect on the Company's consolidated financial position or results of operations.

The Company and its subsidiaries are not party to any other pending legal proceedings, other than ordinary routine litigation that is incidental to their businesses.

CAPITAL STOCK

The Company's authorized capital stock consists of 100 million shares of common stock, par value $\$ .10$ per share, of which $21,813,674$ shares and $22,540,385$ shares were outstanding at December 31, 1998 and 1997, respectively, and $1,000,000$ shares of preferred stock, none of which were issued and outstanding.

## CASH DIVIDENDS

Cash dividends of $\$ 2.2$ million or $\$ .10$ per common share were paid during 1998. In January 1999, a cash dividend of approximately $\$ 545,000$ or $\$ .025$ per share, was declared, payable in the first quarter of 1999.

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

PREFERRED STOCK PURCHASE RIGHTS
Under the Company's Preferred Stock Purchase Rights Plan, each share of the Company's common stock carries with it one preferred stock purchase right. Subject to the terms and conditions set forth in the plan, the rights will become exercisable if a person or group acquires beneficial ownership of $15 \%$ or more of the Company's common stock or announces a tender or exchange offer which would result in the acquisition of $30 \%$ or more thereof. If the rights become exercisable, separate certificates evidencing the rights will be distributed, and each right will entitle the holder to purchase from the Company a new series of preferred stock, designated as Series A Junior Preferred Stock, at a predefined price. The rights also entitle the holder to purchase shares in a change-of-control situation. The preferred stock, in addition to a preferred dividend
and liquidation right, will entitle the holder to vote on a pro rata basis with the Company's common stock.

The rights are redeemable by the Company at a fixed price until 10 days, or longer as determined by the Board, after certain defined events or at any time prior to the expiration of the rights on October 26, 2002 if such events do not occur.

STOCK AND INCENTIVE PLAN
The Company has adopted a Stock and Incentive Plan (the "Plan") which provides for grants of incentive and non-qualified stock options, stock appreciation rights, stock awards or performance unit awards. The Plan is administered by the Compensation and Nominating Committee of the Board of Directors. Stock options granted under the Plan have a term not in excess of ten years. The exercise price for stock options will not be less than the fair market value of the common stock on the date of the grant, and each award of stock options will vest ratably over a specified period, generally three years.

In 1998, the Shareholders approved an amendment to the Plan to increase the number of shares of common stock available under the Plan by an additional 1.5 million.

The following table summarizes stock option activity for the Plan:

|  | UNDER OPTION |  |  |
| :---: | :---: | :---: | :---: |
|  | SHARES <br> AVAILABLE <br> FOR GRANT | SHARES | WEIGHTED AVERAGE <br> EXERCISE PRICE <br> PER SHARE (\$) |
| Balance January 1, 1996 | 1,890,933 | 1,067,649 | \$22.83 |
| Granted | $(804,111)$ | 804,111 | 30.625 |
| Exercised | -- | $(108,911)$ | 22.90 |
| Canceled | 15,069 | $(15,069)$ | 30.06 |
| Balance December 31, 1996 | 1,101,891 | 1,747,780 | 26.36 |
| Exercised | --- | $(96,290)$ | 24.38 |
| Canceled | 23,473 | $(23,473)$ | 30.35 |
| Balance December 31, 1997 | 1,125,364 | 1,628,017 | 26.41 |
| Authorized | 1,500,000 | - -- | -- |
| Granted | $(22,500)$ | 22,500 | 45.86 |
| Exercised | -- | $(162,835)$ | 25.17 |
| Canceled | 27,451 | $(27,451)$ | 30.48 |
| Balance December 31, 1998 | 2,630,315 | 1,460,231 | \$26.77 |

In 1996, the Company adopted the disclosure provisions of SFAS No. 123, "Accounting for Stock Based Compensation." There were 22,500 stock options granted in 1998 and no stock options granted in 1997. The weighted-average fair value per option at the date of grant for options granted during 1998 was $\$ 15.47$ and in 1996 it was $\$ 9.64$. The fair value was estimated using the Black-Scholes option pricing model, modified for dividends, and the following weighted-average assumptions:

Expected life (years)
Interest rate

| 1998 | 1996 |
| :---: | :---: |
| --- | --- |
| 5 | 5 |
| $5.03 \%$ | $6.20 \%$ |
| $28.10 \%$ | $21.53 \%$ |


| Expected dividend yield | $0.22 \%$ | $0.33 \%$ |
| ---: | ---: | ---: |
| $\mathrm{~F}-15$ |  |  |

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Pro forma net income and earnings per share reflecting compensation cost for the fair value of stock options awarded in 1998 and 1996 were as follows:

| EXCEPT PER SHARE AMOUNTS) |  | 1998 | 1997 | 1996 |
| :---: | :---: | :---: | :---: | :---: |
| Net income | As reported | \$57.2 | \$50.3 | \$43.1 |
|  | Pro forma | \$55.5 | \$48.8 | \$41.6 |
| Basic earnings per share | As reported | \$2.57 | \$2.23 | \$1.91 |
|  | Pro forma | \$2.49 | \$2.16 | \$1.84 |
| Diluted earnings per share | As reported | \$2.50 | \$2.18 | \$1.86 |
|  | Pro forma | \$2.42 | \$2.11 | \$1.80 |

The amounts disclosed may not be representative of the effects on reported net income for future years.

The following table summarizes information concerning Plan options outstanding at December 31, 1998:

| OPTIONS OUTSTANDING |  |  |  | OPTIONS EXERCISABLE |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | WEIGHTED |  |  |  |
|  |  | AVERAGE | WEIGHTED | WEIGHTED |  |
| RANGE OF | NUMBER | REMAINING | AVERAGE | NUMBER | AVERAGE |
| EXERCISE | OUTSTANDING | CONTRACTUAL | EXERCISE | EXERCISABLE | EXERCISE |
| PRICES | AT 12/31/98 | TERM (YEARS) | PRICE | AT 12/31/98 | PRICE |
| \$22.625-29.75 | 767,484 | 4.2 | \$22.84 | 767,484 | \$22.84 |
| \$30.625-52.375 | 692,747 | 7.1 | \$31.11 | 446,831 | \$30.625 |

EARNINGS PER SHARE (EPS)

| BASIC EPS | 1998 | 1997 | 1996 |
| :---: | :---: | :---: | :---: |
| Net income | \$57,224 | \$50,312 | \$43,097 |
| Weighted average shares outstanding | 22,281 | 22,558 | 22,621 |
| Basic earnings per share | \$2.57 | \$2. 23 | \$1.91 |


| DILUTED EPS | 1998 | 1997 | 1996 |
| :---: | :---: | :---: | :---: |
| Net income | \$57,224 | \$50, 312 | \$43,097 |
| Weighted average shares outstanding | 22,281 | 22,558 | 22,621 |
| Dilutive effect of stock options | 645 | 555 | 511 |
| Weighted average shares outstanding, adjusted | 22,926 | 23,113 | 23,132 |
| Diluted earnings per share | \$2. 50 | \$2.18 | \$1.86 |
| F-16 |  |  |  |

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

COMPREHENSIVE INCOME

The following table reflects the accumulated balances of other comprehensive income (loss) (in millions):

|  |  |  | ACCUMULATED |
| :---: | :---: | :---: | :---: |
| CURRENCY | MINIMUM | UNREALIZED | OTHER |
| TRANSLATION | PENSION | HOLDING | COMPREHENSIVE |
| ADJUSTMENT | LIABILITY | GAINS | INCOME (LOSS) |


| Balance at <br> January 1, 1996 | \$16.9 | \$ - - | \$ 0.1 | \$17.0 |
| :---: | :---: | :---: | :---: | :---: |
| Current year change | (5.4) | -- | 0.1 | (5.3) |
| Balance at |  |  |  |  |
| December 31, 1996 | 11.5 | -- | 0.2 | 11.7 |
| Current year change | (25.0) | (1.0) | (0.1) | (26.1) |
| Balance at |  |  |  |  |
| December 31, 1997 | (13.5) | (1.0) | 0.1 | (14.4) |
| Current year change | 4.8 | -- | -- | 4.8 |
| Balance at |  |  |  |  |
| December 31, 1998 | \$ (8.7) | \$ (1.0) | \$ 0.1 | \$ (9.6) |

The tax expense (benefit) associated with items included in other comprehensive income (loss) were $\$(0.5)$ million, $\$(1.0)$ million and $\$(0.5)$ million for 1998,1997 and 1996 , respectively.

SEGMENT AND RELATED INFORMATION

SFAS No. 131, "Disclosures about Segments of Enterprise and Related Information," established standards for reporting information about operating segments in annual financial statements and required
selected information about operating segments in interim financial reports issued to stockholders. It also established standards for related disclosures about products and services, and geographic areas. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. The Company's operating segments are strategic business units that offer different products and serve different markets. They are managed separately and require different technology and marketing strategies.

The Company has two operating segments: Specialty Minerals and Refractories. The Specialty Minerals segment produces and sells precipitated calcium carbonate and lime, and mines, processes and sells the natural mineral products limestone and talc. This segment's products are used principally in the paper, building materials, paints and coatings, glass, ceramic, polymers, food, and pharmaceutical industries. The Refractories segment produces and markets monolithic and shaped refractory materials and services used primarily by the steel, cement and glass industries.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. The Company evaluates performance based on operating income of the respective business units. Depreciation expense related to corporate assets are allocated to the business segments and are included in income from operations. However, such corporate depreciable assets are not included in the segment assets. Intersegment sales and transfers are not significant.

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Segment information for the years ended December 31, 1998, 1997 and 1996 was as follows (in millions):

1998

|  | 1998 |  |  |
| :--- | :---: | ---: | ---: |
|  | SPECIALTY MINERALS | REFRACTORIES | TOTAL |
|  |  |  |  |
| Net sales | $\$ 429.0$ | $\$ 180.2$ | $\$ 609.2$ |
| Income from operations | $\$ 66.2$ | $\$ 26.9$ | $\$ 93.1$ |
| Depreciation, depletion |  |  |  |
| and amortization | $\$ 45.3$ | $\$ 7.8$ | $\$ 53.1$ |
| Segment assets | $\$ 562.7$ | $\$ 167.5$ | $\$ 730.2$ |
| Capital expenditures | $\$ 63.1$ | $\$ 9.4$ | $\$ 72.5$ |

1997
SPECIALTY MINERALS REFRACTORIES TOTAL

| Net sales | $\$ 403.1$ | $\$ 199.2$ | $\$ 602.3$ |
| :--- | ---: | ---: | ---: |
| Income from operations | $\$ 54.7$ | $\$ 25.5$ | $\$ 80.2$ |
| Depreciation, depletion |  |  |  |
| and amortization | $\$ 44.3$ | $\$ 8.6$ | $\$ 52.9$ |
| Segment assets | $\$ 537.3$ | $\$ 170.1$ | $\$ 707.4$ |
| Capital expenditures | $\$ 66.6$ | $\$ 8.2$ | $\$ 74.8$ |
|  |  | 1996 |  |
|  |  |  |  |
|  | SPECIALTY MINERALS | REFRACTORIES | TOTAL |
|  |  |  |  |
| Net sales | $\$ 35.3$ | $\$ 196.7$ | $\$ 556.0$ |
| Income from operations | $\$ 50.3$ | $\$ 17.1$ | $\$ 67.4$ |


| Depreciation, depletion |  |  |  |
| :--- | ---: | ---: | ---: |
| and amortization | $\$ 37.8$ | $\$ 8.4$ | $\$ 46.2$ |
| Segment assets | $\$ 512.6$ | $\$ 188.0$ | $\$ 700.6$ |
| Capital expenditures | $\$ 85.1$ | $\$ 11.0$ | $\$ 96.1$ |

A reconciliation of the totals reported for the operating segments to the applicable line items in the consolidated financial statements is as follows (in millions):

|  | 1998 | 1997 | 1996 |
| :---: | :---: | :---: | :---: |
| INCOME BEFORE PROVISION FOR TAXES ON INCOME AND MINORITY INTERESTS |  |  |  |
| Income from operations for reportable segmentS | \$93.1 | \$80.2 | \$67.4 |
| Unallocated corporate expenses | (0.7) | - | - |
| Consolidated income from operations | 92.4 | 80.2 | 67.4 |
| Interest income | 2.1 | 1.8 | 1.0 |
| Interest expense | (5.9) | (7.2) | (5.9) |
| Other income (deductions) | (2.3) | (2.6) | 0.1 |
| Income before provision fortaxes on income and minority interests $\quad \$ 86.3 \quad \$ 72.2$ \$62.6 |  |  |  |
| TOTAL ASSETS | 1998 | 1997 | 1996 |
| Total segment assets | \$730.2 | \$707.4 | \$700.6 |
| Corporate assets | 30.7 | 34.0 | 13.3 |
| Consolidated total assets | \$760.9 | \$741.4 | \$713.9 |
|  | 1998 | 1997 | 1996 |
| CAPITAL EXPENDITURES |  |  |  |
| Total segment capital expenditures | \$72.5 | \$74.8 | \$96.1 |
| Corporate capital expenditures | 10.0 | 2.5 | 1.2 |
| Consolidated total capital expenditures | \$82.5 | \$77.3 | \$97.3 |

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Financial information relating to the Company's operations by geographic area was as follows (in millions):

| 1998 | 1997 | 1996 |
| :--- | :--- | :--- |
| ---- | ---- | --- |

NET SALES

| United States | \$411.7 | \$414.4 | \$383.0 |
| :---: | :---: | :---: | :---: |
| Canada/Latin America | 59.4 | 59.9 | 52.3 |
| Europe/Africa | 103.7 | 83.4 | 76.6 |
| Asia | 34.4 | 44.6 | 44.1 |
| Total International | 197.5 | 187.9 | 173.0 |
| Consolidated total net sales | \$609.2 | \$602.3 | \$556.0 |

Net sales are attributed to countries and geographic areas based on the location of the legal entity. No individual foreign country represents more than $10 \%$ of consolidated net sales or consolidated long-lived assets.

|  | 1998 | 1997 | 1996 |
| :---: | :---: | :---: | :---: |
| LONG-LIVED ASSETS |  |  |  |
| United States | \$349.9 | \$367. 6 | \$365.5 |
| Canada/Latin America | 34.7 | 37.9 | 41.8 |
| Europe/Africa | 108.3 | 72.1 | 61.8 |
| Asia | 31.6 | 23.1 | 32.0 |
| Total International | 174.6 | 133.1 | 135.6 |
| Consolidated totallong-lived assets | \$524.5 | \$500.7 | \$501.1 |

QUARTERLY FINANCIAL DATA (UNAUDITED)

| 1998 QUARTERS | FIRST | SECOND | THIRD | FOURTH |
| :---: | :---: | :---: | :---: | :---: |
| Net sales | \$144,102 | \$155,752 | \$154,119 | \$155, 220 |
| Gross profit | 44,829 | 48,496 | 49,449 | 49,861 |
| Net income | 12,801 | 14,657 | 15,451 | 14,315 |
| Earnings per share: |  |  |  |  |
| Basic | 0.57 | 0.65 | 0.70 | 0.65 |
| Diluted | 0.55 | 0.63 | 0.68 | 0.64 |
| Market Price Range Per Share of Common Stock |  |  |  |  |
| High | $525 / 16$ | 55 9/16 | 54 | 51 1/4 |
| Low | $4015 / 16$ | $483 / 8$ | $357 / 8$ | 36 |
| Close | 49 15/16 | $513 / 4$ | $391 / 4$ | $4015 / 16$ |
| Dividends paid per common share | \$. 025 | \$. 025 | \$. 025 | \$. 025 |
| THOUSANDS OF DOLLARS, EXCEPT PER SHARE AMOUNTS |  |  |  |  |
| 1997 QUARTERS | FIRST | SECOND | THIRD | FOURTH |


| Net sales | \$137,626 | \$151,765 | \$155, 012 | \$157,932 |
| :---: | :---: | :---: | :---: | :---: |
| Gross profit | 40,525 | 44,365 | 46,424 | 46,409 |
| Net income | 10,568 | 12,361 | 13,713 | 13,670 |
| Earnings per share: |  |  |  |  |
| Basic | 0.47 | 0.55 | 0.61 | 0.61 |
| Diluted | 0.46 | 0.54 | 0.59 | 0.59 |
| Market Price Range Per Share of Common Stock |  |  |  |  |
| High | $427 / 8$ | $407 / 8$ | $4415 / 16$ | $461 / 8$ |
| Low | 34 | $321 / 8$ | $361 / 8$ | $391 / 2$ |
| Close | $341 / 4$ | $371 / 4$ | $443 / 4$ | $457 / 16$ |
| Dividends paid per common share | \$. 025 | \$. 025 | \$. 025 | \$. 025 |

INDEPENDENT AUDITORS' REPORT

THE BOARD OF DIRECTORS AND SHAREHOLDERS
MINERALS TECHNOLOGIES INC.:

We have audited the accompanying consolidated balance sheet of Minerals Technologies Inc. and subsidiary companies as of December 31, 1998 and 1997 and the related consolidated statements of income, shareholders' equity and cash flows for each of the years in the three-year period ended December 31, 1998. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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 consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Minerals Technologies Inc. and subsidiary companies as of December 31, 1998 and 1997 and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 1998 in conformity with generally accepted accounting principles.

KPMG LLP

New York, New York
January 19, 1999

The consolidated financial statements and all related financial information herein are the responsibility of the Company's management. The financial statements, which include amounts based on judgments, have been prepared in accordance with generally accepted accounting principles. Other financial information in the annual report is consistent with that in the financial statements.

The Company maintains a system of internal control over financial reporting which it believes provides reasonable assurance that transactions are executed in accordance with management's authorization and are properly recorded, that assets are safeguarded, and that accountability for assets is maintained. Even an effective internal control system, no matter how well designed, has inherent limitations and, therefore, can provide only reasonable assurance with respect to financial statement preparation. The system of internal control is characterized by a control-oriented environment within the company which includes written policies and procedures, careful selection and training of personnel, and audits by a professional staff of internal auditors.

The Company's independent accountants have audited and reported on the Company's consolidated financial statements. Their audits were performed in accordance with generally accepted auditing standards.

The Audit Committee of the Board of Directors is composed solely of outside directors. The Audit Committee meets periodically with our independent auditors, internal auditors and management to review accounting, auditing, internal control and financial reporting matters. Recommendations made by the independent auditors and the company's internal auditors are considered and appropriate action is taken with respect to these recommendations. Both our independent auditors and internal auditors have free access to the Audit Committee.

JEAN-PAUL VALLES
Chairman of the Board and Chief Executive Officer

NEIL M. BARDACH
Vice President, Finance and Chief Financial Officer

MICHAEL A. CIPOLLA
Controller and Chief Accounting Officer
January 19, 1999

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MINERALS TECHNOLOGIES INC. \& SUBSIDIARY COMPANIES SCHEDULE II-VALUATION AND QUALIFYING ACCOUNTS (thousands of dollars)

(a) Includes impact of translation of foreign currencies.
(b) Uncollectible accounts charged against allowances for doubtful accounts, net of recoveries.

Name of the Company

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APP China Specialty Minerals Pte Ltd.
Barretts Minerals Inc.
Centre International De Couchage C.I.C. Inc. ComSource Trading Ltd.
Gold Sheng Chemicals (Zhenjiang) Co., Ltd. Hi-Tech Specialty Minerals Company Limited
Huzhou Minteq Refractory Co. Ltd.
Minerals Technologies Europe N.V.
Minerals Technologies Holdings Ltd.
Minerals Technologies South Africa (Pty) Ltd.
Mintech Canada Inc.
Mintech do Brasil Comercio Ltda.
Mintech Japan K.K.
Minteq Australia Pty Ltd.
Minteq Europe Limited.
Minteq International GmbH
Minteq International Inc.
Minteq Italiana S.p.A.
Minteq Korea Inc.
Minteq Magnesite Limited
Minteq UK Limited.
MTX Finance Inc.
MTX Finance Ireland
PT Sinar Mas Specialty Minerals
Specialty Minerals do Brasil Comercio
e Industria Ltda.
Specialty Minerals FMT K.K.
Specialty Minerals France S.A.R.L.
Specialty Minerals Inc.
Specialty Minerals Inc. Poland Sp. z o.o.
Specialty Minerals International Inc.
Specialty Minerals Israel Limited
Specialty Minerals (Mauritius) Private Limited
Specialty Minerals (Michigan) Inc.
Specialty Minerals Nordic Oy Ab
Specialty Minerals Philippines, Inc.
Specialty Minerals (Portugal) -
Especialidades Minerais, S.A.
Specialty Minerals, S.A. de C.V.
Specialty Minerals Slovakia, spol. s r.o.
Specialty Minerals South Africa (Pty.) Limited
Specialty Minerals (Thailand) Limited
Specialty Minerals UK Limited
Specialty Pigments (India) Private Limited
Synsil Products Inc.
Tecnologias Minerales de Mexico, S.A. de C.V.

Place of Incorporation

Singapore
Delaware
Canada
Delaware
China
Thailand
China
Belgium
United Kingdom
South Africa
Canada
Brazil
Japan
Australia
Ireland
Germany
Delaware
Italy
Korea
Ireland
United Kingdom
Delaware
Ireland
Indonesia

Brazil
Japan
France
Delaware
Poland
Delaware
Israel
Mauritius
Michigan
Finland
Philippines

Portugal
Mexico
Slovakia
South Africa
Thailand
United Kingdom
India
Delaware
Mexico

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REPORT AND CONSENT OF INDEPENDENT AUDITORS
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The Board of Directors and Shareholders
Minerals Technologies Inc.:

The audits referred to in our report dated January 19, 1999, included the related financial statement schedule for each of the years in the threeyear period ended December 31, 1998, as listed in Item 14 of this Annual Report on Form $10-K$. This financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion on this financial statement schedule based on our audits. In our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We consent to the use of our reports included herein and incorporated by reference in the Registration Statements on Form S-8 (Nos. 33-59080, 33-65268, 33-96558 and 333-62739).

New York, New York
March 15, 1999

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This schedule contains summary financial information extracted from the
consolidated financial statements of Minerals Technologies Inc., and
is qualified in its entirety by reference to such consolidated financial
statements.
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[^0]:    -     - HISTORICAL GROWTH RATE

    Continuance of the historical growth rate of the Company depends upon a number of uncertain events, including the outcome of the company's strategies of increasing its penetration into geographical markets such as Asia, Latin America and Europe; increasing its penetration into product markets such as the market for paper coating pigments and the market for groundwood paper pigments; increasing sales to existing PCC customers by increasing the amount of PCC used in each ton of paper produced; and developing, introducing and selling new products. Difficulties, delays or failures of any of these strategies could cause the future growth rate of the Company to differ materially from its historical growth rate.

