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BRUSH ENGINEERED MATERIALS INC  
Form S-3  
April 02, 2004

AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON APRIL 2, 2004

REGISTRATION NO. 333-

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SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549  
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FORM S-3  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933  
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BRUSH ENGINEERED MATERIALS INC.  
(Exact Name of Registrant as Specified in Its Charter)

OHIO  
(State or Other Jurisdiction of Incorporation or  
Organization)

34-1919973  
(I.R.S. Employer Identification Num

-----  
17876 ST. CLAIR AVENUE  
CLEVELAND, OHIO 44110  
TELEPHONE: (216) 486-4200  
(Address, Including Zip Code, and Telephone Number, Including Area Code, of  
Registrant's Principal Executive Offices)  
-----

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APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as  
practicable after this Registration Statement becomes effective.

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If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. [ ]

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. [ ]

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. [ ]

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER UNIT	PROPOSED AGGREGATE PRICE
Common Stock, no par value (2).....	2,087,250 (3)	\$20.35	\$42,475

- (1) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) promulgated under the Securities Act on the basis of the average of the high and low intra-day sales prices of the common shares on the New York Stock Exchange on March 26, 2004, which date is within five business days prior to filing.
- (2) This registration statement also relates to rights to purchase the registrant's preferred stock issued pursuant to the Rights Agreement, dated May 10, 2000, by and between Brush Engineered Materials Inc. and National City Bank, N.A., as rights agent. Until the occurrence of certain events specified in the Rights Agreement, these rights are not exercisable, are evidenced by the certificates for the common shares and are transferred solely with the common shares. The value attributable to these rights, if any, is reflected in the value of the common shares, and, accordingly, no separate fee is paid.
- (3) This amount represents 1,700,000 common shares being sold by the registrant, 115,000 common shares that are issuable upon exercise of warrants to purchase common shares of the registrant and are being registered for resale by certain holders of warrants to purchase common shares and 272,250 common shares that the underwriters have the option to purchase to cover over-allotments, if any.

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THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933 OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

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THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE AND THE SELLING SHAREHOLDERS MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT THAT IS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED APRIL 1, 2004

PROSPECTUS

[BRUSH LOGO]

1,815,000 SHARES

BRUSH ENGINEERED MATERIALS INC.  
COMMON STOCK

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We are offering 1,700,000 common shares and the selling shareholders are offering 115,000 common shares through a syndicate of underwriters. We will not receive any of the proceeds from the sale of common shares by the selling shareholders.

Our common shares are traded on the New York Stock Exchange under the symbol "BW." The last reported sale price of our common shares on the New York Stock Exchange on April 1, 2004 was \$20.98 per share.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

INVESTING IN OUR COMMON SHARES INVOLVES RISKS. SEE "RISK FACTORS" BEGINNING ON PAGE 7.

	PER SHARE	TOTAL
	-----	-----
Public offering price	\$	\$
Underwriting discount and commission	\$	\$
Proceeds to us (before expenses)	\$	\$
Proceeds to selling shareholders (before expenses)	\$	\$

We have granted the underwriters an option to purchase up to 272,250 additional common shares to cover over-allotments.

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We expect that the common shares will be ready for delivery on or about  
, 2004.

## KEYBANC CAPITAL MARKETS

The date of this prospectus is , 2004.

### [DESCRIPTION OF ARTWORK]

The following is a description of graphics that will be included on the  
inside front cover of the prospectus:

[Company Logo]

1. Under the Company's Logo is the following text: "We are a leading global provider of high-performance engineered materials for a growing variety of commercial and industrial applications where superior performance and reliability are essential. We are the world's only fully-integrated provider of beryllium, beryllium-containing alloys and beryllia ceramics. Beryllium is a key raw material in many of our products and is the lightest structural metal on Earth. We have two business segments: Metal Systems Group and Microelectronics Group."

2. A photograph of a cellular tower under a caption titled "Metal Systems Group" with the following text to the right of the photograph: "We produce and distribute high-performance alloy products, beryllium products and engineered material systems. These highly engineered products have applications in the telecommunications and computer, automotive electronics, industrial components, aerospace and defense, appliance and other markets."

3. A photograph of DVDs under a caption titled "Microelectronics Group" with the following text above the photograph: "We manufacture precious metal and specialty alloy products, electronic packaging, circuitry and beryllia ceramic materials. These products are used in the wireless telecommunications and computer, semi-conductor, optical media, automotive, medical, aerospace and defense, laser and other markets."

4. A pie chart titled "2003 Revenue by Segment."

5. A pie chart titled "2003 Revenue by Market."

6. A pie chart titled "2003 Revenue by Geographic Area."

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YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN OR INCORPORATED BY REFERENCE INTO THIS PROSPECTUS. WE HAVE NOT AUTHORIZED ANYONE TO PROVIDE YOU WITH DIFFERENT INFORMATION. WE ARE NOT MAKING AN OFFER OF THESE SECURITIES IN ANY STATE WHERE THE OFFER IS NOT PERMITTED. YOU SHOULD NOT ASSUME THAT THE INFORMATION CONTAINED IN THIS PROSPECTUS IS ACCURATE AS OF ANY DATE OTHER THAN THE DATE ON THE FRONT OF THIS PROSPECTUS.

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### PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary may not contain all of the information that you should consider before investing in our common shares. We urge you to read this entire prospectus and the documents incorporated by reference into this prospectus carefully, including the "Risk Factors" section and our consolidated financial statements and the related notes included elsewhere in this prospectus. Unless the context otherwise requires, references to "we," "us" or "our" refer collectively to Brush Engineered Materials Inc. and its subsidiaries. The term "common shares" means our shares of common stock, no par value, unless the context indicates a different meaning. Unless otherwise specified, all information assumes the underwriters do not exercise their over-allotment option.

#### BRUSH ENGINEERED MATERIALS INC.

We are a leading global provider of high-performance engineered materials for a growing variety of commercial and industrial applications where superior performance and reliability are essential. Our engineered materials are critical components of many high-technology or high-performance products and enable those products to be made stronger, smaller and lighter, with improved performance characteristics. We produce and distribute high-performance beryllium products, alloy products, electronic products, precious metal products and engineered material systems. Our engineered materials have product applications in a variety of end-use markets, including telecommunications and computer, automotive electronics, optical media, industrial components, appliance, aerospace and defense.

Beryllium is a key raw material in many of our products. Beryllium is a naturally occurring element -- number four on the periodic table of elements, with the symbol "Be" -- and is the lightest structural metal on Earth. It is stiffer than steel, lighter than aluminum and possesses other unique mechanical and thermal properties. Beryllium is extracted from bertrandite and beryl ores. We operate the only active bertrandite ore mine in the developed world, located on 7,500 acres in Juab County, Utah. Through our subsidiaries Brush Wellman Inc., Brush Resources Inc. and Brush Ceramic Products Inc., we are the world's only fully integrated provider of beryllium, beryllium-containing alloys and beryllia ceramics.

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We were organized as a holding company for our various businesses in 2000. Our subsidiary Brush Wellman Inc. was founded in 1931 as The Brush Beryllium Company, was publicly traded since 1956 and was listed on the NYSE in 1972. We currently operate 16 manufacturing facilities located in the United States, Singapore and the Philippines. We also have global service and distribution centers in Germany, Japan, Singapore, England and the United States, and sales offices throughout the United States, China and Taiwan.

We have two business segments: Metal Systems Group and Microelectronics Group. Our Metal Systems Group accounted for approximately 60% of our sales during 2003, and our Microelectronics Group accounted for approximately 39% of our sales during 2003. The balance of our sales during 2003 were from Brush Resources, which sells beryllium hydroxide produced through its Utah operations to businesses within our Metal Systems Group and to outside customers.

### METAL SYSTEMS GROUP

Our Metal Systems Group includes Alloy Products, Beryllium Products and Technical Materials Inc., or TMI.

Alloy Products, our largest business, manufactures and sells copper and nickel-based alloy systems, most of which incorporate beryllium. These beryllium alloys exhibit high strength and hardness, good formability and excellent resistance to corrosion, wear and fatigue, while retaining good thermal and electrical conductivity. They often are the material of choice for critical components in cell phones and wireless communications equipment, notebook and network computers and web servers, personal digital assistants, or PDAs, automotive electronics and industrial products. Alloy Products also manufactures non-beryllium-containing alloys -- including ToughMet (R), a copper-nickel-tin alloy -- which are corrosion and wear resistant, have excellent lubricity properties and are used in plastic mold tooling, aerospace, oil and gas and heavy equipment product applications.

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Beryllium Products manufactures pure beryllium and aluminum-beryllium composites that are used in many high-performance applications, primarily for the defense and aerospace industries. Beryllium's unique properties -- stiffness, strength, lightweight, temperature resistance and reflectivity -- are critical to a number of NASA programs. For example, in September 2003, beryllium was chosen by Northrop Grumman Space Technology as the material for the 18 segment, 6.5-meter primary mirror of NASA's James Webb Space Telescope. This state-of-the-art lightweight beryllium mirror will allow scientists to see ten to eleven billion light years away. We expect this application to add approximately \$15 million in sales of optical grade beryllium over the next two to three years.

TMI produces engineered material systems including clad metals, plated metals and electron beam welded, solder coated and reflow materials. These engineered material systems are produced by combining precious and non-precious metals in continuous strip form, which provide a variety of thermal, electrical or mechanical properties over a surface area or particular section of the material. TMI's products are used in complex electrical components in telecommunications systems, automotive electronics, semi-conductors and computers, as well as other high-technology applications.

### MICROELECTRONICS GROUP

Our Microelectronics Group includes Williams Advanced Materials Inc., or WAM, and Electronic Products, which consists of Brush Ceramic Products and Zentrix Technologies Inc.

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WAM manufactures precious metal and specialty alloy products specifically fabricated to meet the exacting standards required in high reliability applications for the microelectronics, semi-conductor, optical media (including DVDs), electron tube, magnetic head, aerospace and performance film industries.

Brush Ceramic Products produces beryllia ceramic materials used in wireless telecommunications, laser, medical and defense applications. Zentrix manufactures electronic packaging and circuitry used in wireless telecommunications, automotive, medical, aerospace and defense applications.

### OUR FINANCIAL AND OPERATIONAL INITIATIVES

After generating record sales of \$147.2 million during the fourth quarter of 2000 and strong sales of \$145.5 million during the first quarter of 2001, we experienced a dramatic and sustained decline in sales. Our quarterly revenue has ranged between approximately \$89 million and \$106 million since the second quarter of 2001. This drop in sales levels was primarily due to the collapse of the global telecommunications and computer market, which accounted for approximately 50% of our sales in 2000 and approximately 35% of sales in 2003. As a result, we recorded significant operating losses in 2001, 2002 and 2003.

In 2001, we implemented several financial and operational initiatives designed to return us to consistent profitability. These initiatives are focused on five key areas: reducing debt, reducing overhead, improving margins, broadening our revenue base and positioning ourselves to capitalize on a general economic recovery, including a recovery in the telecommunications and computer market.

Through these initiatives, we have reduced total debt, off-balance sheet financing and precious metal consignment obligations by more than \$80 million since the end of 2000. In December 2003, we completed a five-year, \$147.5 million debt refinancing that lowered costs compared to an existing credit and lease facility. We used the proceeds from the transaction to retire existing debt and terminate an existing key off-balance sheet obligation through the purchase of certain leased assets. The refinancing also provides increased liquidity to support working capital requirements for future growth. We achieved targeted overhead cost reductions through, among other things, improved efficiencies, a 27% reduction in headcount from 2000 year-end levels, a wage freeze and fringe benefit reductions. Despite a decline in revenue, our variable margins, which we define as sales less materials and direct manufacturing cost, have improved as a percent of sales approximately 2.3 percentage points since 2000. In 2003, Alloy Products reduced manufacturing cycle times for our alloy products by 18%, improved manufacturing inventory turns by 48%, raised yields by 11% and shipped 23% more pounds per manufacturing employee. We also broadened our revenue base through the introduction of several new products for existing and new markets and positioned ourselves to capitalize on growth in Asia by developing sales, marketing and distribution capabilities in a number of markets in the region.

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### OUR COMPETITIVE STRENGTHS

We believe that we maintain the following competitive strengths:

- UNIQUE STATUS AS A FULLY INTEGRATED PROVIDER OF BERYLLIUM-CONTAINING PRODUCTS. We operate the only active bertrandite ore mine in the developed world and are the world's only fully integrated provider of beryllium, beryllium-containing alloys and beryllia ceramics. We mine bertrandite ore at our 7,500-acre mine in Juab County, Utah and extract

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beryllium from that ore at our processing facility in Delta, Utah. Based on average production levels in recent years, our proven bertrandite ore reserves would last approximately 100 years. As a fully integrated provider, we offer our customers the convenience and security of a single supply chain source for critical engineered materials.

- HIGH BARRIERS TO ENTRY. Our vertical integration, access to beryllium resources, know-how and expertise in refining and processing beryllium and beryllium-containing materials, and the capital investment required in the plant, equipment and health and safety infrastructure for our business establish high barriers to entry for potential competitors.
- PRODUCT BREADTH WITHIN EXISTING MARKETS. Each of our businesses provides a diverse selection of products. Product breadth is an important consideration for many customers and distributors in their selection of suppliers. Our extensive product offerings provide an advantage in developing and maintaining relationships with original equipment manufacturers, or OEMs, and in establishing partnerships with distributors.
- GLOBAL DISTRIBUTION NETWORK. Our global distribution network allows us to actively market our products and effectively respond to our customers' needs throughout the world. This network includes sales, service and distribution centers in the United States and in key European and Asian markets, as well as sales offices throughout the United States, China and Taiwan. We augment our internal distribution capabilities with a worldwide network of independent distributors.
- STRATEGIC CUSTOMER RELATIONSHIPS. We have established long-term relationships with a variety of customers in key growth end markets. These relationships allow us to work cooperatively with customers in their new product development activities, which often results in our products being included in design specifications for a customer's new product. We believe that these relationships have resulted from our responsiveness, our ability to meet special customer requirements based on innovative technology, the quality of our products and the speed of our delivery.
- TECHNOLOGICAL CAPABILITIES AND PRODUCT QUALITY. We believe that our precious and base metal alloys, precious metal products, precious metal refining, precious metal plating technologies, customized machinery, processes and attention to quality are competitive advantages. A portion of our products and processes are proprietary. We believe that our products' superior characteristics and performance tolerances provide an important competitive advantage, particularly in the sophisticated alloys required for the most demanding end user applications.
- CAPACITY TO SUPPORT PROFITABLE MARKET GROWTH. As the market's demand for engineered materials increases, we are well-positioned to expand our manufacturing output without significant incremental cash investment. In addition to manufacturing capacity, our focus on Six Sigma and lean manufacturing techniques and emphasis on worker productivity have significantly improved our manufacturing efficiency and have positioned us to improve our profitability. Six Sigma is an analytical process that helps companies to improve efficiency, quality and customer satisfaction while reducing cycle time and operating costs.
- SIGNIFICANT OPERATING EXPERTISE. Our senior managers have significant experience in the engineered materials industry. We believe that our management team is successfully implementing our financial and operational initiatives to return us to profitability. We also believe that our management team's extensive experience positions us to identify



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and capitalize on emerging growth opportunities.

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### OUR GROWTH STRATEGY

Our objective is to grow our business profitably while strengthening our position as a leading global provider of high-performance engineered materials. Key elements of our growth strategy are to:

- CAPTURE IMPROVED DEMAND IN THE TELECOMMUNICATIONS AND COMPUTER MARKET. We are positioned to benefit from an increase in equipment spending and a general improvement in the conditions of the telecommunications and computer market. During 2003, demand for telecommunications and computer products began to improve as commercial and industrial users began to make more significant expenditures on information and communication systems. This increasing demand among commercial customers was augmented by increasing consumer demand for cellular phones, wireless communication systems and other communication products. We are well positioned in these markets and expect to benefit from improvements in market conditions.
- CAPITALIZE ON THE TREND TOWARDS HIGHER PERFORMANCE AND MINIATURIZATION OF ELECTRONIC COMPONENTS. We seek to capitalize on our ability to provide our customers with engineered materials that are well suited to meet the demanding standards associated with the trend towards higher performance and miniaturization of electronic components. New electronic components must meet enhanced performance requirements, which in turn require materials that can meet demanding mechanical, electrical and thermal properties. These demands for heightened performance are coupled with ongoing efforts to make these components stronger, smaller and lighter. As manufacturers continue to miniaturize their products, more high-performance engineered materials capable of meeting stringent performance and reliability standards need to be included in those products.
- EXPAND AND DIVERSIFY OUR REVENUE BASE. We seek to build on existing customer relationships and our core manufacturing competencies to increase the breadth of our product offerings in existing markets and diversify into additional markets. We intend to reduce our susceptibility to economic cycles and increase our prospects for profitable growth by continuing to expand the markets and customers we serve and products we offer.
- INCREASE OUR GLOBAL PRESENCE. We support our customers in their geographic markets throughout the world. As the trend towards high-performance materials and miniaturization continues, we believe that new market opportunities and new potential customers will emerge. We intend to continue to expand our sales, marketing and service capabilities into international markets in response to our existing customers' needs and new business opportunities. Our presence in the local markets of our customers allows us to quickly respond to their needs and requests, which we believe provides us with a key competitive advantage. For example, Alloy Products is focused on expanding its foothold in the high growth China and other Asian markets where consumer, personal computer and wireless applications are key drivers to future development. Alloy Products' focus in this region complements the solid foundations it has already established in Europe.
- INCREASE OPERATIONAL EFFICIENCY. We intend to build upon the success of our existing cost reduction and manufacturing efficiency initiatives to

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improve margins and position ourselves for profitable growth in both strong and weak economic environments.

- PURSUE SELECTIVE ACQUISITIONS IN OUR STRATEGIC MARKETS. We intend to selectively pursue acquisitions that can extend our geographic reach, expand and diversify our customer base or increase the breadth of our product and service offerings.

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### CORPORATE INFORMATION

Brush Engineered Materials Inc. is an Ohio corporation. Our principal executive offices are located at 17876 St. Clair Avenue, Cleveland, Ohio 44110. Our telephone number is (216) 486-4200. Our website is [www.beminc.com](http://www.beminc.com). The information on our website is not part of this prospectus.

### THE OFFERING

Common shares offered by us...	1,700,000 shares
Common shares offered by the selling shareholders.....	115,000 shares
Common shares to be outstanding immediately after this offering.....	18,559,184 shares
Use of proceeds.....	We intend to use the net proceeds of approximately \$ million, based on an offering price of \$ per share, from this offering to repay a portion of the amounts outstanding under credit facilities and for working capital and general corporate purposes, including capital expenditures, acquisitions of businesses or assets and investments. We will not receive any of the proceeds from the sale of common shares by the selling shareholders. See "Use of Proceeds" on page 19.
Over-allotment option.....	We have granted to the underwriters an option to purchase up to an additional 272,250 common shares solely to cover over-allotments.
NYSE symbol.....	BW

The number of common shares to be outstanding after the offering is based on the number of common shares outstanding as of March 31, 2004 plus a total of 115,000 shares issued or to be issued to the selling shareholders upon the exercise of outstanding warrants. Unless we specifically state otherwise, the information contained in this prospectus excludes 1,573,868 common shares reserved for issuance upon the exercise of options granted under our equity compensation plans.

### RISK FACTORS

SEE "RISK FACTORS" BEGINNING ON PAGE 7 FOR A DISCUSSION OF MATERIAL RISKS THAT PROSPECTIVE PURCHASERS OF OUR COMMON SHARES SHOULD CONSIDER.

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## SUMMARY CONSOLIDATED FINANCIAL DATA (Dollars in thousands, except per share data)

The tables below set forth our summary consolidated financial data for the years ended December 31, 1999, 2000, 2001, 2002 and 2003. This financial data has been derived from our audited consolidated financial statements. Prospective investors should read the summary consolidated financial data in conjunction with "Selected Consolidated Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus.

The "As Adjusted" column in the consolidated balance sheet data below gives effect to the exercise of the warrants and the sale of the 1,700,000 common shares offered by us at an assumed public offering price of \$ \_\_\_\_\_ per share, the last reported sale price of our common shares on \_\_\_\_\_, 2004, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

	YEAR ENDED DECEMBER 31,			
	1999	2000	2001	2002
<b>STATEMENT OF OPERATIONS DATA:</b>				
Net sales.....	\$455,707	\$563,690	\$472,569	\$372,829
Cost of sales.....	363,773	444,951	404,574	324,932
Gross profit.....	91,934	118,739	67,995	47,897
Operating profit (loss).....	10,558	22,986	(14,069)	(22,845)
Interest expense.....	4,173	4,652	3,327	3,010
Income (loss) from continuing operations before income taxes.....	6,385	18,334	(17,396)	(25,855)
Net income (loss).....	\$ 6,439	\$ 14,165	\$ (10,274)	\$ (35,604)
Net income (loss) per common share:				
Basic.....	\$ 0.40	\$ 0.87	\$ (0.62)	\$ (2.15)
Diluted.....	\$ 0.40	\$ 0.86	\$ (0.62)	\$ (2.15)
Dividends per common share.....	\$ 0.48	\$ 0.48	\$ 0.24	--
Depreciation and amortization.....	\$ 27,037	\$ 22,664	\$ 21,609	\$ 20,640
Capital expenditures.....	\$ 16,758	\$ 21,306	\$ 23,130	\$ 5,248
Mine development expenditures.....	\$ 288	\$ 332	\$ 154	\$ 166

	AT DECEMBER 31,				
	1999	2000	2001	2002	2003
ACTUAL					
<b>BALANCE SHEET DATA:</b>					
Working capital.....	\$124,831	\$143,387	\$110,894	\$ 82,645	\$ 85,141
Property and equipment At cost.....	\$440,234	\$449,697	\$469,663	\$ 476,283	\$ 535,421

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Cost less depreciation and amortization.....	\$170,939	\$170,460	\$171,296	\$ 152,544	\$ 190,846
Total assets.....	\$428,406	\$452,506	\$403,653	\$ 334,879	\$ 371,616
Other long-term liabilities.....	\$ 53,837	\$ 55,454	\$ 62,473	\$ 65,977	\$ 64,097
Long-term debt.....	\$ 42,305	\$ 43,305	\$ 47,251	\$ 36,219	\$ 85,756
Shareholders' equity.....	\$220,638	\$229,907	\$214,350	\$ 159,094	\$ 153,573

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### RISK FACTORS

You should carefully consider the risks described below and all other information contained in or incorporated by reference into this prospectus before purchasing our common shares. Some of the following risks relate principally to the industry in which we operate and to our business. Other risks relate principally to the securities markets and ownership of our common shares. Additional risks and uncertainties not presently known to us, or risks that we currently do not consider to be material, may also impair our operations or results. If any of the following risks actually occurs, we may not be able to conduct our business as currently planned, and our financial condition and sales, margins and profitability could be seriously harmed. In that case, the market price of our common shares could decline, and you could lose all or part of your investment.

#### RISKS RELATING TO OUR BUSINESS

HEALTH ISSUES AND LITIGATION RELATING TO MACHINING AND MANUFACTURING OF BERYLLIUM-CONTAINING PRODUCTS COULD HAVE A MATERIAL ADVERSE EFFECT ON OUR SALES, MARGINS AND PROFITABILITY.

If exposed to respirable beryllium fumes, dusts or powder, some individuals may demonstrate an allergic reaction to beryllium and may later develop a chronic lung disease known as chronic beryllium disease, or CBD. Some people who are diagnosed with CBD do not develop clinical symptoms at all. In others, the disease can lead to scarring and damage of lung tissue, causing clinical symptoms that include shortness of breath, wheezing and coughing. Severe cases of CBD can cause disability or death.

Further, some scientists claim there is evidence of an association between beryllium exposure and lung cancer, and certain standard-setting organizations have classified beryllium and beryllium compounds as human carcinogens.

The health risks relating to exposure to beryllium have been, and will continue to be, a significant issue confronting the beryllium-containing products industry. The health risks associated with beryllium have resulted in product liability claims, employee and third-party lawsuits and increased levels of scrutiny by federal and state regulatory authorities of us and our customers. Concerns over CBD and other potential adverse health effects relating to beryllium, as well as concerns regarding potential liability from the use of beryllium, may discourage our customers' use of our beryllium-containing products and reduce demand for our products.

One of our subsidiaries, Brush Wellman, is a defendant in proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted CBD or other lung conditions as a result of exposure to beryllium. Plaintiffs include persons employed by Brush Wellman, contractors at Brush Wellman's facilities and its customers and users of beryllium-containing products, and their family members. As of March 31, 2004, there were 14 beryllium-related claims pending in which Brush Wellman is a defendant, three of which are putative class actions. Many of the plaintiffs in these suits do not

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currently have any symptoms of CBD, though we cannot assure you they will not exhibit symptoms in the future. All but one of these actions are currently covered under varying levels of pre-existing insurance coverage through third-party carriers, although we may not be able to collect fully on our insurance coverage. A substantial portion of our insurance coverage is provided through various Lloyd's of London syndicates, some of whose names are or may become insolvent.

Our sales, margins and profitability could be affected adversely by unfavorable results in one or more of those cases. In addition, continued or increased adverse media coverage relating to our beryllium-containing products could damage our reputation or cause a decrease in demand for beryllium-containing products, which could adversely affect our sales, margins and profitability. Further, an unfavorable outcome or settlement of a pending beryllium case or additional adverse media coverage could encourage the commencement of additional similar litigation.

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WE ARE CURRENTLY SELF-INSURED FOR PRODUCT LIABILITY CLAIMS BASED ON EXPOSURE TO BERYLLIUM AFTER JULY 2001, AND MATERIAL LOSSES FROM THOSE CLAIMS COULD ADVERSELY AFFECT OUR SALES, MARGINS AND PROFITABILITY.

Although we have varying levels of insurance coverage from insurance carriers for product liability claims based on exposure to beryllium for most periods prior to July 2001, we are self-insured for product liability claims based on exposure to beryllium after July 2001 and for a short period in the 1980s. We may not be able to provide adequate coverage against all potential liabilities. Significant losses from any of the claims for which we are self-insured could adversely affect our sales, margins and profitability.

OUR BUSINESS AND OUR CUSTOMERS' BUSINESSES ARE SUBJECT TO EXTENSIVE HEALTH AND SAFETY REGULATIONS THAT IMPOSE, AND WILL CONTINUE TO IMPOSE, SIGNIFICANT COSTS AND LIABILITIES, AND FUTURE REGULATION COULD INCREASE THOSE COSTS AND LIABILITIES OR EFFECTIVELY PROHIBIT PRODUCTION OR USE OF BERYLLIUM-CONTAINING PRODUCTS.

We and our customers are subject to laws regulating worker exposure to beryllium. Standards for exposure to beryllium are under review by various governmental and private standard-setting organizations. One such review is being conducted by the United States Occupational Safety and Health Administration, which has commenced a rulemaking process to decide whether to revise its current standards for workers exposed to beryllium. Those reviews may result in more stringent worker safety standards, which may significantly increase our costs of production. More stringent worker safety standards may also cause users of beryllium-containing products to choose alternative materials or otherwise reduce demand for beryllium-containing products. Reduction in demand for our products or an increase in our production costs could adversely affect our sales, margins and profitability. Further, production or use of beryllium may be effectively prohibited, at least for some applications, if worker safety standards were increased significantly, which would cause us to shut down a portion or all of our operations relating to beryllium-containing materials. Present and future environmental regulations could also impair our customers' ability and willingness to use our beryllium-containing products.

OUR BUSINESS IS SUBJECT TO EXTENSIVE ENVIRONMENTAL REGULATIONS THAT IMPOSE, AND WILL CONTINUE TO IMPOSE, SIGNIFICANT COSTS AND LIABILITIES ON US, AND FUTURE REGULATION COULD INCREASE THESE COSTS AND LIABILITIES OR PREVENT PRODUCTION OF BERYLLIUM-CONTAINING PRODUCTS.

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We are subject to a variety of governmental regulations relating to the environment, including those relating to our handling of hazardous materials and air and wastewater emissions. Some environmental laws impose substantial penalties for noncompliance. Others, such as the federal Comprehensive Environmental Response, Compensation, and Liability Act, impose strict, retroactive and joint and several liability upon entities responsible for releases of hazardous substances. Bertrandite ore mining is also subject to extensive governmental regulation on matters such as permitting and licensing requirements, plant and wildlife protection, reclamation and restoration of mining properties, the discharge of materials into the environment and the effects that mining has on groundwater quality and availability. If we fail to comply with present and future environmental laws and regulations, we could be subject to liabilities or our operations could be interrupted. In addition, future environmental laws and regulations could restrict our ability to expand our facilities or extract our bertrandite ore deposits. They could also require us to acquire costly equipment or to incur other significant expenses in connection with our business, which could adversely affect our business.

WE HAVE RECENTLY INCURRED SIGNIFICANT LOSSES, AND WE MAY NOT BE ABLE TO SUSTAIN PROFITABILITY IF WE ATTAIN IT.

We have not generated an annual operating profit since 2000. Although we have taken steps under our business strategy to improve our operating performance, those measures may not result in profitability, or, if they do result in profitability, that trend may not continue. If we fail to establish profitable operations and continue to incur losses, the price of our common shares may fall.

We have implemented strategic initiatives designed to improve our operating performance. We may not be able to successfully implement or realize the expected benefits of any of those initiatives or sustain

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improvements made to date. If we fail to achieve the goals of those initiatives, our sales, margins and profitability may be adversely affected.

OUR CUSTOMERS ARE SUBJECT TO SIGNIFICANT FLUCTUATIONS AS A RESULT OF THE CYCLICAL NATURE OF THEIR INDUSTRIES AND THEIR SENSITIVITY TO GENERAL ECONOMIC CONDITIONS, WHICH COULD ADVERSELY AFFECT THEIR DEMAND FOR OUR PRODUCTS AND COULD, IN TURN, ADVERSELY AFFECT OUR SALES, MARGINS AND PROFITABILITY.

A substantial number of our customers are in the telecommunications and computer, and automotive electronics industries. Each of those industries is cyclical in nature, influenced by a combination of factors, including, among other things, periods of economic growth or recession, strength or weakness of the United States dollar, the strength of the automotive electronics and computer industries and the rate of construction of telecommunications infrastructure equipment.

The demand for our products is generally affected by macroeconomic fluctuations in the global economies in which we sell our products. The United States and other world markets have experienced an economic downturn in recent years, which had a significant negative impact on our customers' financial performance, which in turn has had a significant negative impact on our financial performance. The severity and duration of this downturn could cause additional adverse impacts on our financial performance. Future economic downturns, stagnant economies or global currency fluctuations could significantly affect our financial performance.

In addition, a disruption or downturn in the telecommunications and

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computer or automotive electronic industries could negatively impact demand for our products and adversely affect our sales, margins and profitability. For instance, bulk product sales into the undersea telecommunications market, which was our largest market segment for bulk products as recently as 2000, began to decline in the second half of 2001 and were minimal in 2002 due to the severe reduction in the number of new undersea fiber optic line installation projects throughout the world.

Our business is dependent on continued capital spending by the telecommunications and computer industries, and a decrease in capital spending for infrastructure and equipment could affect our revenue more than we currently expect. Our business could be exposed to unexpected or extended downturns in capital spending, which could adversely affect our sales, margins and profitability. In addition, a decrease in military, aerospace or defense-related spending could adversely affect our sales, margins and profitability.

THE AVAILABILITY OF COMPETITIVE SUBSTITUTE MATERIALS FOR BERYLLIUM-CONTAINING PRODUCTS MAY REDUCE OUR CUSTOMERS' DEMAND FOR THESE PRODUCTS AND ADVERSELY AFFECT OUR SALES, MARGINS AND PROFITABILITY.

In certain product applications, we compete with manufacturers of non-beryllium-containing products, including organic composites, metal alloys or composites, titanium and aluminum. Our customers may choose to use substitutes for beryllium-containing products in their products for a variety of reasons, including, among other things, the lower costs of those substitutes, the health and safety concerns relating to these products and the risk of litigation relating to beryllium-containing products. If our customers use substitutes for beryllium-containing products in their products, the demand for our products may decrease, which could adversely affect our sales, margins and profitability.

THERE ARE LIMITED SOURCES OF BERYLLIUM AND BERTRANDITE AND BERYL ORES, AND IF WE ARE UNABLE TO OBTAIN SUFFICIENT QUANTITIES OF THOSE MATERIALS, OUR SALES, MARGINS AND PROFITABILITY COULD BE ADVERSELY AFFECTED.

Over 50% of our sales in 2003 related to products that contain beryllium and beryllium alloys. Currently there are only three primary sources for beryllium and materials from which beryllium can be extracted: the United States government, sources in Kazakhstan and our bertrandite ore mine in Utah. We currently obtain beryllium and bertrandite and beryl ores from one or more of these sources. If we were unable to obtain a sufficient amount of beryllium from those sources, we would have to construct a new ore processing facility or make substantial improvements to our existing facilities, which would require significant capital expenditures and would not alleviate any supply shortage in the short term. In the event of a prolonged supply shortage of our access to beryllium or bertrandite and beryl ore, our sales, margins and profitability could be adversely affected.

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WE MAY NOT BE ABLE TO COMPLETE OUR ACQUISITION STRATEGY OR SUCCESSFULLY INTEGRATE ACQUIRED BUSINESSES.

Although we have not been an active acquiror in the past, we intend to pursue further growth through the acquisition of assets or companies involved in the engineered materials industry and routinely review acquisition opportunities. While we believe that there are available a number of potential acquisition candidates that would complement our businesses, we currently have no agreements, understandings or arrangements to acquire any specific business or material assets. We cannot predict whether we will be successful in pursuing any acquisition opportunities or what the consequences of any acquisition would be. Future acquisitions may involve the expenditure of significant funds and

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management time. Depending upon the nature, size and timing of future acquisitions, we may be required to raise additional financing, which may not be available to us on acceptable terms. Further, we may not be able to successfully integrate any acquired business with our existing businesses or recognize any expected advantages from any completed acquisition.

OUR OPERATIONS ARE CONDUCTED WORLDWIDE AND ARE SUBJECT TO THE RISKS ASSOCIATED WITH DOING BUSINESS OUTSIDE THE UNITED STATES.

We sell to customers outside of the United States from our United States and international operations. Shipments to customers outside of the United States accounted for approximately 31% of our sales in 2003, 28% in 2002 and 28% in 2001. We anticipate that international shipments will account for a significant portion of our sales for the foreseeable future. Revenue from non-United States operations (principally Europe and the Pacific Rim) amounted to approximately 22% of our sales in 2003, 19% in 2002 and 18% in 2001. There are a number of risks associated with international business activities, including:

- burdens to comply with multiple and potentially conflicting foreign laws and regulations, including export requirements, tariffs and other barriers, environmental health and safety requirements and unexpected changes in any of these factors;
- difficulty in obtaining export licenses from the United States government;
- political and economic instability and disruptions;
- potentially adverse tax consequences due to overlapping or differing tax structures; and
- fluctuations in currency exchange rates.

Any of these risks could adversely affect our sales, margins and profitability.

THE AVAILABILITY AND PRICES OF SOME RAW MATERIALS WE USE IN OUR OPERATIONS FLUCTUATE, WHICH CAN ADVERSELY AFFECT OUR SALES, MARGINS AND PROFITABILITY.

We manufacture engineered materials using various precious and non-precious metals, including gold, silver, palladium, platinum, copper and nickel. The availability of and prices for these raw materials are subject to volatility and are influenced by worldwide economic conditions, speculative action, world supply and demand balances, inventory levels, availability of substitute metals, the United States dollar exchange rate, production costs of United States and foreign competitors, anticipated or perceived shortages and other factors. Decreased availability and fluctuating prices of precious and non-precious metals that we use in our manufacturing may adversely affect our sales, margins and profitability. For example, prices for copper have recently reached eight-year highs due to, among other things, increased Chinese demand. Further, we maintain some precious metals on a consigned inventory basis. The owners of the precious metals charge a fee that fluctuates based on the market price of those metals and other factors. A significant increase in the market price of precious metals or the consignment fee could increase our financing costs, which could adversely affect our profitability.

BECAUSE WE EXPERIENCE SEASONAL FLUCTUATIONS IN OUR SALES, OUR QUARTERLY RESULTS WILL FLUCTUATE, AND OUR ANNUAL PERFORMANCE WILL BE AFFECTED BY THOSE FLUCTUATIONS.

Because many of our European and automotive electronics customers slow or cease operations during the summer months, we have generally had weaker demand



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in the quarters ending in September compared to the

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quarters ending in March, June and December. We expect this seasonal pattern to continue, which causes our quarterly results to fluctuate. If our revenue during any quarter were to fall below the expectations of investors or securities analysts, our share price could decline, perhaps significantly. Unfavorable economic conditions, lower than normal levels of demand and other occurrences in any of the other quarters could also adversely affect our operating results.

NATURAL DISASTERS, EQUIPMENT FAILURES, WORK STOPPAGES AND OTHER UNEXPECTED EVENTS MAY LEAD OUR CUSTOMERS TO CURTAIL PRODUCTION OR SHUT DOWN THEIR OPERATIONS.

Our customers' operations are subject to conditions beyond their control, including raw material shortages, natural disasters, interruptions in electrical power or other energy services, equipment failures, work stoppages due to strikes or lockouts, particularly those affecting the automotive industry, and other unexpected events. Any of those events could also affect other suppliers to our customers. In either case, those events could cause our customers to curtail production or to shut down a portion or all of their operations, which could reduce their demand for our products. Decreased demand for our products could adversely affect our sales, margins and profitability.

UNEXPECTED EVENTS AND NATURAL DISASTERS AT OUR MINE COULD INCREASE THE COST OF OPERATING OUR BUSINESS.

A portion of our production costs at our mine are fixed regardless of current operating levels. Our operating levels are subject to conditions beyond our control that may increase the cost of mining for varying lengths of time. These conditions include, among other things, fire, natural disasters, pit wall failures and ore processing changes. Our mining operations also involve the handling and production of potentially explosive materials. It is possible that an explosion could result in death and injuries to employees and others and material property damage to us and third parties. Any explosion could expose us to adverse publicity or liability for damages and materially adversely affect our operations. These conditions could adversely affect our sales, margins and profitability.

EQUIPMENT FAILURES AND OTHER UNEXPECTED EVENTS AT OUR FACILITIES MAY LEAD TO MANUFACTURING CURTAILMENTS OR SHUTDOWNS.

The manufacturing processes that take place in our mining operation, as well as in our manufacturing facilities, depend on critical pieces of equipment. This equipment may, on occasion, be out of service because of unanticipated failure, and some equipment is not readily available or replaceable. In addition to equipment failures, our facilities are also subject to the risk of loss due to unanticipated events such as fires, explosions or other disasters. Material plant shutdowns or reductions in operations could adversely affect our sales, margins and profitability. Further, remediation of any interruption in production capability may require us to make large capital expenditures that may have a negative effect on our profitability and cash flows. Our business interruption insurance may not cover all of the lost revenues associated with interruptions in our manufacturing capabilities. Further, longer-term business disruptions could result in a loss of customers, which could adversely affect our future sales, margins and profitability.

MANY OF OUR MANUFACTURING FACILITIES ARE DEPENDENT ON SINGLE SOURCE ENERGY SUPPLIERS, AND INTERRUPTION IN ENERGY SERVICES MAY ADVERSELY EFFECT OUR SALES, MARGINS AND PROFITABILITY.

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Many of our manufacturing facilities depend on one source for electric power and for natural gas. For example, Utah Power is the sole supplier of electric power to the processing facility for our mining operations in Utah. A significant interruption in service from our energy suppliers due to equipment failures, terrorism or any other cause may result in substantial losses that are not fully covered by our business interruption insurance. While we have some long-term contracts with energy suppliers, supplies of energy may be curtailed during periods of peak usage. Any substantial unmitigated interruption of our operations due to these conditions could adversely affect our sales, margins and profitability.

IF THE PRICE OF ELECTRICAL POWER, FUEL OR OTHER ENERGY SOURCES INCREASES, OUR OPERATING EXPENSES COULD INCREASE SIGNIFICANTLY.

Our operating expenses are sensitive to changes in electricity prices and fuel prices, including natural gas prices. Prices for electricity and natural gas can fluctuate widely with availability and demand levels from

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other users. During periods of peak usage, supplies of energy may be curtailed, and we may not be able to purchase at historical market rates. While we have some long-term contracts with energy suppliers, we are exposed to fluctuations in energy costs that can affect our production costs. Although we enter into forward fixed price supply contracts for natural gas and electricity for use in our operations, those contracts are of limited duration and do not cover all of our fuel or electricity needs. Price increases in fuel and electricity costs could cause our profitability to decrease significantly.

WE HAVE A LIMITED NUMBER OF MANUFACTURING FACILITIES, AND DAMAGE TO THOSE FACILITIES COULD INTERRUPT OUR OPERATIONS, INCREASE OUR COSTS OF DOING BUSINESS AND ADVERSELY AFFECT OUR ABILITY TO DELIVER OUR PRODUCTS ON A TIMELY BASIS.

We have 16 manufacturing facilities and one mining operation. Some of our facilities are interdependent. For instance, our manufacturing facility in Elmore, Ohio relies on our mining operation for its supply of beryllium hydroxide used in production of most of its beryllium-containing materials. The destruction or closure of any of our manufacturing facilities or our mine for a significant period of time as a result of fire, explosion, act of war or terrorism or other natural disaster or unexpected event may interrupt our manufacturing capabilities, increase our capital expenditures and our costs of doing business and impair our ability to deliver our products on a timely basis. In such an event, we may need to resort to an alternative source of manufacturing or to delay production, which could increase our costs of doing business. Our property damage and business interruption insurance may not cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all. Any such delays or increased costs could adversely affect our sales, margins and profitability.

THE MARKETS FOR OUR PRODUCTS ARE EXPERIENCING RAPID CHANGES IN TECHNOLOGY.

We operate in markets characterized by rapidly changing technology and evolving customer specifications and industry standards. New products may quickly render an existing product obsolete and unmarketable. Our growth and future results of operations depend in part upon our ability to enhance existing products and introduce newly developed products on a timely basis that conform to prevailing and evolving industry standards, meet or exceed technological advances in the marketplace, meet changing customer specifications, achieve market acceptance and respond to our competitors' products.

The process of developing new products can be technologically challenging

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and requires the accurate anticipation of technological and market trends. We may not be able to introduce new products successfully or do so on a timely basis. If we fail to develop new products that are appealing to our customers or fail to develop products on time and within budgeted amounts, we may be unable to recover our significant research and development costs, which could adversely affect our sales, margins and profitability.

IF WE CANNOT DELIVER PRODUCTS THAT MEET OUR CUSTOMER-DEFINED SPECIFICATIONS IN A PROFITABLE AND TIMELY MANNER, OUR SALES, MARGINS AND PROFITABILITY MAY BE ADVERSELY EFFECTED.

Our ability to generate future sales depends upon our ability to manufacture and supply products that meet customer-defined specifications on a timely basis. If we incur higher costs than anticipated when we price our products, our gross margins on those products will decrease, and they may not be as profitable as expected. In addition, if we are unable to deliver our products as required by the terms of our product sales contracts, our customers may cancel those contracts. In that event, we might not recover costs that we incurred for research and development, production and otherwise, and we may incur additional costs as contractual penalties. If we fail to meet a delivery deadline, or a customer determines that the products we deliver do not meet its specifications, we may have to reduce the price we can charge for our products, or we may be liable to pay damages to the customer. Failing to successfully manage these risks could adversely affect our sales, margins and profitability.

OUR LENGTHY AND VARIABLE SALES AND DEVELOPMENT CYCLE MAKES IT DIFFICULT FOR US TO PREDICT IF AND WHEN A SALE CAN BE MADE AND MAY ADVERSELY AFFECT OUR SALES, MARGINS AND PROFITABILITY.

Our sales and development cycle, which is the period from the generation of a sales lead or new product idea through the development of the product and the recording of sales, could be as long as several years,

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making it very difficult to forecast sales and results of operations. Our inability to accurately predict the timing and magnitude of sales of our products could affect our ability to meet our customers' product delivery requirements or cause our results of operations to suffer if we incur expenses in a particular period that do not translate into sales during that period, or at all. In addition, these failures would make it difficult to plan future capital expenditure needs and could cause us to fail to meet our cash flow requirements. These problems could adversely affect our sales, margins and profitability.

OUR PRODUCTS ARE DEPLOYED IN COMPLEX APPLICATIONS AND MAY HAVE ERRORS OR DEFECTS THAT WE FIND ONLY AFTER DEPLOYMENT.

Our products are highly complex, designed to be deployed in complicated applications and may contain undetected defects, errors or failures. Although our products are generally tested during manufacturing, prior to deployment, they can only be fully tested when deployed in specific applications. Consequently, our customers may discover errors after the products have been deployed. The occurrence of any defects, errors or failures could result in installation delays, product returns, termination of contracts with our customers, diversion of our resources, increased service and warranty costs and other losses to us or to our customers or end users. Any of these occurrences could also result in the loss of or delay in market acceptance of our products and could damage our reputation, which could adversely affect our sales, margins and profitability.

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FUTURE TERRORIST ATTACKS AND OTHER ACTS OF VIOLENCE OR WAR MAY DIRECTLY IMPACT OUR SALES, MARGINS AND PROFITABILITY.

Future terrorist attacks or other acts of violence or war may directly impact our physical facilities. In addition, future terrorist attacks, related armed conflicts or prolonged or increased tensions in the Middle East or other regions of the world could cause consumer confidence and spending to decrease, thereby decreasing demand for consumer goods that contain our products. Further, when United States forces are involved in active hostilities or large-scale deployments, defense spending tends to focus more on meeting the physical needs of the troops, and planned expenditures on weapons and other systems incorporating our products may be reduced or deferred. Any of these occurrences could also increase volatility in the United States and worldwide financial markets, which could adversely affect our sales, margins and profitability.

OUR EXPENDITURES FOR POST-RETIREMENT PENSION OBLIGATIONS COULD BE MATERIALLY HIGHER THAN WE HAVE PREDICTED IF OUR UNDERLYING ASSUMPTIONS PROVE TO BE INCORRECT.

We provide defined benefit pension plans to eligible employees. Our pension expense and our required contributions to our pension plans are directly affected by the value of plan assets, the projected rate of return on plan assets, the actual rate of return on plan assets and the actuarial assumptions we use to measure our defined benefit pension plan obligations, including the rate at which future obligations are discounted to a present value, or the discount rate. For pension accounting purposes, we assumed a 9.0% rate of return on pension plan assets. We decreased the discount rate to 6.375% at December 31, 2003 from 6.75% at December 31, 2002, 7.125% at December 31, 2001 and 8.0% at December 31, 2000.

Lower investment performance of our pension plan assets resulting from a decline in the stock market could significantly increase the deficit position of our plans. Should the assets earn an average return less than 9.0% over time, it is likely that future pension expenses would increase. Investment earnings in excess of 9.0% may reduce future pension expenses. The actual return on our plan assets was 19.7% in 2003 and the ten-year average return as of year-end 2003 was 7.9%.

We establish the discount rate used to determine the present value of the projected and accumulated benefit obligation at the end of each year based upon the available market rates for high quality, fixed income investments. An increase to the discount rate would reduce the future pension expense and conversely, a lower discount rate would raise the future pension expense. We estimate that the change in the discount rate and other actuarial assumptions and valuations combined with the amortization of prior differences between actual and expected results will result in a \$1.0 million increase in the net expense from our pension plan in 2004 over 2003 with the 2005 expense estimated to be an additional \$1.1 million higher than the 2004 expense. If the expected rate of return assumption was changed by 50 basis points (0.50%) and all other pension assumptions remained the same, the 2004 projected expense would change by approximately \$0.5 million. If the December 31, 2003 discount rate were reduced by 25 basis points (0.25%) and all other

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pension assumptions remained the same, the 2004 pension expense would increase by approximately an additional \$0.3 million.

Based on current guidelines, assumptions and estimates, including stock market prices and interest rates, we anticipate that we may be required to make a cash contribution of approximately \$1.7 million to our pension plan in 2004. If our current assumptions and estimates are not correct, a contribution in

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years beyond 2004 may be greater than the projected 2004 contribution.

In addition, we cannot predict whether changing market or economic conditions, regulatory changes or other factors will increase our pension expenses or our funding obligations, diverting funds we would otherwise apply to other uses.

OUR EXPENDITURES FOR POST-RETIREMENT HEALTH BENEFITS COULD BE MATERIALLY HIGHER THAN WE HAVE PREDICTED IF OUR UNDERLYING ASSUMPTIONS PROVE TO BE INCORRECT.

We also provide post-retirement health benefits to eligible employees. Our retiree health expense is directly affected by the assumptions we use to measure our retiree health plan obligations, including the assumed rate at which health care costs will increase and the discount rate used to calculate future obligations. For retiree health accounting purposes, we decreased the assumed rate at which health care costs will increase for the next year to 8.0% at December 31, 2003 from 9.0% at December 31, 2002. In addition, we have assumed that this health care cost increase trend rate will decline to 6.0% by 2008. We have used the same discount rates for our retiree health plans that we use for our pension plan accounting.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A 1.0% increase in assumed health care cost trend rates would have increased the post-employment benefits included among the liabilities in our balance sheet by \$2.4 million at December 31, 2003, while a 1.0% decrease in assumed health care cost trend rates would have decreased those benefits by \$2.1 million at December 31, 2003.

In addition, we cannot predict whether changing market or economic conditions, regulatory changes or other factors will further increase our retiree health care expenses or obligations, diverting funds we would otherwise apply to other uses.

OUR TAX POSITION MAY CREATE VOLATILITY IN OUR NET INCOME, AND OUR ABILITY TO USE OUR NET OPERATING LOSS CARRYFORWARDS AND ALTERNATIVE MINIMUM TAX CREDITS MAY BE IMPAIRED.

At December 31, 2003, we had a tax deferred asset of approximately \$10.6 million relating to alternative minimum tax credits and approximately \$32.2 million of net operating loss carryforwards. We recently evaluated all of our deferred tax assets for impairment due to our recent operating losses and recorded valuation allowances of \$7.2 million in 2003, with \$5.3 million charged to expense and \$1.9 million charged to other comprehensive income, and \$27.2 million in 2002, with \$19.9 million charged to expense and \$7.3 million charged to other comprehensive income. If we generate a domestic pre-tax profit in subsequent periods, the valuation allowance will be reversed against the federal tax expense in the current period, resulting in higher net income and net income per share for that period. If we achieve and sustain profitability, significant portions or all of the remaining valuation allowance may be reversed back to income. If we generate domestic pre-tax losses in subsequent periods, a federal tax benefit will not be recorded and the valuation allowance recorded against the net deferred tax assets will increase. This would result in a larger net loss and net loss per share for the period versus a comparable period when a favorable tax benefit was recorded. If these factors were to occur and our operating results were affected, it would impair our ability to use our net operating loss carryforwards and alternative minimum tax credits.

A MAJOR PORTION OF OUR BANK DEBT CONSISTS OF VARIABLE-RATE OBLIGATIONS, WHICH SUBJECTS US TO INTEREST RATE FLUCTUATIONS.

Our credit facilities are secured by our working capital, and we have other term loans secured by plant, property and equipment, and, in one instance, some

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export accounts receivable. Our working capital line-of-credit and term loans are variable-rate obligations, which expose us to interest rate risks. If interest rates increase, our debt service obligations on our variable-rate indebtedness would increase even if the amount

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borrowed remained the same, resulting in a decrease in our net income. We have developed a hedging program to manage the risks associated with interest rate fluctuations, but our program may not effectively eliminate all of the financial exposure associated with interest rate fluctuations. We currently have instruments in place that have the effect of fixing the interest rate on a portion of our outstanding debt for various time periods up to five years.

SHOULD WE BE UNABLE TO ACCESS THE FINANCIAL MARKETS ON FAVORABLE TERMS, OUR LIQUIDITY, BUSINESSES AND RESULTS OF OPERATIONS COULD BE ADVERSELY AFFECTED.

The inability to raise capital on favorable terms, particularly during times of uncertainty in the financial markets, could impact our ability to sustain and grow our business and would increase our capital costs. We rely on access to financial markets as a significant source of liquidity for capital requirements not satisfied by cash on hand or operating cash flows. Our access to the financial markets could be adversely impacted by various factors, including:

- changes in credit markets that reduce available credit or the ability to renew existing liquidity facilities on acceptable terms;
- a deterioration of our credit or a reduction in our credit ratings or the credit ratings of our subsidiaries;
- extreme volatility in our markets that increases margin or credit requirements;
- a material breakdown in our risk management procedures;
- the collateral pledge of substantially all of our assets in connection with our existing indebtedness, which limits our flexibility in raising additional capital; and
- the occurrence of material adverse changes in our business that restrict our ability to access our liquidity facilities.

A lack of necessary capital and cash reserves could adversely impact our credit ratings.

THE TERMS OF OUR INDEBTEDNESS MAY RESTRICT OUR ABILITY TO PURSUE OUR GROWTH AND ACQUISITION STRATEGIES.

The terms of our credit facilities restrict our ability to, among other things, borrow and make investments, acquire other businesses, make capital expenditures and declare dividends on our common shares. In addition, the terms of our indebtedness require us to satisfy specified financial covenants. Our ability to comply with these provisions depends, in part, on factors over which we may have no control. These restrictions could adversely affect our ability to pursue our growth and acquisition strategies. If we breach any of our financial covenants or fail to make scheduled payments, our creditors could declare all amounts owed to them to be immediately due and payable, and we may not have sufficient available funds to repay the amounts due, in which case we may be required to seek legal protection from our creditors.

WE ARE SUBJECT TO FLUCTUATIONS IN CURRENCY EXCHANGE RATES, WHICH CAN ADVERSELY

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IMPACT OUR SALES, MARGINS AND PROFITABILITY.

A significant portion of our sales is conducted in international markets and priced in currencies other than the United States dollar. Significant fluctuations in currency values relative to the United States dollar may affect our financial performance and adversely affect our sales, margins and profitability. While we may hedge our currency transactions to mitigate the impact of currency price volatility on our earnings, any hedging activities may not be successful.

OUR HOLDING COMPANY STRUCTURE CAUSES US TO RELY ON FUNDS FROM OUR SUBSIDIARIES.

We are a holding company and conduct substantially all our operations through our subsidiaries. As a holding company, we are dependent upon dividends or other intercompany transfers of funds from our subsidiaries. The payment of dividends and other payments to us by our subsidiaries may be restricted by, among other things, applicable corporate and other laws and regulations, agreements of the subsidiaries and the terms of our current and future indebtedness.

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RISKS RELATED TO THIS OFFERING

OUR SHARE PRICE IS VOLATILE, AND YOU MAY NOT BE ABLE TO RESELL YOUR COMMON SHARES AT OR ABOVE THE OFFERING PRICE.

The market price and trading volume of our common shares has been subject to volatility, and this trend may continue. In particular, trading volume historically has been low, and the market price of our common shares has increased significantly in recent months. The value of our common shares may decline regardless of our operating performance or prospects. Factors affecting our market price include:

- our perceived prospects;
- variations in our operating results and whether we have achieved our key business targets;
- the limited number of our common shares available for purchase or sale in the public markets;
- sales or purchases of large blocks of our common shares;
- changes in, or our failure to meet, our earnings estimates;
- changes in securities analysts' ratings and recommendations;
- differences between our reported results and those expected by investors and securities analysts;
- announcements of new contracts by us or our competitors;
- market reaction to any acquisitions, joint ventures or strategic investments announced by us or our competitors;
- developments in the financial markets; and
- general economic, political or stock market conditions.

The general economic, political and stock market conditions that may affect the

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market price of our common shares are beyond our control. The market price of our common shares at any particular time may not remain the market price in the future.

OUR ABILITY TO ISSUE PREFERRED STOCK IN THE FUTURE COULD ADVERSELY AFFECT THE RIGHTS OF HOLDERS OF OUR COMMON SHARES.

Our board of directors is authorized, without shareholder approval, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions granted to or imposed upon the preferred stock, including voting rights, dividend rights, conversion rights, terms of redemption, liquidation preference, sinking fund terms and the number of shares constituting any series or the designation of a series. Our board of directors can, without shareholder approval, issue preferred stock with voting and conversion rights that could adversely affect the voting power of the holders of our common shares. Any preferred stock issued would also rank senior to our common shares as to rights upon liquidation, winding-up or dissolution.

WE DO NOT ANTICIPATE DECLARING ANY CASH DIVIDENDS ON OUR COMMON SHARES.

We have no intention to declare dividends on our common shares in the near term. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business, and our ability to pay dividends is restricted by the terms of our credit facilities.

THE OHIO TAKEOVER STATUTES, OUR CONSTITUENT DOCUMENTS AND RIGHTS PLAN COULD DETER, DELAY OR PREVENT A THIRD PARTY FROM ACQUIRING US, WHICH COULD DEPRIVE YOU OF AN OPPORTUNITY TO OBTAIN A TAKEOVER PREMIUM FOR OUR COMMON SHARES.

We are subject to the Ohio statutes relating to control share acquisitions, which restrict the ability of an acquiror to acquire a significant amount of our outstanding common shares without shareholder approval, as well as Ohio's merger moratorium statute, which restricts the ability of certain interested shareholders to effect transactions involving us or our assets. Our articles of incorporation provide that our board of directors,

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without shareholder approval, may issue up to 5,000,000 shares of preferred stock, which, if convertible in common shares, could have the effect of delaying, deferring or preventing a change in control of our company. Our articles of incorporation also restrict some transactions with related parties, which could also have the affect of delaying, deferring or preventing a change in control of our company. In addition, we have a shareholder rights plan that under certain circumstances would significantly impair the ability of third parties to acquire control of us without prior approval of our board of directors. Together, these provisions may discourage transactions that otherwise could provide for the payment of a premium over prevailing market prices for our common shares and could also limit the price that investor may be willing to pay in the future for our common shares.

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### FORWARD-LOOKING STATEMENTS

All statements set forth or incorporated by reference in this prospectus that are not historical in nature are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We have attempted to identify forward-looking statements by using such words as "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "plans," "potential," "should" or "will" or other similar



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expressions. These forward-looking statements, which are subject to risks and uncertainties, and assumptions about us, may include, among other things, projections of our future financial performance, our anticipated growth strategies and anticipated trends in our industry, including potential growth opportunities, and the effects of litigation and future regulation. These statements are only predictions based on our current expectations and projections about future events. Because these forward-looking statements involve risks and uncertainties, you should be aware that there are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by these forward-looking statements, including, but not limited to:

- health issues, litigation and regulation relating to mining bertrandite ore and producing and using beryllium-containing materials;
- our ability to achieve and sustain profitability;
- significant cyclical fluctuations in our customers' businesses;
- the availability of competitive substitute materials for beryllium-containing materials;
- our ability to obtain beryllium from limited sources;
- our ability to complete and integrate acquisitions successfully;
- risks associated with our international operations;
- the availability and prices of raw materials;
- seasonal fluctuations in our net sales;
- natural disasters, equipment failures, interruptions in energy supplies and other unexpected events that may affect our business or our customers' businesses;
- increases in energy costs;
- rapid changes in technology, which may make our existing products obsolete;
- our ability to deliver products that are free of defects and meet our customers' specifications;
- risks associated with our lengthy sales and development cycle;
- risks associated with terrorists attacks;
- risks associated with our pension and retiree health obligations;
- risks associated with our tax position;
- risks associated with our indebtedness and our ability to access the financial markets on favorable terms;
- fluctuations in currency exchange rates; and
- our reliance on funds from our subsidiaries.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee our future results, level of

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activity, performance or achievement. Further, neither we nor any other person assumes responsibility for the accuracy and completeness of these statements. We disclaim any obligation to update any of the forward-looking statements after the date of this prospectus or to conform these statements to actual results. You should not place undue reliance on forward-looking statements contained in or incorporated by reference into this prospectus.

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### USE OF PROCEEDS

We estimate the net proceeds to us of this offering to be approximately \$ million, based upon the last reported sale price of our common shares on , 2004 of \$ per share, after deducting the estimated expenses related to this offering and the portion of the underwriting discount payable by us. We will not receive any proceeds from the sale of common shares by the selling shareholders in this offering.

We intend to use the net proceeds from this offering to repay a portion of the amounts outstanding under the credit facilities that are part of the refinancing we completed in December 2003. Any remaining net proceeds will be used for working capital and general corporate purposes, including capital expenditures, acquisitions of businesses or assets and investments. We used the proceeds from the refinancing to retire existing debt and terminate an existing key off-balance sheet obligation through the purchase of certain leased assets. Pending final use, we may invest the net proceeds of this offering in short-term, investment grade, interest-bearing securities or guaranteed obligations of the United States or its agencies.

Our current credit facilities will mature in 2008 and are described in the notes to the consolidated financial statements included elsewhere in this document. We have not yet determined which credit facilities or combination of credit facilities we will repay with a portion of the net proceeds of this offering. These facilities are variable rate obligations, and as of March 29, 2004, we had \$85.6 million outstanding under these facilities with a weighted average interest rate of 8.33%.

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### CAPITALIZATION

The following table sets forth our consolidated capitalization as of December 31, 2003 on an actual basis and on an "As Adjusted" basis. The "As Adjusted" basis reflects our sale of 1,700,000 common shares at an assumed offering price of \$ per share, the last reported sale price of our common shares on , 2004, after deducting underwriting discounts and commissions and the estimated offering expenses payable by us. The common shares to be outstanding after this offering exclude 272,250 common shares we will issue if the underwriters exercise their over-allotment option and 1,573,868 common shares reserved for issuance upon the exercise of options granted under our equity compensation plans.

You should read this table together with "Selected Consolidated Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

DECEMBER 31, 2003

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	----- ACTUAL -----	AS ADJUSTED -----
	(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA) (UNAUDITED)	
Cash.....	\$ 5,062	\$
	=====	=====
Debt		
Short-term debt(1).....	13,387	
Long-term debt(1).....	85,756	
	-----	-----
Total debt.....	\$ 99,143	\$
	=====	=====
Shareholders' equity		
Preferred stock, no par value; 5,000,000 shares authorized; none issued or outstanding.....	--	--
Common shares, no par value; 60,000,000 shares authorized; 22,919,518 shares issued, as adjusted.....	93,336	
Common share warrants.....	1,616	--
Retained income.....	181,156	
Common shares held in treasury, 6,294,128; as adjusted.....	(105,633)	
Other comprehensive income (loss).....	(16,794)	(16,794)
Other equity transactions.....	(108)	(108)
	-----	-----
Total shareholders' equity.....	153,573	
	-----	-----
Total Capitalization.....	\$ 252,716	\$
	=====	=====

-----

(1) As described in "Use of Proceeds," we intend to use a portion of the net proceeds from this offering to repay a portion of the amounts outstanding under our credit facilities.

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MARKET PRICE OF COMMON SHARES AND DIVIDENDS

Our common shares are traded on the New York Stock Exchange under the symbol "BW." The following table shows for the periods indicated the range of the high and low intra-day sales prices per common share as reported by the New York Stock Exchange.

	PRICE RANGE OF COMMON SHARES -----	
	HIGH	LOW
	-----	-----
YEAR ENDED DECEMBER 31, 2002		
First Quarter.....	\$14.25	\$10.00
Second Quarter.....	13.61	10.90
Third Quarter.....	12.40	6.75
Fourth Quarter.....	8.08	4.09

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YEAR ENDED DECEMBER 31, 2003

First Quarter.....	\$ 6.20	\$ 4.72
Second Quarter.....	8.95	4.85
Third Quarter.....	10.49	7.56
Fourth Quarter.....	15.75	10.29

YEAR ENDED DECEMBER 31, 2004

First Quarter (through April 1, 2004).....	\$21.75	\$14.95
--	---------	---------

On April 1, 2004, the closing price of our common shares as reported by the New York Stock Exchange was \$20.98 per share. We did not pay any dividends in 2002 or 2003. We have no current intention to declare dividends on our common shares in the near term. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business, and our ability to pay dividends is restricted by the terms of our credit facilities.

### DILUTION

Purchasers of our common shares offered by this prospectus will suffer immediate and substantial dilution in the net tangible book value per share. Our net tangible book value as of December 31, 2003 was approximately \$133.6 million, or approximately \$8.04 per common share. Net tangible book value per share represents the amount of total tangible assets less total liabilities, divided by the number of our common shares outstanding as of December 31, 2003.

Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of our common shares in this offering and the net tangible book value per share of our common shares immediately after this offering. After giving effect to our sale of 1,700,000 common shares in this offering at an assumed offering price of \$ \_\_\_\_\_ per share, the last reported sale price of our common shares on the New York Stock Exchange on \_\_\_\_\_, 2004, and after deduction of the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our net tangible book value as of December 31, 2003 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in net tangible book value of \$ \_\_\_\_\_ per common share to existing shareholders and an immediate dilution of \$ \_\_\_\_\_ per common share to purchasers of common shares in this offering.

Assumed public offering price per share.....	\$ _____
Net tangible book value per share as of December 31, 2003...	8.04
Increase in net tangible book value.....	
Net tangible book value per share as of December 31, 2003 after giving effect to this offering.....	
Dilution in net tangible book value per share to new investors.....	

The foregoing does not take into account further dilution to new investors that could occur upon the issuance of additional common shares. The above discussion excludes 1,573,868 common shares reserved for issuance upon the exercise of options under our equity compensation plans.

### SELECTED CONSOLIDATED FINANCIAL DATA (Dollars in thousands, except per share data)

The tables below set forth selected consolidated financial data for the years ended December 31, 1999, 2000, 2001, 2002 and 2003. We derived the

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selected consolidated financial data for the years ended and as of December 31, 1999, 2000, 2001, 2002 and 2003 from our audited consolidated financial statements.

Prospective investors should read the selected consolidated financial data in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus.

	YEAR ENDED DECEMBER 31,				
	1999	2000	2001	2002	2003
STATEMENT OF OPERATIONS DATA:					
Net sales.....	\$455,707	\$563,690	\$472,569	\$372,829	\$401,046
Cost of sales.....	363,773	444,951	404,574	324,932	328,008
Gross profit.....	91,934	118,739	67,995	47,897	73,038
Operating profit (loss).....	10,558	22,986	(14,069)	(22,845)	(9,340)
Interest expense.....	4,173	4,652	3,327	3,010	3,355
Income (loss) from continuing operations before income taxes.....	6,385	18,334	(17,396)	(25,855)	(12,695)
Net income (loss).....	\$ 6,439	\$ 14,165	\$ (10,274)	\$ (35,604)	\$ (13,226)
Net income (loss) per common share:					
Basic.....	\$ 0.40	\$ 0.87	\$ (0.62)	\$ (2.15)	\$ (0.80)
Diluted.....	\$ 0.40	\$ 0.86	\$ (0.62)	\$ (2.15)	\$ (0.80)
Dividends per common share.....	\$ 0.48	\$ 0.48	\$ 0.24	--	--
Depreciation and amortization.....	\$ 27,037	\$ 22,664	\$ 21,609	\$ 20,640	\$ 20,731
Capital expenditures.....	\$ 16,758	\$ 21,306	\$ 23,130	\$ 5,248	\$ 6,162
Mine development expenditures.....	\$ 288	\$ 332	\$ 154	\$ 166	\$ 157

	AT DECEMBER 31,				
	1999	2000	2001	2002	2003
BALANCE SHEET DATA:					
Working capital.....	\$124,831	\$143,387	\$110,894	\$ 82,645	\$ 85,141
Property and equipment					
At cost.....	\$440,234	\$449,697	\$469,663	\$ 476,283	\$ 535,421
Cost less depreciation and amortization.....	\$170,939	\$170,460	\$171,296	\$ 152,544	\$ 190,846
Total assets.....	\$428,406	\$452,506	\$403,653	\$ 334,879	\$ 371,616
Other long-term liabilities.....	\$ 53,837	\$ 55,454	\$ 62,473	\$ 65,977	\$ 64,097
Long-term debt.....	\$ 42,305	\$ 43,305	\$ 47,251	\$ 36,219	\$ 85,756
Shareholders' equity.....	\$220,638	\$229,907	\$214,350	\$ 159,094	\$ 153,573

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The following discussion and analysis should be read in conjunction with "Selected Consolidated Financial Data" and our consolidated financial statements and related notes included elsewhere in this prospectus. Portions of this document that are not statements of historical or current fact are forward-looking statements. This discussion contains forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. The cautionary statements made in this prospectus should be read as applying to all related forward-looking statements wherever they appear in this prospectus. Our actual results could differ materially from those anticipated in the forward-looking statements. Factors that could cause our actual results to differ materially from those anticipated include those discussed in "Risk Factors," as well as those discussed elsewhere. See "Risk Factors" and "Forward-Looking Statements."

### OVERVIEW

We are an integrated producer of engineered materials used in a variety of electrical, electronic, thermal and structural applications. After achieving record sales of \$563.7 million in 2000, our sales declined rapidly over the next two years mainly as a result of the collapse of the global telecommunications and computer market. In light of the lower sales volumes, beginning in 2001, we implemented various financial and operational initiatives to sustain and improve cash flow and to position ourselves to return to profitability by broadening our market base, increasing margins, controlling costs, improving working capital utilization and reducing debt.

Sales rebounded in 2003, growing \$28.2 million over 2002, due in part to our efforts to broaden our revenue base by developing new products and expanding our market penetration. Gross margin in turn grew over \$25.0 million in 2003 while the operating loss was reduced by \$13.5 million. This leverage resulted from a combination of an improved product mix, i.e., an increase in sales of higher margin products, manufacturing efficiencies, cost control and other factors. The manufacturing efficiencies helped to improve the margin contribution rate and the manpower and other cost saving initiatives initially implemented beginning in mid-2001 reduced the 2003 manufacturing overhead by \$25.8 million from the 2001 level. Selling, general and administrative expenses and research and development expenses in 2003 were down an additional \$8.6 million from the annual expense two years earlier. Cost control programs continued during 2003, and manpower levels by year-end 2003 were 27% lower than the peak level in 2001.

Working capital utilization improved through a \$6.9 million reduction in inventories in 2003 after a \$14.8 million reduction in 2002. Buffer inventories have been deployed to allow for faster customer response times and inventory turns have increased over this time period as well. The accounts receivable balance increased in 2003 due to the higher sales, but the average collection period was shorter than at the end of the prior year.

The working capital, margin and cost improvements allowed us to reduce our total outstanding debt, key leases and other off-balance sheet obligations by \$24.8 million in 2003 and \$36.2 million in 2002. In addition, late in the fourth quarter 2003, we refinanced our debt on a long-term basis. The new structure provides increased borrowing capacity and extended maturity dates while lowering the projected financing costs and required cash payments in 2004.

### RESULTS OF OPERATIONS

2003	2002	2001
-----	-----	-----

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(DOLLARS IN MILLIONS,  
EXCEPT PER SHARE DATA)

Net sales.....	\$401.0	\$372.8	\$472.6
Operating profit (loss).....	(9.3)	(22.8)	(14.1)
Earnings (loss) per share.....	(0.80)	(2.15)	(0.62)

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Sales of \$401.0 million in 2003 grew 8% over sales of \$372.8 million in 2002 after having declined 21% in 2002 from sales in 2001. Approximately half of the sales increase in 2003 was due to higher precious metal prices and favorable foreign currency translation effect. For the year, domestic sales grew 3%, and international sales grew 19% as we aggressively pursued marketing opportunities overseas. Sales in each quarter of 2003 were higher than the comparable quarter in 2002. The lower sales in 2002 as compared to 2001 were caused mainly by the significant decline in demand from the telecommunications and computer market that began in the second quarter 2001 and continued throughout that year. Demand for isolated applications from this key market, which accounted for 35% of sales in 2003, compared to 30% of sales in 2002 and 42% of sales in 2001, increased in the early portion of 2003 while the overall market demand started to show some improvement in the fourth quarter. Sales into the automotive market, after improving slightly in 2002 over 2001, declined slightly in 2003. Sales for defense applications remained strong during this time period, as did sales into the optical media and magnetic head markets. Demand from other key markets, including industrial components and plastic tooling, remained weak through the majority of 2003, although certain sectors started to improve at the end of the year. A portion of the sales growth in 2003 was attributable to market share gains and new product development. Sales from both reportable segments -- the Metal Systems Group and the Microelectronics Group -- improved in 2003 after declining in 2002.

The sales order backlog entering 2004 was \$65.5 million compared to \$57.7 million at the beginning of 2003 and \$91.1 million at the beginning of 2002. Sales order entry rates improved in the fourth quarter 2003 and early in 2004. Lead times continued to be very short, and we have made improvements in our manufacturing processes and inventory positions to more quickly respond to our customers' needs.

The gross margin of \$73.0 million was 18% of sales in 2003 compared to a gross margin of \$47.9 million, or 13% of sales, in 2002 and \$68.0 million, or 14% of sales, in 2001. Approximately 89% of the sales increase in 2003 flowed through to gross margin. In addition to the increased margin contribution due to the higher sales, gross margin improved due to a favorable product mix, operational improvements on the manufacturing floor, foreign currency translation benefits and manufacturing overhead cost reductions. Margins from both segments improved in 2003 over 2002. The decline in gross margin in 2002 from 2001 was caused by the significant decline in sales volumes offset in part by a favorable product mix and a reduction in manufacturing overhead and inventory valuation adjustments.

Selling, general and administrative expenses, or SG&A, were \$68.8 million, or 17% of sales, in 2003; \$61.3 million, or 16% of sales in 2002; and \$75.3 million, or 16% of sales, in 2001. Differences in the amounts charged or credited to expense from movements in the legal reserves and insurance recovery accounts caused \$4.2 million of the increase in 2003 over 2002 and \$6.3 million of the decrease in 2002 from 2001. We negotiated legal settlements on various cases involving chronic beryllium disease, or CBD, while other cases were dismissed in 2003 and 2002. In addition, we have also received several favorable court rulings on our litigation during the last two years. As a result of a

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court ruling in 2002, we increased the recovery portion on insured legal claims that previously were subject to apportionment. Changes in the legal reserve and insurance recoverable charged to SG&A expense were limited to \$0.2 million in 2003 while in 2002 changes in the legal reserve and recoverable accounts generated a credit, i.e., reduction to expense, of \$4.0 million. In 2001, the comparable expense was \$2.3 million.

In addition to the impact of the legal reserve and recoverable accounts, SG&A expenses were higher in 2003 than 2002 due to an increase in incentive compensation expense, as a result of operational improvements implemented in the year, and an increase in costs under the company-owned life insurance program, while the weaker dollar caused a \$1.2 million increase in the translated value of the international subsidiaries' expenses. SG&A expenses in 2003 also included \$0.6 million of the \$6.0 million one-time charge associated with refinancing the debt in 2003, as further explained under "-- Financial Position -- Refinancing." SG&A manpower and other activity levels remained relatively unchanged in 2003 as compared to the latter half of 2002. Cost saving initiatives and manpower reductions, net of severance costs, implemented in the second half of 2001 and in 2002 in response to the decrease in sales volume also served to reduce SG&A expenses in 2002 as compared to 2001. Offsetting a portion of these savings in 2002 was an increase in incentive compensation expense as several operating units achieved their objectives.

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Research and development expenses, or R&D, were \$4.2 million in 2003, \$4.3 million in 2002 and \$6.3 million in 2001. R&D expenses were approximately 1% of sales in each of the three years. Overall R&D spending was reduced during the latter half of 2001 as part of the cost reduction initiatives and spending has remained essentially unchanged since that time. Approximately two-thirds of the R&D spending supports the Metal Systems Group and one-third supports the Microelectronics Group.

Other-net expense was \$9.3 million in 2003, \$5.2 million in 2002 and \$0.4 million in 2001 as the expense in both 2003 and 2002 included significant one-time items. The 2003 expense included \$4.7 million of the \$6.0 million refinancing charge as more fully described under "-- Financial Position -- Refinancing." In 2002, we recorded asset impairment charges of \$4.4 million in accordance with SFAS No. 144 that are described in further detail in the segment disclosures and Note C to the consolidated financial statements included elsewhere in this prospectus. In addition to the difference in these two charges, other-net expense was higher in 2003 due to a combination of other factors. Foreign exchange losses totaled \$0.9 million in 2003 compared to gains of \$1.5 million in 2002 with the difference attributable to the decline in the dollar's average value versus the euro, yen and pound sterling in 2003 compared to 2002. The unrealized valuation of the stock-based directors' compensation plan was a \$2.0 million swing between years. The valuation, and, therefore, the liability to us, is based upon the number of shares outstanding and the current common share price; in 2003, we recorded an expense of \$0.9 million due to the increase in the share price of our common share while in 2002 we recorded income of \$1.1 million due to the decline in the share price that year. Metal financing fees were \$0.6 million lower in 2003 than in 2002, due to a decline in financed inventory on hand, while the bad debt expense as well as changes in the allowance for doubtful accounts was \$0.3 million higher in 2003 than in 2002.

In addition to the asset impairment charge (see "-- Critical Accounting Policies" and the notes to our consolidated financial statements included elsewhere in this prospectus), other-net expense was higher in 2002 than in 2001 as a result of a \$0.8 million decline in exchange gains in 2002 compared to 2001, which was offset in part by lower metal financing fees and the elimination of goodwill amortization due to the adoption of SFAS No. 142 in 2002. Other-net



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expense also includes amortization of intangible assets, gain or loss on the disposal of fixed assets, cash discounts and other non-operating income and expense items.

The operating loss was \$9.3 million in 2003, a \$13.5 million improvement over the \$22.8 million loss in 2002. The operating loss was \$14.1 million in 2001.

Interest expense was \$3.4 million in 2003 compared to \$3.0 million in 2002 and \$3.3 million in 2001. Balance sheet debt increased by over \$50.0 million due to the purchase of previously leased assets as part of the fourth quarter 2003 refinancing and resulted in an increase in interest expense of approximately \$0.4 million. Prior to the refinancing, average debt levels were lower in 2003 than in 2002, and the effective interest rate was slightly higher. The 2002 expense was lower than 2001 due to a lower average debt level and a lower effective interest rate. Offsetting a portion of these benefits in 2002 was a \$0.5 million decline in interest capitalized in association with long-term capital projects from 2001.

The loss before income taxes was \$12.7 million in 2003, a \$13.2 million improvement over 2002. The improvement resulted from the margin contribution on the increase in sales, an increase in margin contribution rate and continued manufacturing overhead control offset in part by higher SG&A expenses and the impact of the one-time charges. The 2002 loss before income taxes of \$25.9 million as compared to \$17.4 million in 2001 resulted primarily from the lower margins due to the significant drop in sales volumes, partially offset by overhead cost reductions.

The 2003 income tax expense of \$0.6 million included a favorable tax provision of \$4.7 million and a deferred tax valuation allowance of \$5.3 million while the 2002 expense of \$9.7 million included a favorable provision of \$10.2 million and a deferred tax valuation allowance of \$19.9 million. The 2001 tax benefit was \$7.1 million. A valuation allowance was not required for 2001.

Prior to the recognition of the valuation allowances, tax benefit rates of 37.3%, 39.4% and 40.9% were applied against the loss before income taxes to calculate the favorable tax provisions in 2003, 2002 and 2001, respectively. The effects of percentage depletion and foreign source income were the major causes of the differences between the effective and statutory rates for all three years. The relative impact of percentage

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depletion and the company-owned life insurance program were the main differences between the 2003 and 2002 effective rates.

The deferred tax valuation allowances were recorded in 2003 and 2002 in accordance with SFAS No. 109, "Accounting for Income Taxes." This statement requires a company to evaluate its deferred tax assets on its balance sheet for impairment in the event of recent operating losses. This evaluation process is not based upon the specific expiration date of the individual deferrals but rather on the company's ability to demonstrate taxable income that will result in utilization of those assets. As a result of a review in the fourth quarter 2002, we determined that the majority of our deferred tax assets were impaired and a valuation allowance was recorded with \$19.9 million charged against expense and \$7.3 million to other comprehensive income within shareholders' equity. In 2003, the \$5.3 million valuation allowance offset the deferred tax assets that were created by the current year domestic federal and various foreign tax benefits. The 2003 net tax expense of \$0.6 million, therefore, represents the provision for state, local and certain other foreign taxes, which were not subject to a valuation allowance. An additional \$1.9 million valuation

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allowance was charged against other comprehensive income in 2003 for deferred tax assets associated with the net charge to equity for the change in derivative fair values and the accrued pension liability. See Note I to the consolidated financial statements included elsewhere in this prospectus.

As a result of the preceding, the net loss was \$13.2 million, or \$0.80 per share, in 2003 compared to \$35.6 million, or \$2.15 per share, in 2002 and \$10.3 million, or \$0.62 per share, in 2001.

We aggregate our businesses into two reportable segments -- the Metal Systems Group and the Microelectronics Group. Our parent company and other corporate expenses, as well as the operating results from BEM Services, Inc. and Brush Resources Inc., two wholly owned subsidiaries, are not included in either segment and are shown in the "All Other" column in the segment results contained in Note M to the consolidated financial statements included elsewhere in this prospectus. BEM Services charges a management fee for the services it provides, primarily corporate, administrative and financial oversight, to the other businesses within our company on a cost-plus basis. Brush Resources sells beryllium hydroxide, produced through its Utah operations, to outside customers and to businesses within the Metal Systems Group. The profitability within All Other declined in 2003 as compared to 2002 as a result of the \$6.0 million one-time charge associated with the debt refinancing, the \$4.2 million difference in movements in the legal reserve, the increase in the company-owned life insurance expense and reduced profitability of Brush Resources primarily due to lower production activity.

### METAL SYSTEMS GROUP

	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN MILLIONS)		
Net sales.....	\$239.4	\$227.9	\$295.7
Operating profit (loss).....	(16.6)	(37.7)	(20.1)

The Metal Systems Group is the larger of our reportable segments, accounting for approximately 60% of total sales and almost 70% of total assets. The group consists of Alloy Products; TMI, one of our wholly owned subsidiaries; and Beryllium Products. These units manufacture a variety of engineered materials that provide superior performance in demanding applications and compete against beryllium and non-beryllium-containing alloys. The Elmore, Ohio facility manufactures finished goods for Alloy Products and Beryllium Products as well as materials for further processing and sale by other operations within Alloy Products, Beryllium Products and TMI. Customers typically use our materials from this segment as their raw material input and are also usually one or more tiers removed from the end-use demand generator in a given market. After declining significantly in each of the last two years, primarily as a result of softness in the

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telecommunications and computer market, sales grew 5% in 2003 over 2002. Sales to external customers by business unit within the Metal Systems Group during the 2001 to 2003 time frame were as follows:

	2003	2002	2001
--	------	------	------

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	(DOLLARS IN MILLIONS)		
Alloy Products.....	\$162.3	\$151.9	\$217.5
Technical Materials, Inc. ....	41.9	44.4	50.5
Beryllium Products.....	35.2	31.6	27.7
	-----	-----	-----
Total Segment Sales.....	\$239.4	\$227.9	\$295.7
	=====	=====	=====

### Alloy Products

Alloy Products, the largest unit within our company, manufactures and sells copper and nickel-based alloy systems, the majority of which also contain beryllium, and consists of two major product families -- strip and bulk products. Strip products, which include thin gauge precision strip and thin diameter rod and wire, provide a combination of high conductivity, high reliability and formability for use as connectors, contacts, switches, relays and shielding. Major markets for strip products include telecommunications and computer, automotive electronics and appliances. Bulk products include plate, rod, bar, tube and other customized forms that, depending upon the application, may provide superior strength, corrosion or wear resistance or thermal conductivity. Applications for bulk products include plastic mold tooling, bearings, bushings, welding rods and telecommunications housing equipment. Alloy Products are manufactured at our facilities in Ohio and Pennsylvania and are distributed worldwide through a network of our own service centers and outside distributors and agents.

Alloy Products' sales of \$162.3 million improved 7% over sales in 2002 while sales of \$151.9 million in 2002 were 30% lower than sales in 2001. The improvement in sales in 2003 was due to strip products as sales of bulk products declined during 2003. The strip sales growth was caused by an increase in demand for the higher beryllium-containing and, therefore, higher priced alloys. Underlying volumes of these products improved 22% in 2003 over 2002. Sales of thin diameter rod and wire products also showed double-digit growth in 2003. Bulk sales volumes were 9% lower in 2003 than in 2002.

The Alloy Products' sales growth in 2003 was in the international markets as domestic sales declined slightly. A portion of this international growth is due to domestic customers shifting manufacturing operations overseas, particularly to Asia. Alloy Products recently established additional sales and marketing offices in China to augment its existing service centers in Japan and Singapore in order to maintain and grow sales applications in the region. The sales growth also resulted from an increase in market share and the development of various new products. Demand from the telecommunications and computer market was unchanged for the first three quarters of 2003 and then showed some improvements in the fourth quarter. Demand for strip products from the automotive market remained sluggish in 2003. The lower bulk products sales was caused in part by soft demand from the plastic tooling market for the majority of the year (although demand started to improve in the fourth quarter), while demand from the industrial components market declined during 2003. The increased demand from the telecommunications and computer and plastic tooling markets continued into early 2004. Orders for new products, including the non-beryllium-containing ToughMet(R) alloy used in bearing applications in heavy equipment, also showed improvement in late 2003 and early 2004.

Sales of strip and bulk products both declined significantly in 2002 as compared to 2001. Strip volumes were down 17% and bulk volumes were down 33%. The lower sales were due in large part to the precipitous decline in demand from the telecommunications and computer market that began in the second quarter 2001. Automotive sales of strip products were essentially unchanged in 2002 as

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compared to 2001. Bulk sales into the undersea telecommunications market, which was the largest market segment for bulk products as recently as 2000, began to decline in the second half of 2001 and were minimal in 2002 due to the severe reduction in the number of new undersea fiber optic line installation projects throughout the world. Bulk product sales

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for plastic tooling applications also declined in 2002 due in part to customers adjusting their inventory positions.

Technical Materials, Inc.

TMI manufactures engineered materials systems, including clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metal systems. These specialty strip metal products provide a variety of thermal, electrical or mechanical properties from a surface area or particular section of the material. Major markets for TMI products include telecommunications and computer and automotive electronics while major applications include connectors, contacts and semi-conductors.

TMI sales were \$41.9 million in 2003, \$44.4 million in 2002 and \$50.5 million in 2001. The lower sales in each of the last two fiscal years were due to the continued soft demand from the telecommunications and computer market. Automotive sales, which had been relatively unchanged in the prior two years, also softened during the third and fourth quarters of 2003. However, overall sales order entry rates improved in the fourth quarter 2003 over the first nine months of the year, and this trend continued into early 2004.

Production capacity within the markets served by TMI continued to be transferred from the United States to Asia, and TMI has aggressively managed its marketing efforts and manufacturing and overhead cost structure in order to profitably position itself to maintain and grow its base business while expanding into new applications and markets. As a result, TMI's profits increased in 2003 over 2002 despite the 6% decline in sales.

Beryllium Products

Beryllium Products manufactures pure beryllium and beryllium aluminum alloys in rod, tube, sheet and a variety of customized forms at the Elmore, Ohio and Fremont, California facilities. These materials are used in applications that require high stiffness and/or low density, and they tend to be premium priced due to their unique combination of properties. Defense and government-related applications remain the largest market for Beryllium Products, accounting for approximately two-thirds of sales, while other markets served include automotive, electronics, medical and optical scanning.

Revenues from Beryllium Products were \$35.2 million in 2003, \$31.6 million in 2002 and \$27.7 million in 2001. Revenues from Beryllium Products have grown for four consecutive years, including annual growth rates of 11% and 14% in 2003 and 2002, respectively. Sales for defense and government-related applications remained strong throughout this period. Several system upgrades for F-16 fighter jets and the new F-22 fighter are two of the largest platforms for Beryllium Products. Sales to the electronics market for acoustic components increased in 2003 over 2002 and represent a commercial growth opportunity for Beryllium Products. Acoustic component sales had declined in 2002 due to customers' excess inventory positions. Performance automotive sales contributed to the sales growth in 2003 and 2002 as well; however, management is uncertain as to the growth prospects for this market in the coming year. In the third quarter 2003, we secured a material supply contract for NASA's James Webb Space Telescope

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program, which is anticipated to generate an additional \$15.0 million in revenue, the majority of which should be invoiced in the 2004 to 2005 time frame.

### Metal Systems Gross Margin and Expenses

The gross margin on Metal System sales was \$39.5 million, or 16% of segment sales, in 2003 compared to \$18.0 million, or 8% of segment sales, in 2002. The increased sales volume improved the margin contribution by \$2.8 million in 2003 as compared to 2002. A favorable product mix, operational improvements and a favorable currency effect increased margins by \$12.1 million. The favorable mix resulted primarily from strip products, although TMI and Beryllium Products had mix shifts due to higher margin generating products as well. Operational improvements were made at the Elmore, Ohio facility, including yield and machine utilization rates, and at the TMI facility in Lincoln, Rhode Island, including yields and cost controls. Manufacturing overhead costs and inventory valuation adjustments were \$6.6 million lower in

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2003 than in 2002, with the majority of savings coming from manpower, supplies and services at the Elmore facility.

The 2002 gross margin of \$18.0 million was \$21.1 million lower than the gross margin in 2001. The margin contribution decline due to the lower sales volume in 2002 totaled \$30.7 million. An unfavorable product mix, primarily from Alloy Products, combined with a slightly unfavorable currency and copper impact, reduced margins by an additional \$6.3 million. Mitigating the impact of these negative factors on margins was a reduction in manufacturing overhead expense and inventory valuation adjustments of \$15.9 million. Overhead costs were reduced at all of the Metal Systems Group's manufacturing facilities in response to the lower sales volume. This decrease in overhead in 2002 was net of a \$4.7 million increase in rent expense from the off-balance sheet operating lease that was subsequently refinanced in December 2003.

SG&A, R&D and other-net expenses were \$0.5 million higher in 2003 than in 2002 as a result of the foreign currency exchange gain/loss difference and an increase to incentive compensation accruals. SG&A and R&D manpower levels were relatively unchanged for the year. The \$0.5 million increase was net of the impact of a one-time asset impairment charge in 2002. We determined that the projected cash flow from various assets used in the production of beryllium was less than the carrying value. The assets were written down to their net realizable values, and a \$3.1 million charge was recorded against other-net expense in the fourth quarter 2002. The equipment has been shut down due to the use of alternative input materials and manufacturing processes. Expenses in 2002 were \$3.5 million lower than 2001 as manpower and other cost savings initiatives reduced expenses by \$6.6 million in 2002 compared to the prior year, the benefit of which was offset in part by the impairment charge.

The Metal Systems Group recorded an operating loss of \$16.6 million in 2003, a \$21.1 million improvement over the \$37.7 million loss in 2002. The improvement was caused by the additional margin generated by the higher sales, favorable mix, operational efficiencies and manufacturing overhead cost reductions. In 2001, the Metal Systems Group lost \$20.1 million.

### MICROELECTRONICS GROUP

2003	2002	2001
-----	-----	-----

(DOLLARS IN MILLIONS)

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Net sales.....	\$157.3	\$139.2	\$169.6
Operating profit (loss).....	12.6	3.8	4.6

Microelectronics Group includes WAM and Electronic Products. These businesses manufacture a variety of high quality precision parts that are sold to assemblers and other fabricators of electronic components and equipment. Sales grew 13% in 2003 over 2002 after declining 18% in 2002 from 2001. Operating profit improved by \$8.8 million in 2003. Sales to external customers by business unit within the Microelectronics Group during the 2001 to 2003 time frame were as follows:

	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN MILLIONS)		
Williams Advanced Materials Inc. ....	\$127.8	\$109.1	\$135.3
Electronic Products.....	29.5	30.1	34.3
	-----	-----	-----
Total Segment Sales.....	\$157.3	\$139.2	\$169.6
	=====	=====	=====

### Williams Advanced Materials Inc.

WAM manufactures precious, non-precious and specialty metal products at its facilities in New York, California and Asia. Specific products include vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials and ultra fine wire. Major markets for WAM's products include optical media, magnetic head, electron tube, performance film and the wireless, semi-conductor, photonic and hybrid segments of the microelectronics market.

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Sales from WAM were \$127.8 million in 2003, \$109.1 million in 2002 and \$135.3 million in 2001. WAM adjusts its selling prices daily to reflect the current cost of the precious and non-precious metals sold. The cost of the metal is a pass-through to the customer, and WAM generates its margin on its fabrication efforts irrespective of the type or cost of the metal used in a given application. Therefore, the cost and mix of metals sold will affect sales but not necessarily the margins generated by those sales. Metal prices increased on average in 2003 over 2002, and the underlying volumes grew 7% compared to a 17% growth in sales. In 2002, a mix shift to lower priced metals as compared to 2001 caused the majority of the decrease in sales, as volumes were only 2% lower than the prior year.

Sales of vapor deposition targets grew in 2003 from the 2002 level driven by the continued strong end-use demand from the optical media market for digital versatile disks. Demand for targets from the photonics and other segments of the microelectronics market, which was soft and caused a slight overall decline in target sales in 2002, started to improve in the latter part of 2003. Sales of various products into the wireless segment demonstrated improvement in 2003 over 2002. Demand for data storage applications for giant magnetic resistive thin film applications remained strong throughout the 2001 to 2003 time period. Frame lid assembly sales grew in 2003 and in 2002 as a result of acquiring various assets of competitors who exited the market in the second quarter 2001 and the second quarter 2003.

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Due to the precious metal content of many of its products, WAM's customers continuously evaluate alternative lower cost materials and systems, and WAM faces stiff competition from other material providers. WAM strives to develop new alloys and products that satisfy its customers' quality, cost and service objectives. A key competitive advantage for WAM is its ability to reclaim precious metals, from its own or customers' scrap, through its in-house refinery. WAM also emphasizes new product and application development in order to keep pace with technological advancements.

### Electronic Products

Electronic Products manufactures beryllia ceramics, electronic packages and circuitry for sale into the telecommunications and computer, medical, electronics, automotive and defense markets. These products provide specific thermal and/or electrical conductivity characteristics and are used as components in a variety of applications, including wireless telecommunications equipment, fiber optics, lasers for medical and other electronic equipment, automotive ignition module systems, satellites and radar systems. Electronic Products are manufactured by Zentrix Technologies Inc. and Brush Ceramic Products, two wholly owned subsidiaries. Sales from Electronic Products were \$29.5 million in 2003 compared to \$30.1 million in 2002 and \$34.3 million in 2001.

Sales of beryllia ceramics were essentially unchanged in 2003 compared to 2002 after declining in 2002. This is a mature product line with established applications but limited growth opportunities. A temporary disruption in the sales order pattern from the largest ceramics customer during a plant relocation offset mild improvements during 2003. Sales order entry levels for ceramics strengthened in the fourth quarter 2003. Softer demand from the telecommunications and computer market caused the lower sales of ceramics in 2002 as compared to 2001. Sales of electronic packages also declined in each of the last two years due to the slowdown in build rates for telecommunications infrastructure equipment. Sales into the automotive market declined in 2003 after growing in 2002 over 2001. Sales of circuitry, which are manufactured by Circuits Processing Technology, Inc., a wholly owned subsidiary of Zentrix, increased in 2003 due to strengthening defense orders after declining in 2002 due to softer demand for commercial applications.

### Microelectronics Group Gross Margin and Expenses

The gross margin on Microelectronics Group sales was \$32.8 million, or 21% of segment sales, in 2003, compared to \$26.4 million, or 19% of segment sales, in 2002 and \$25.6 million, or 15% of sales, in 2001. The margin contribution in 2003 improved by \$3.3 million as a result of the increased sales. The product mix effect, as well as operational efficiencies, primarily in Electronic Products, generated an additional \$1.6 million in gross margin while manufacturing overhead costs and inventory adjustments were \$1.4 million lower in 2003 than in 2002. The \$0.8 million margin improvement in 2002 over 2001 resulted from an

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\$8.1 million favorable mix effect, primarily from WAM, combining with a \$3.1 million reduction in manufacturing overhead and inventory valuation adjustments to more than offset the reduction in margin contribution from the lower sales volume.

SG&A, R&D and other-net expenses were \$2.4 million lower in 2003 than in 2002 in part due to one-time charges of \$1.9 million recorded in 2002. Management determined that the projected cash flow from various assets used by

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Electronic Products was less than the carrying value. A charge of \$1.3 million was recorded in other-net expense to write down the assets to their fair value as determined by an outside appraisal. See Note C to the consolidated financial statements included elsewhere in this prospectus. Expenses in 2002 also included severance costs of \$0.6 million as we restructured the management of Electronic Products, eliminating various positions and closing two small foreign offices. In addition, expenses were lower in 2003 due to the full-year benefit of the manpower reductions made in 2002. The precious metal financing fee was lower in 2003 than in 2002 as well. Offsetting a portion of these benefits were increased costs to support the WAM sales growth and higher incentive accruals. Expenses were \$1.6 million higher in 2002 than in 2001. In addition to the \$1.9 million one-time items, WAM's SG&A and R&D expenses grew in 2002 over 2001 while the precious metal financing fee declined by \$0.7 million.

The Microelectronics Group operating profit was \$12.6 million, or 8% of segment sales, in 2003 compared to \$3.8 million, or 3% of segment sales, in 2002. Improved margins and lower expenses combined to generate the profit improvement. Operating profit for the Microelectronics Group was \$4.6 million, or 3% of segment sales, in 2001.

### INTERNATIONAL SALES AND OPERATIONS

	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN MILLIONS)		
From international operations.....	\$ 89.0	\$ 71.8	\$ 86.8
Exports from U.S. operations.....	35.4	32.5	47.5
Total international sales.....	\$124.4	\$104.3	\$134.3
Percent of total net sales.....	31%	28%	28%

The international sales presented in the preceding table are included in the Metal Systems Group and Microelectronics Group sales figures previously discussed. The majority of international sales are to the Pacific Rim, Europe and Canada. Sales to the Pacific Rim and Europe showed strong growth in 2003 resulting from a combination of additional market penetration, the relocation of United States production to overseas locations, increased market share and a favorable currency exchange effect. Sales into each major region were lower in 2002 than in 2001 with European sales accounting for over 60% of the total falloff.

International operations include service centers in Germany, England, Japan and Singapore that primarily focus on the distribution of Alloy Products while providing additional local support to various other businesses within our company. WAM has finishing operations in Singapore and the Philippines and a small joint venture that was established in Taiwan in 2003. We also have branch sales offices in the Republic of China and in Taiwan as well as an established network of independent distributors and agents.

As is the case domestically, telecommunications and computer and automotive electronics are the largest international markets for our products. Defense applications are not as prevalent overseas while the appliance market for alloy products is a more significant market, primarily in Europe, than it is domestically. Our market share is smaller in the overseas markets than it is domestically and given the macro-economic growth potential for the international economies, the international markets may present greater long-term growth opportunities for us.

Sales from the international operations are typically denominated in the



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local currency, particularly in Europe and Japan. Exports from the United States and sales from the Singapore operations are predominately denominated in United States dollars. Movements in the foreign currency exchange rates will affect the reported translated value of foreign currency-denominated sales while local competition limits our ability to adjust selling prices upwards to compensate for short-term unfavorable exchange rate movements. The dollar

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was weaker against the euro, yen and sterling over the course of 2003 compared to 2002, resulting in a favorable translation impact on sales of \$6.4 million. The dollar was slightly stronger in 2002 than in 2001, resulting in an unfavorable translation impact on sales of \$1.1 million in 2002. We have a hedge program with the objective of minimizing the impact of fluctuating currency values on our reported results.

### LEGAL PROCEEDINGS

Our subsidiary, Brush Wellman Inc., is a defendant in 14 proceedings in various state and federal courts brought by plaintiffs alleging that they have contracted CBD or other lung conditions as a result of exposure to beryllium. Plaintiffs in beryllium cases seek recovery under theories of intentional tort and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses of some plaintiffs claim loss of consortium.

The following table summarizes the associated activity with beryllium cases. Settlement payment and dismissal for a single case may not occur in the same period.

	DECEMBER 31,		
	2003	2002	2001
Total cases pending.....	15	33	76
Total plaintiffs (including spouses).....	33	70	193
Number of claims (plaintiffs) filed during period ended.....	11(22)	2(4)	19(37)
Number of claims (plaintiffs) settled during period ended...	24(47)	34(107)	2(3)
Aggregate cost of settlements during period ended (dollars in thousands).....	\$2,045	\$4,945	\$ 570
Number of claims (plaintiffs) otherwise dismissed.....	5(12)	11(20)	12(31)
Number of claims (plaintiffs) voluntarily withdrawn.....	0(0)	0(0)	0(2)

The 2003 data includes five claims that were settled and dismissed late in the fourth quarter 2003, with the settlement payments of \$0.9 million made or scheduled to be made in early 2004. Additional beryllium claims may arise. Management believes that we have substantial defenses in these cases and intends to contest the suits vigorously. Employee cases, in which plaintiffs have a high burden of proof, have historically involved relatively small losses to us. Third-party plaintiffs, typically employees of customers or contractors, face a lower burden of proof than do employees or former employees, but these cases are generally covered by varying levels of insurance. A reserve was recorded for beryllium litigation of \$2.9 million at December 31, 2003 and \$4.2 million at December 31, 2002. A receivable was recorded of \$3.2 million at December 31, 2003 and \$4.9 million at December 31, 2002 from our insurance carriers as recoveries for insured claims.

Although it is not possible to predict the outcome of the litigation

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pending against us and our subsidiaries, we provide for costs related to these matters when a loss is probable and the amount is reasonably estimable. Litigation is subject to many uncertainties, and it is possible that some of these actions could be decided unfavorably in amounts exceeding our reserves. An unfavorable outcome or settlement of a pending beryllium case or additional adverse media coverage could encourage the commencement of additional similar litigation. We are unable to estimate our potential exposure to unasserted claims.

While we are unable to predict the outcome of the current or future beryllium proceedings, based upon currently known facts and assuming collectibility of insurance, we do not believe that resolution of these proceedings will have a material adverse effect on the financial condition or our cash flow. However, our results of operations could be materially affected by unfavorable results in one or more of these cases. As of December 31, 2003, two purported class actions were pending.

Standards for exposure to beryllium are under review by the United States Occupational Safety and Health Administration and by other standard-setting organizations. One result of these reviews might be more stringent worker safety standards. More stringent standards may affect buying decisions by the users of beryllium-containing products. If the standards are made more stringent or our customers decide to reduce

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their use of beryllium-containing products, our operating results, liquidity and capital resources could be materially adversely affected. The extent of the adverse effect would depend on the nature and extent of the changes to the standards, the cost and ability to meet the new standards, the extent of any reduction in customer use and other factors that cannot be estimated.

The 15 pending beryllium cases as of December 31, 2003 fall into three categories: one "employee case" involving one former employee; 12 cases involving third-party individual plaintiffs, with 12 individuals (and five spouses who have filed claims as part of their spouse's case, and five children who have filed claims as part of their parent's case); and two purported class actions, involving ten individuals, as discussed more fully below.

In one purported class action in which Brush Wellman is seeking review of the appellate court's reversal of the trial court's denial of class certification, the named plaintiffs allege that past exposure to beryllium has increased their risk of contracting CBD and possibly cancer, although they do not claim to have actually contracted any disease. They seek medical monitoring funds to be used to detect medical problems that they believe may develop as a result of their exposure and punitive damages. This purported class action was brought by named plaintiffs on behalf of tradesmen who worked in one of Brush Wellman's facilities as employees of independent contractors.

In the second purported class action that is pending against Brush Wellman, the named plaintiffs allege that they were exposed to beryllium in the course of their employment with a customer of Brush Wellman and that they are sensitized to beryllium. They seek medical monitoring funds to be used to detect medical problems that they believe may develop as a result of their exposure and punitive damages. This purported class action was brought by named plaintiffs on behalf of employees who worked in the State of California at the facilities of one of Brush Wellman's customers and the spouses of those workers.

From January 1, 2004 to April 1, 2004, Brush Wellman was served with a third purported class action, in which the named plaintiffs allege that they were exposed to beryllium in the course of their employment with a customer of

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Brush Wellman. They seek medical monitoring funds to be used to detect medical problems that they believe may develop as a result of their exposure and punitive damages. This purported class action was brought on behalf of current and former employees who worked at the Marietta, Georgia facility of one of Brush Wellman's customers and their spouses. Also during this period, one third-party case, involving one plaintiff, was filed. Two third-party cases, involving seven plaintiffs, were voluntarily dismissed by the plaintiffs. The settlement amounts in five third-party cases, involving 14 plaintiffs, that were settled and dismissed in 2003 have been paid to the plaintiffs. One employee case, involving one plaintiff, was settled and dismissed.

### FINANCIAL POSITION

#### WORKING CAPITAL

Cash flow from operations totaled \$26.3 million in 2003 as depreciation, other non-cash items and changes in working capital items more than offset the net loss of \$13.2 million. Cash flow from operations in 2003 was a \$10.6 million improvement over the \$15.7 million generated in 2002. The cash balance was \$5.1 million at December 31, 2003, an increase of \$0.7 million for the year, as the balance of the cash generated from operations was used to reduce debt and fund capital expenditures.

The accounts receivable balance was \$55.1 million at year-end 2003, an increase of \$7.6 million from year-end 2002. The increase is largely due to the higher sales in the fourth quarter 2003 relative to the fourth quarter 2002 as the days sales outstanding, or DSO, a measure of how quickly receivables are collected, improved one day to 47 days. The DSO improved despite an increase in international sales, which typically take longer to collect. Accounts receivable declined in 2002 as a result of lower sales and a five-day improvement in the DSO.

Inventories declined \$6.9 million in 2003 to \$87.4 million after declining \$14.8 million in 2002 as we continued to improve our manufacturing efficiencies and inventory utilization in order to improve customer response time and lower our working capital investment. The reduction in inventories in 2002 was net of a

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\$6.0 million increase due to the termination of an off-balance sheet copper financing arrangement in the fourth quarter 2002. Total Metal Systems Group inventory was down 12% on a first-in, first-out, or FIFO, valuation basis in 2003. Each unit within the Metal Systems Group lowered its inventories in 2003, with Alloy Products responsible for the largest decline. Alloy inventory pounds declined 15% during the year and were down 50% from their peak levels in 2001. FIFO inventories within the Microelectronics Group increased 13% as WAM's inventories increased in order to support the higher sales volumes and as a result of higher precious metal prices. Brush Resources also increased its inventory, as ore was mined in excess of current production requirements in order to extract the ore from the existing pits within the allowable safety time frame. Overall inventory turns as of the fourth quarter 2003 improved over the fourth quarter 2002. The majority of the inventory reduction in 2002 was in the Metal Systems Group as Microelectronics Group inventories declined only slightly.

Prepaid expenses declined during 2003 mainly due to the collection of a \$3.8 million federal income tax refund. The accounts payable balance was \$0.9 million higher at year-end 2003 than at year-end 2002 due to higher activity levels. Other liabilities and accruals increased \$7.0 million as a result of higher incentive compensation accruals, a change in the fair value of derivative

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financial instruments, higher interest accruals and other miscellaneous items. Other long-term liabilities of \$14.7 million at December 31, 2003 were \$2.8 million lower than at December 31, 2002 due to reductions in the legal reserves and changes in the long-term portion of the fair value of derivatives. We paid \$1.2 million in 2003 for legal settlements, primarily for CBD cases, and received \$1.6 million from our insurance carriers as partial reimbursement for the insured portions of claims paid in the current and prior years. In 2002, we paid \$4.9 million in settlements and recovered \$2.3 million from our insurance carriers.

### DEPRECIATION AND AMORTIZATION

Depreciation, amortization and depletion was \$19.5 million in 2003 and \$20.4 million in 2002. The lower expense in 2003 resulted from the reduced level of capital spending. Amortization of deferred mine development was \$1.2 million in 2003 and \$0.3 million in 2002. Mine development costs are amortized based upon the units-of-production method as ore is extracted from the pits.

### CAPITAL EXPENDITURES

Capital expenditures for property, plant and equipment and mine development totaled \$6.3 million in 2003 compared to \$5.4 million in 2002. Spending by the Metal Systems Group totaled \$2.8 million in 2003 and \$1.9 million in 2002, while the Microelectronics Group spending totaled \$2.9 million in 2003 and \$2.4 million in 2002. The majority of the spending was on small infrastructure and other individual projects as in general we had sufficient production capacity to meet the level of demand in 2003. The Microelectronics Group spending included the acquisition of various assets used to manufacture frame lid assemblies from a competitor who exited the market. In addition to the \$6.3 million of spending, as part of the December 2003 refinancing, we purchased \$51.8 million of assets previously held under an operating lease that have been in use at the Elmore facility since 1998 by the Metal Systems Group. Management anticipates that capital expenditures should increase in 2004 over the \$6.3 million spent in 2003 but will still be below the level of depreciation.

### PENSION LIABILITY

SFAS No. 87, "Employers' Accounting for Pensions", requires the recognition of a minimum pension liability if the present value of the accumulated benefit obligation is greater than the market value of the pension assets at year end. The market value of our pension assets in our domestic defined benefits plan was \$85.8 million while the present value of the accumulated benefit obligation was \$95.4 million as of December 31, 2003. We, therefore, reduced our minimum pension liability to \$9.6 million (in other long-term liabilities) by adjusting the intangible pension asset by \$0.6 million in other assets and recording a pre-tax credit of \$1.0 million against other comprehensive income, a component of shareholders' equity, in the fourth quarter 2003. The 2003 pension expense, which had increased the minimum liability, was \$1.6 million. We had initially recorded a \$13.6 million charge against other comprehensive income in the fourth quarter 2002

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to adjust the carrying value of the recognized pension asset and to establish a minimum pension liability of \$9.6 million based upon an asset market value of \$78.1 million and an accumulated benefit obligation of \$87.7 million at December 31, 2002. During 2003, the fair value of the pension assets increased as the investment earnings exceeded the plan payouts and expenses by \$7.7 million while the accumulated benefit obligation increased a similar amount due to a lower discount rate, an additional year of service earned and other actuarial assumptions.

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### REFINANCING

We refinanced our debt on a long-term basis with the completion of new debt facilities totaling \$147.5 million in the fourth quarter 2003. The new financing includes an \$85.0 million revolving line of credit secured by our working capital, \$20.0 million of term loans secured by real estate and machinery and equipment and a \$7.5 million facility secured by certain export accounts receivable. The remaining \$35.0 million consists of a subordinated term loan that is secured by a second lien on our working capital, real estate and machinery and equipment and is payable at the end of five years. All of the new debt is variable rate based upon spreads over LIBOR or prime. The new debt provides additional capacity to fund our growth and provides stability through extension of maturity dates. See Note E to the consolidated financial statements included elsewhere in this prospectus.

Proceeds from the refinancing were used to retire the existing revolving credit agreement that was scheduled to mature in April 2004 and to purchase \$51.8 million of leased assets, thereby terminating an existing off-balance sheet lease obligation. The leased assets have been used at the Elmore facility in the manufacture of alloy strip products since 1998. The \$51.8 million purchase price was the notional value of the lease at the time of the purchase and, therefore, while the balance sheet debt increased by \$51.8 million as result of this transaction, our total obligations, as defined by debt plus off-balance sheet obligations, were unchanged.

The refinancing increases our liquidity and available credit lines, and we anticipate the related expense and repayments in 2004 will be lower than the projected expense and payments under the prior debt and lease structure. Lease payments to be expensed against cost of sales under the terminated lease would have been \$10.4 million in 2004. Under the new structure, this expense has been eliminated and replaced by approximately \$4.0 million of depreciation expense on the purchased assets. Therefore, cost of sales will be \$6.4 million lower and gross margin will be \$6.4 million higher in 2004 than it would have been under the prior financing arrangement. The margin improvement will flow through the Metal Systems Group. This benefit will be partially offset by an increase in the amortization of deferred financing fees and higher interest costs due to the increase in debt and changes in the interest rate structure. Based upon the interest rates and debt levels at the time of the refinancing, the increase in these costs are estimated to be \$5.0 million in 2004 and, therefore, management estimates that earnings before income taxes in 2004 will improve by \$1.4 million as a result of the refinancing. In addition, the increased interest payments plus the required debt repayments in 2004 are estimated to be \$5.2 million lower than the 2004 lease payment would have been.

As a result of the refinancing, we recorded a \$6.0 million one-time charge in the fourth quarter 2003 to write off deferred costs associated with the prior financing arrangement and to record derivative ineffectiveness on an associated interest rate swap. We have an interest rate swap that initially was designated as a hedge of the equipment operating lease payments. With the termination of the lease, the swap no longer qualified for hedge accounting, and the \$4.6 million unfavorable fair value at the time of the refinancing that previously was deferred into other comprehensive income on our consolidated balance sheet was charged against the other-net expense on our consolidated income statements. We kept this swap in place, as its cash flows will serve to hedge a portion of the outstanding variable rate debt even though the swap does not technically qualify for hedge accounting. See Note G to the consolidated financial statements included elsewhere in this prospectus. An additional \$0.1 million was recorded against other-net expense for other deferred costs while \$0.7 million was recorded against cost of sales and \$0.6 million against SG&A expense as part of the \$6.0 million charge.

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Debt issuance costs associated with the December 2003 refinancing totaling \$6.2 million were deferred and included in other assets on the consolidated balance sheet. The issuance costs included \$4.6 million of cash payments and \$1.6 million representing the fair value of warrants to purchase 115,000 common shares and are being amortized using the effective interest method over the life of the debt.

### DEBT AND OFF-BALANCE SHEET OBLIGATIONS

Total debt on the balance sheet was \$99.1 million as of December 31, 2003 compared to \$63.5 million as of December 31, 2002. The \$35.6 million increase resulted from the \$51.8 million purchase of the leased assets and the retirement of an existing off-balance sheet obligation as part of the refinancing partially offset by a \$15.8 million reduction paid by cash flow from operations. Short-term debt totaled \$13.4 million at year-end 2003 and included \$2.1 million borrowed under the new revolving credit agreement, \$9.7 million of gold denominated debt and \$0.1 million of foreign currency-denominated debt. The gold loan is designed as a hedge against gold inventory. Short-term debt also includes \$1.5 million of the current portion of long-term debt obligations. In addition to the new long-term debt obtained in the fourth quarter, we also had an \$8.3 million variable rate industrial development bond, a \$3.0 million variable rate demand note and a \$0.9 million promissory note outstanding at December 31, 2003. We were in compliance with all of our debt covenants as of December 31, 2003.

In addition to the \$99.1 million of balance sheet debt, we have an off-balance sheet operating lease with a notional value of \$14.4 million that finances a building at the Elmore facility. Annual payments under this lease are \$2.3 million. See Note F to the consolidated financial statements included elsewhere in this prospectus for further leasing details.

We maintain a portion of our precious metal inventories on a consignment basis in order to reduce our price exposure. See "-- Market Risk Disclosures." The notional value of this inventory was \$11.5 million at December 31, 2003 and \$15.6 million at December 31, 2002. The value of the consigned precious metals declined during 2003 due to inventory reduction efforts and changes in the product mix. The impact of the decrease in quantity on hand was offset in part by higher prices at year-end 2003 than at year-end 2002. Since third parties own the consigned precious metal, its cost is not reflected in the total inventory on our balance sheet. We maintained an off-balance sheet financing arrangement with a bank for a portion of our copper-based inventories until it was terminated in the fourth quarter 2002. We purchased the copper inventory for \$6.0 million from the bank and added it into our balance sheet inventory as we determined it was more cost effective to finance these inventories with traditional balance sheet debt.

A summary of contractual payments under long-term debt agreements, operating leases and material purchase commitments by year is as follows:

	TOTAL	PAYMENTS DUE IN					THEREAFTER
		2004	2005	2006	2007	2008	
(DOLLARS IN MILLIONS)							
Long-term debt repayments.....	\$ 87.2	\$ 1.5	\$ 3.5	\$ 3.5	\$ 3.5	\$65.6	\$ 9.6
Elmore building lease payments.....	18.6	2.3	2.3	2.3	2.3	2.3	7.1
Other operating lease payments.....	10.5	2.7	1.9	1.3	1.0	1.0	2.6

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Subtotal non-cancelable leases.....	29.1	5.0	4.2	3.6	3.3	3.3	9.7
Purchase obligations.....	47.7	12.0	11.8	11.9	12.0	--	--
	-----	-----	-----	-----	-----	-----	-----
Total.....	\$164.0	\$18.5	\$19.5	\$19.0	\$18.8	\$68.9	\$19.3
	=====	=====	=====	=====	=====	=====	=====

See "-- Refinancing."

The new revolving credit agreement, the \$35.0 million subordinated loan and the \$20.0 million term loans mature in 2008. Management anticipates that new debt agreements will be negotiated prior to the maturation of these agreements in 2008, as warranted. Quarterly installments against the term loans begin in 2004 while annual repayments are also required to be made against other portions of our long-term debt in each of the next five years. See Note E to the consolidated financial statements included elsewhere in this

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prospectus for additional debt information. The lease payments represent payments under non-cancelable leases with initial lease terms in excess of one year as of December 31, 2003. See Note F to the consolidated financial statements included elsewhere in this prospectus. The purchase obligations include \$0.3 million for capital equipment to be acquired in 2004. The balance of the obligations are for raw materials to be acquired under long-term supply agreements. These commitments end in 2007, although we have the opportunity to negotiate an extension for one of the agreements. See Note L to the consolidated financial statements included elsewhere in this prospectus.

We are offering 1,700,000 of our common shares for sale under this prospectus. We intend to use the net proceeds from this offering to repay a portion of the amounts outstanding under the credit facilities that are part of the refinancing we completed in December 2003. Any remaining net proceeds will be used for working capital and general corporate purposes, including capital expenditures, acquisitions of businesses or assets and investments. As part of this offering, the selling shareholders are selling 115,000 of our common shares, which were issued upon exercise of warrants that were issued in connection with our December 2003 refinancing. The issuance of our common shares upon exercise of the warrants does not materially change our total shareholder equity, although it does increase the total number of our common shares outstanding.

As a result of this offering and the repayment of our debt, our liquidity, debt-to-equity ratio and available unused debt capacity will increase, while our future mandatory debt repayments will decline. The issuance of our common shares in this offering and subsequent debt reduction should also result in a lower interest expense in 2004 than it would have been otherwise.

### OTHER

Management believes that cash flow from operations plus the available borrowing capacity are adequate to support operating requirements, capital expenditures, projected pension plan contributions and remediation projects. The refinanced debt structure provides improved stability in terms of maturity dates and improved flexibility in terms of available credit and covenant structures. Our cost control and working capital management efforts have allowed cash flow from operations to remain positive despite the operating losses the last three years, while the capital expenditure limitations and the elimination of the regular dividend in the third quarter 2001 have further helped to reduce cash outlays. Our current debt-to-equity ratio, recent operating losses or other

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financial measures may limit our ability to raise debt financing in excess of the existing revolving credit agreement and other established lines. However, availability under existing unused lines of credit totaled \$36.9 million as of December 31, 2003.

We attempt to maintain cash balances at a minimum with any excess cash used to reduce overnight or other short-term borrowings. Cash balances, if any, are invested in high quality, highly liquid investments.

### ENVIRONMENTAL

We have an active program of environmental compliance. We estimate the probable cost of identified environmental remediation projects and establish reserves accordingly. The environmental remediation reserve balance was \$6.9 million at December 31, 2003 and \$7.7 million at December 31, 2002. The reserve was reduced in 2003 for changes in the estimated cost for various projects based on analyses of the projected required remediation effort and payments for current activity. See Note L to the consolidated financial statements included elsewhere in this prospectus.

### ORE RESERVES

Our reserves of bertrandite ore are located in Juab County, Utah. An ongoing drilling program has generally added to proven reserves. Proven reserves are the measured quantities of ore commercially recoverable through the open pit method. Probable reserves are the estimated quantities of ore known to exist, principally at greater depths, but prospects for commercial recovery are indeterminable. Ore dilution that occurs during mining is approximately seven percent. Approximately 87% of beryllium in ore is recovered in

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the extraction process. We augment our proven reserves of bertrandite ore through the purchase of imported beryl ore, approximately 4% beryllium, which is also processed at the Utah extraction facility.

We use computer models to estimate ore reserves, which are subject to economic and physical evaluation. Development drilling can also affect the total ore reserves to some degree. The requirement that reserves pass an economic test causes open-pit mineable ore to be found in both proven and probable geologic settings. Proven reserves decreased slightly and probable reserves were unchanged in 2003 while proven reserves decreased and probable reserves increased in 2002. We own approximately 95% of the proven reserves and lease the balance. Based upon average production levels in recent years, proven reserves would last approximately 100 years. Ore reserves classified as possible are excluded from the following table.

	2003 -----	2002 -----	2001 -----	2000 -----	1999 -----
Proven bertrandite ore reserves at year end (thousands of dry tons).....	6,687	6,730	7,270	7,690	7,769
Grade % beryllium.....	0.267%	0.267%	0.268%	0.263%	0.265%
Probable bertrandite ore reserves at year end (thousands of dry tons).....	3,519	3,519	3,081	3,166	3,081
Grade % beryllium.....	0.232%	0.232%	0.219%	0.217%	0.215%
Bertrandite ore processed (thousands of dry tons, diluted).....	41	40	48	84	93
Grade % beryllium, diluted.....	0.224%	0.217%	0.224%	0.235%	0.240%



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### CRITICAL ACCOUNTING POLICIES

The preparation of consolidated financial statements requires the inherent use of estimates and management's judgment in establishing those estimates. The following are the most significant accounting policies used by us that rely upon management's judgment.

**Accrued Liabilities.** We have various accruals on our balance sheet that are based in part upon management's judgment, including accruals for litigation, environmental remediation and workers' compensation costs. We establish accrual balances at the best estimate determined by a review of the available facts and trends by management and independent advisors and specialists as appropriate. Absent a best estimate, the accrual is established at the low end of the estimated reasonable range in accordance with SFAS No. 5, "Accounting for Contingencies." Accruals are only established for identified and/or asserted claims; future claims, therefore, could give rise to increases to the accruals. The accruals are adjusted as the facts and circumstances change. The accruals may also be adjusted for changes in our strategies or regulatory requirements. Since these accruals are estimates, the ultimate resolution may be greater or less than the established accrual balance for a variety of reasons, including court decisions, additional discovery, inflation levels, cost control efforts and resolution of similar cases. Changes to the accruals would then result in an additional charge or credit to income. See Note L to the consolidated financial statements included elsewhere in this prospectus.

The accrued legal liability only includes the estimated indemnity cost, if any, to resolve the claim through a settlement or court verdict. The legal defense costs are not included in the accrual and are expensed in the period incurred, with the level of expense in a given year affected by the number and types of claims we are actively defending. Certain legal claims are subject to partial or complete insurance recovery. The accrued liability is recorded at the gross amount of the estimated cost and the insurance recoverable, if any, is recorded as a separate asset and is not netted against the liability.

**Pensions.** We have a defined benefit pension plan that covers a large portion of our current and former domestic employees. We account for this plan in accordance with SFAS No. 87, "Employers' Accounting for Pensions." Under Statement No. 87, the carrying values of the associated assets and liabilities are determined on an actuarial basis using numerous actuarial and financial assumptions. Differences between the assumptions and current period actual results may be deferred into the net pension asset value and amortized against future income under established guidelines. The deferral process generally reduces the volatility of the recognized net pension asset or liability and current period income or expense. The actuaries adjust their

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assumptions to reflect changes in demographics and other factors, including mortality rates and employee turnover, as warranted. We periodically review other key assumptions, including the expected return on plan assets, the discount rate and the average wage rate increase, against actual results, trends and industry standards and make adjustments accordingly. These adjustments may then lead to a higher or lower expense in a future period.

We maintained our expected long-term rate of return on plan assets assumption at 9.0% as of December 31, 2003, unchanged from the previous year end. While our pension assets earned well in excess of 9.0% in 2003, the plan underperformed this level for several years prior to 2003. However, our long-term experience indicates that a 9.0% return is reasonable. Our pension plan investment strategies are governed by a policy adopted by the Retirement

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Plan Review Committee of the Board of Directors. The future return on pension assets is dependent upon the plan's asset allocation, which changes from time to time, and the performance of the underlying investments. Should the assets earn an average return less than 9.0% over time, in all likelihood the future pension expense would increase. Investment earnings in excess of 9.0% would tend to reduce the future expense. We establish the discount rate used to determine the present value of the projected and accumulated benefit obligation at the end of each year based upon the available market rates for high quality, fixed income investments. An increase to the discount rate would reduce the future pension expense and, conversely, a lower discount rate would raise the future pension expense. As of December 31, 2003, we elected to use a discount rate of 6.375% compared to a rate of 6.75% as of December 31, 2002. We estimate that the change in the discount rate and other actuarial assumptions and valuations combined with the amortization of prior differences between actual and expected results will result in a \$1.0 million increase in the net expense from our qualified pension plan in 2004 over 2003 with the 2005 expense estimated to be an additional \$1.1 million higher than the 2004 expense. If the expected rate of return assumption was changed by 50 basis points (0.50%) and all other pension assumptions remained constant, the 2004 projected expense would change by approximately \$0.5 million. If the December 31, 2003 discount rate were reduced by 25 basis points (0.25%) and all other pension assumptions remained constant, the 2004 pension expense would increase by approximately an additional \$0.3 million.

The \$9.6 million additional minimum pension liability recorded as of December 31, 2003 does not by itself indicate that a cash contribution to the plan is required. This liability was recorded according to SFAS No. 87, while cash contributions and funding requirements are governed by ERISA and IRS guidelines. Based upon these guidelines and current assumptions and estimates, we anticipate that a cash contribution to the pension plan of approximately \$1.7 million may be required in 2004. The inter-relationship of the many factors affecting the plan assets and liabilities makes it difficult to project contributions beyond one year out; however, a contribution may be required in 2005 that is greater than the 2004 projected contribution. The minimum pension liability under SFAS No. 87 will be recalculated at the measurement date, December 31 of each year, and any adjustments to this account and other comprehensive income within shareholders' equity will be recorded at that time accordingly. See Note K to the consolidated financial statements included elsewhere in this prospectus for additional details on our pension plan.

LIFO Inventory. The prices of certain major raw materials, including copper, nickel, gold, silver and other precious metals purchased by us, fluctuate during a given year. Such changes in costs are generally reflected in selling price adjustments. The prices of labor and other factors of production generally increase with inflation. Additions to capacity, while more expensive over time usually result in greater productivity or improved yields. However, market factors, alternative materials and competitive pricing affect our ability to offset wage, benefit and other cost increases. Therefore, we use the last-in, first-out, or LIFO, method for costing the majority of our domestic inventories. Under the LIFO method, inflationary cost increases are charged against the current cost of goods sold in order to more closely match the cost with revenue. The carrying value of the inventory is based upon older costs and as a result, the LIFO cost of the inventory on the balance sheet is typically lower than it would be under most alternative costing methods. The LIFO impact on the income statement in a given year is dependent upon the inflation rate effect on raw material purchases and manufacturing conversion costs, the level of purchases in a given year and the inventory mix and balance. In 2003, the average inflation rate was low, and we reduced our inventories. As a result, LIFO inventory layers were liquidated that reduced cost of sales by \$3.6 million in 2003. However, the cost of

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various raw materials, including copper and nickel, increased near the end of the fourth quarter 2003, and prices continued to rise in the early portion of 2004.

**Deferred Tax Assets.** We record deferred tax assets and liabilities in accordance with SFAS No. 109, "Accounting For Income Taxes." The deferrals are determined based upon the temporary difference between the financial reporting and tax bases of assets and liabilities. We review the expiration dates of the deferrals against projected income levels to determine if the deferral will or can be realized. If it is determined that it is not probable a deferral will be realized, a valuation allowance would be established for that item. Certain deferrals, including the alternative minimum tax credit, do not have an expiration date. See Note I to the consolidated financial statements included elsewhere in this prospectus for additional deferred tax details.

In addition to reviewing the deferred tax assets against their expiration dates, we evaluated our deferred tax assets for impairment due to the recent operating losses, as previously described, and recorded valuation allowances of \$7.2 million in 2003, with \$5.3 million charged to expense and \$1.9 million charged to other comprehensive income, and \$27.2 million in 2002, with \$19.9 million charged to expense and \$7.3 million charged to other comprehensive income. Should we generate a domestic pre-tax profit in subsequent periods, the valuation allowance will be reversed against the current period domestic federal tax expense, resulting in higher net income and net income per share for that period. Once we establish a trend of consistent actual and projected positive earnings, significant portions or all of the remaining valuation allowance may be reversed back to income. Should we generate domestic pre-tax losses in subsequent periods, a domestic federal tax benefit will not be recorded, and the valuation allowance recorded against the net deferred tax assets will increase. This will result in a larger net loss and net loss per share for that period versus a comparable period when a favorable tax benefit was recorded. We will continue to record tax provisions or benefits as appropriate for state and local taxes and various foreign taxes regardless of the status of this valuation allowance.

**Derivatives.** We may use derivative financial instruments to hedge our foreign currency, commodity price and interest rate exposures. We apply hedge accounting when an effective hedge relationship can be documented and maintained. If a hedge is deemed effective, changes in its fair value are recorded in other comprehensive income until the underlying hedged item matures. If a hedge does not qualify as effective, changes in its fair value are recorded against income in the current period. We secure derivatives with the intention of hedging existing or forecasted transactions only and do not engage in speculative trading or holding derivatives for investment purposes. Our annual budget and quarterly forecasts serve as the basis for determining forecasted transactions. The use of derivatives is governed by policies established by the Board of Directors. The level of derivatives outstanding may be limited by the availability of credit from financial institutions. See "-- Market Risk Disclosures" and Note G to the consolidated financial statements included elsewhere in this prospectus for more information on our derivatives.

### MARKET RISK DISCLOSURES

We are exposed to precious metal and commodity price, interest rate and foreign exchange rate differences. While the degree of exposure varies from year to year, our methods and policies designed to manage these exposures have remained fairly consistent. We attempt to minimize the effects of these exposures through a combination of natural hedges and the use of derivatives. Our use of derivatives is governed by policies adopted by the Board of Directors.

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We use gold and other precious metals in manufacturing various Microelectronics Group and Metal Systems products. To reduce the exposure to market price changes, certain amounts of precious metals are maintained on a consigned inventory basis. The metal is purchased out of consignment when it is ready to ship to a customer as a finished product. Our purchase price forms the basis for the price charged to the customer for the precious metal content and, therefore, the current cost is matched to the selling price and the price exposure is minimized. We maintain a certain amount of gold in our own inventory, which is typically balanced out by having a loan denominated in gold for the same number of ounces. Any change in the market price of gold, either higher or lower, will result in an equal change in the fair value of the asset and liability recorded on the balance sheet.

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We are charged a consignment fee by the financial institutions that actually own the precious metals. This fee, along with the interest charged on the gold-denominated loan, is partially a function of the market price of the metal. Because of market forces and competition, the fee, but not the interest on the loan, can be charged to customers on a case-by-case basis. To further limit price and financing rate exposures, under some circumstances we will require customers to furnish their own metal for processing. This practice is used more frequently when the rates are high and/or more volatile. Should the market price of precious metals used by us increase by 15% from the prices on December 31, 2003, the additional pre-tax cost to us on an annual basis would be approximately \$0.2 million. This calculation assumes no changes in the quantity of inventory or the underlying fee and interest rates and that none of the additional fee is charged to customers.

We also use base metals, primarily copper, in our production processes. Fluctuations in the market price of copper are passed on to customers in the form of price adders or reductions for the majority of the copper sales volumes. However, when we cannot pass through the price of copper, margins can be reduced by increases in the market price of copper. To hedge this exposure, we may enter into copper swaps with financial institutions that exchange a variable price of copper for a fixed price. By so doing, the difference between our purchase price and selling price of copper will be a known, fixed value for the quantities covered by the swaps. We did not have any copper swaps outstanding as of December 31, 2003, in part due to credit constraints. The notional value of the outstanding copper swaps was \$1.8 million as of December 31, 2002.

We are exposed to changes in interest rates on our debt and cash. This interest rate exposure is managed by maintaining a combination of short-term and long-term debt and variable and fixed rate instruments. We also use interest rate swaps to fix the interest rate on variable debt obligations, as we deem appropriate. Excess cash, if any, is typically invested in high quality instruments that mature in seven days or less. We had \$95.2 million in variable rate debt and variable-to-fixed interest rate swaps with a notional value of \$55.9 million outstanding at December 31, 2003. If interest rates were to increase 200 basis points (2.0%) from the December 31, 2003 rates and assuming no changes in debt or cash from the December 31, 2003 levels, the additional annual net expense would be \$0.8 million on a pre-tax basis. The calculation excludes any additional expense on fixed rate debt that upon maturity may or may not be extended at the prevailing interest rates.

Our international operations sell products priced in foreign currencies, mainly the euro, yen and sterling, while the majority of these products' costs are incurred in United States dollars. We are exposed to currency movements in that if the United States dollar strengthens, the translated value of the foreign currency sale and the resulting margin on that sale will be reduced. We

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typically cannot increase the price of our products for short-term exchange rate movements because of our local competition. To minimize this exposure, we may purchase foreign currency forward contracts, options and collars. Should the dollar strengthen, the decline in the translated value of the margins should be offset by a gain on the contract. A decrease in the value of the dollar would result in larger margins but potentially a loss on the contract, depending upon the method used to hedge the exposure. The notional value of the outstanding currency contracts was \$39.8 million as of December 31, 2003 compared to \$26.4 million as of December 31, 2002. If the dollar weakened 10% against all currencies from the December 31, 2003 exchange rates, the increased loss on the outstanding contracts as of December 31, 2003 would reduce pre-tax profits by approximately \$4.5 million. This calculation does not take into account the increase in margins as a result of translating foreign currency sales at the more favorable exchange rate, any changes in margins from potential volume fluctuations caused by currency movements or the translation effects on any other foreign currency-denominated income statement or balance sheet item.

We record the fair values of derivatives on our balance sheet in accordance with SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" and SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities." The fair values are determined by financial institutions and represent the market price for the instrument between two willing parties as of the balance sheet dates. Changes in the fair value of outstanding derivatives are recorded in equity or against income as appropriate under the statement guidelines. The fair value of the outstanding foreign currency contracts was a liability of \$2.9 million at December 31, 2003, indicating that the average hedge rates were unfavorable compared to the actual year-end market exchange rates. The fair value of the interest rate swaps was a loss of

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\$5.3 million as the available interest rates were lower than the rates fixed under the swap contracts. The net derivative loss recorded in other comprehensive income within shareholders' equity was \$3.2 million as of December 31, 2003 compared to \$7.8 million at December 31, 2002.

### OUTLOOK

Shipment and sales order trends in early 2004 were positive. Key markets for our products, including telecommunications and computer and plastic tooling, showed signs of improvement while other markets, including defense and optical media, remained strong. Shipments for the new James Webb Space Telescope have begun, and this will add to the expected revenue growth in 2004. New products from Alloy Products, TMI and WAM offer realistic opportunities for further growth in 2004. We also plan on increasing our international presence in 2004 in efforts to continue to position ourselves to capture applications in the rapidly changing and growing international markets.

We remain committed to cost control and improving operational efficiencies. The margin improvements generated in 2003 demonstrated the leverage to be gained through increasing yields, optimizing machinery and inventory utilization and various cost control programs. The principles of Six Sigma will continue to be used to help drive further improvements in margins and working capital in 2004.

Improved profitability combined with working capital management should help to reduce debt in 2004. In addition, the refinanced debt brings stability to our capital structure and provides the borrowing capacity to support our growth.

We made additional progress on our CBD litigation in 2003, reducing the number of outstanding claims without a material impact on cash flows or financial position. We are encouraged by this progress but caution that it is

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difficult to predict the outcome of the remaining claims or the probability and the potential impact of future claims. The progress made thus far is a testament to our health and safety measures and our investment in worker protection, education and medical research.

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### BUSINESS

#### OVERVIEW

We are a leading global provider of high-performance engineered materials for a growing variety of commercial and industrial applications where superior performance and reliability are essential. Our engineered materials are critical components of many high-technology or high-performance products and enable those products to be made stronger, smaller and lighter, with improved performance characteristics. We produce and distribute high-performance beryllium products, alloy products, electronic products, precious metal products and engineered material systems. Our engineered materials have product applications in a variety of end-use markets, including telecommunications and computer, automotive electronics, optical media, industrial components, appliance, aerospace and defense.

Beryllium is a key raw material in many of our products. Beryllium is a naturally occurring element -- number four on the periodic table of elements, with the symbol "Be" -- and is the lightest structural metal on Earth. It is stiffer than steel, lighter than aluminum and possesses other unique mechanical and thermal properties. Beryllium is extracted from bertrandite and beryl ores. We operate the only active bertrandite ore mine in the developed world, located on 7,500 acres in Juab County, Utah. Through our subsidiaries Brush Wellman Inc., Brush Resources Inc. and Brush Ceramic Products Inc., we are the world's only fully integrated provider of beryllium, beryllium-containing alloys and beryllia ceramics.

We were organized as a holding company for our various businesses in 2000. Our subsidiary Brush Wellman Inc. was founded in 1931 as The Brush Beryllium Company, was publicly traded since 1956 and was listed on the NYSE in 1972. We currently operate 16 manufacturing facilities located in the United States, Singapore and the Philippines. We also have global service and distribution centers in Germany, Japan, Singapore, England and the United States, and sales offices throughout the United States, China and Taiwan.

We have two business segments: Metal Systems Group and Microelectronics Group. Our Metal Systems Group accounted for approximately 60% of our sales during 2003, and our Microelectronics Group accounted for approximately 39% of our sales during 2003. The balance of our sales during 2003 were from Brush Resources, which sells beryllium hydroxide produced through its Utah operations to businesses within our Metal Systems Group and to outside customers.

#### METAL SYSTEMS GROUP

Our Metal Systems Group includes Alloy Products, Beryllium Products and Technical Materials Inc., or TMI.

Alloy Products, our largest business, manufactures and sells copper and nickel-based alloy systems, most of which incorporate beryllium. These beryllium alloys exhibit high strength and hardness, good formability and excellent resistance to corrosion, wear and fatigue, while retaining good thermal and electrical conductivity. They often are the material of choice for critical components in cell phones and wireless communications equipment, notebook and network computers and web servers, PDAs, automotive electronics and industrial

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products. Alloy Products also manufactures non-beryllium-containing alloys -- including ToughMet (R), a copper-nickel-tin alloy -- which are corrosion and wear resistant, have excellent lubricity properties and are used in plastic mold tooling, aerospace, oil and gas and heavy equipment product applications.

Beryllium Products manufactures pure beryllium and aluminum-beryllium composites that are used in many high-performance applications, primarily for the defense and aerospace industries. Beryllium's unique properties -- stiffness, strength, lightweight, temperature resistance and reflectivity -- are critical to a number of NASA programs.

TMI produces engineered material systems including clad metals, plated metals and electron beam welded, solder coated and reflow materials. These engineered material systems are produced by combining precious and non-precious metals in continuous strip form, which provide a variety of thermal, electrical or mechanical properties over a surface area or particular section of the material. TMI's products are used in

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complex electrical components in telecommunications systems, automotive electronics, semi-conductors and computers, as well as other high-technology applications.

### MICROELECTRONICS GROUP

Our Microelectronics Group includes Williams Advanced Materials Inc., or WAM, and Electronic Products, which consists of Brush Ceramic Products and Zentrix Technologies Inc.

WAM manufactures precious metal and specialty alloy products specifically fabricated to meet the exacting standards required in high reliability applications for the microelectronics, semi-conductor, optical media, including DVDs, electron tube, magnetic head, aerospace and performance film industries.

Brush Ceramic Products produces beryllia ceramic materials used in wireless telecommunications, laser, medical and defense applications. Zentrix manufactures electronic packaging and circuitry used in wireless telecommunications, automotive, medical, aerospace and defense applications.

### OUR FINANCIAL AND OPERATIONAL INITIATIVES

After generating record sales of \$147.2 million during the fourth quarter of 2000 and strong sales of \$145.5 million during the first quarter of 2001, we experienced a dramatic and sustained decline in sales. Our quarterly revenue has ranged between approximately \$89 million and \$106 million since the second quarter of 2001. This drop in sales levels was primarily due to the collapse of the global telecommunications and computer market, which accounted for approximately 50% of our sales in 2000 and approximately 35% of sales in 2003. As a result, we recorded significant operating losses in 2001, 2002 and 2003.

In 2001, we implemented several financial and operational initiatives designed to return us to consistent profitability. These initiatives are focused on five key areas: reducing debt, reducing overhead, improving margins, broadening our revenue base and positioning ourselves to capitalize on a general economic recovery, including a recovery in the telecommunications and computer market.

Through these initiatives, we have reduced total debt, off-balance sheet financing and precious metal consignment obligations by more than \$80 million since the end of 2000. In December 2003, we completed a five-year, \$147.5

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million debt refinancing that lowered costs compared to an existing credit and lease facility. We used the proceeds from the transaction to retire existing debt and terminate an existing key off-balance sheet obligation through the purchase of certain leased assets. The refinancing also provides increased liquidity to support working capital requirements for future growth. We achieved targeted overhead cost reductions through, among other things, improved efficiencies, a 27% reduction in headcount from 2000 year-end levels, a wage freeze and fringe benefit reductions. Despite a decline in revenue, our variable margins, which we define as our sales less materials and direct manufacturing costs, as a percent of sales, have improved approximately 2.3 percentage points since 2000. In 2003, Alloy Products reduced manufacturing cycle times for our alloy products by 18%, improved manufacturing inventory turns by 48%, raised yields by 11% and shipped 23% more pounds per manufacturing employee. We also broadened our revenue base through the introduction of several new products for existing and new markets and positioned ourselves to capitalize on growth in Asia by developing sales, marketing and distribution capabilities in a number of markets in the region.

### OUR COMPETITIVE STRENGTHS

#### UNIQUE STATUS AS A FULLY INTEGRATED PROVIDER OF BERYLLIUM PRODUCTS

We operate the only active bertrandite ore mine in the developed world and are the world's only fully integrated provider of beryllium, beryllium-containing alloys and beryllia ceramics. We mine bertrandite ore at our 7,500-acre mine in Juab County, Utah and extract beryllium from that ore at our processing facility in Delta, Utah. Based on average production levels in recent years, our proven bertrandite ore reserves would last approximately 100 years. As a fully integrated provider, we offer our customers the convenience and security of a single supply chain source for critical engineered materials.

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#### HIGH BARRIERS TO ENTRY

Our vertical integration, access to beryllium resources, know-how and expertise in refining and processing beryllium and beryllium-containing materials, and the capital investment required in the plant, equipment and health and safety infrastructure for our business establish high barriers to entry for potential competitors.

#### PRODUCT BREADTH WITHIN EXISTING MARKETS

Each of our businesses provides a diverse selection of products. Product breadth is an important consideration for many customers and distributors in their selection of suppliers. Our extensive product offerings provide an advantage in developing and maintaining relationships with OEMs and in establishing partnerships with distributors.

#### GLOBAL DISTRIBUTION NETWORK

Our global distribution network allows us to actively market our products and effectively respond to our customers' needs throughout the world. This network includes sales, service and distribution centers in the United States and in key European and Asian markets, as well as sales offices throughout the United States, China and Taiwan. We augment our internal distribution capabilities with a worldwide network of independent distributors.

#### STRATEGIC CUSTOMER RELATIONSHIPS

We have established long-term relationships with a variety of customers in



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key growth end markets. These relationships allow us to work cooperatively with customers in their new product development activities, which often results in our products being included in design specifications for a customer's new product. We believe that these relationships have resulted from our responsiveness, our ability to meet special customer requirements based on innovative technology, the quality of our products and the speed of our delivery.

### TECHNOLOGICAL CAPABILITIES AND PRODUCT QUALITY

We believe that our precious and base metal alloys, precious metal products, precious metal refining, precious metal plating technologies, customized machinery, processes and attention to quality are competitive advantages. A portion of our products and processes are proprietary. We believe that our products' superior characteristics and performance tolerances provide an important competitive advantage, particularly in the sophisticated alloys required for the most demanding end user applications.

### CAPACITY TO SUPPORT PROFITABLE MARKET GROWTH

As the market's demand for engineered materials increases, we are well-positioned to expand our manufacturing output without significant incremental cash investment. In addition to manufacturing capacity, our focus on Six Sigma and lean manufacturing techniques and emphasis on worker productivity have significantly improved our manufacturing efficiency and have positioned us to improve our profitability. Six Sigma is an analytical process that helps companies to improve efficiency, quality and customer satisfaction while reducing cycle time and operating costs.

### SIGNIFICANT OPERATING EXPERTISE

Our senior managers have significant experience in the engineered materials industry. We believe that our management team is successfully implementing our financial and operational initiatives to return us to profitability. We also believe that our management team's extensive experience positions us to identify and capitalize on emerging growth opportunities.

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### OUR GROWTH STRATEGY

Our objective is to grow our business profitably while strengthening our position as a leading global provider of high-performance engineered materials. Key elements of our growth strategy are to:

#### CAPTURE IMPROVED DEMAND IN TELECOMMUNICATIONS AND COMPUTER MARKET

We are positioned to benefit from an increase in equipment spending and a general improvement in the conditions of the telecommunications and computer market. During 2003, demand for telecommunications and computer products began to improve as commercial and industrial users began to make more significant expenditures on information and communication systems. This increasing demand among commercial customers was augmented by increasing consumer demand for cellular phones, wireless communication systems and other communication products. We are well positioned in these markets and expect to benefit from improvements in market conditions.

#### CAPITALIZE ON THE TREND TOWARDS HIGHER PERFORMANCE AND MINIATURIZATION OF ELECTRONIC COMPONENTS

We seek to capitalize on our ability to provide our customers with

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engineered materials that are well suited to meet the demanding standards associated with the trend towards higher performance and miniaturization of electronic components. New electronic components must meet enhanced performance requirements, which in turn require materials that can meet demanding mechanical, electrical and thermal properties. These demands for heightened performance are coupled with ongoing efforts to make these components stronger, smaller and lighter. As manufacturers continue to miniaturize their products, more high-performance engineered materials capable of meeting stringent performance and reliability standards need to be included in those products.

### EXPAND AND DIVERSIFY OUR REVENUE BASE

We seek to build on existing customer relationships and our core manufacturing competencies to increase the breadth of our product offerings in existing markets and diversify into additional markets. We intend to reduce our susceptibility to economic cycles and increase our prospects for profitable growth by continuing to expand the markets and customers we serve and products we offer.

Today, the telecommunications and computer market comprises approximately 35% of worldwide sales versus nearly 50% in 2001. We are not content to "wait it out" until there is a robust recovery in the telecommunications and computer market. Although we remain well-positioned in existing markets, efforts are continuing to broaden the product base and diversify into other potential long-term growth markets.

Some examples of our new products and their applications and markets include:

PRODUCT	APPLICATION/MARKET
Strip New Product Forms	Tubing, Bearings and Other - Oil and Gas - Instrumentation - Transportation
New Strip Alloys—Alloy 390	Electronics Market
MoldMAX(R) XL	Plastic Tooling
ToughMet (R)	Bearings and Wear Applications
Undersea Housings	Marine and Power Systems
New Silver Alloy	Optical Media

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The following charts indicate our percentage of sales by market for years 2000 and 2003:

2000

TELECOM/COMPUTER	AUTOMOTIVE	INDUSTRIAL	OPTICAL MEDIA	AEROSPACE/DE
49	11	11	10	6
TELECOM/COMPUTER	OTHER			

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2003

TELECOM/COMPUTER -----	AUTOMOTIVE -----	OPTICAL MEDIA -----	INDUSTRIAL -----	AEROSPACE/DE -----
35	14	13	11	9

TELECOM/COMPUTER -----	OTHER -----
35	11

INCREASE OUR GLOBAL PRESENCE

We support our customers in their geographic markets throughout the world. As the trend towards high-performance materials and miniaturization continues, we believe that new market opportunities and new potential customers will emerge. We intend to continue to expand our sales, marketing and service capabilities into international markets in response to our existing customers' needs and new business opportunities. Our presence in the local markets of our customers allows us to quickly respond to their needs and requests, which we believe provides us with a key competitive advantage. For example, Alloy Products is focused on expanding its foothold in the high growth China and other Asian markets where consumer, personal computer and wireless applications are key drivers to future development. Alloy Products' focus in this region complements the solid foundations it has already established in Europe.

INCREASE OPERATIONAL EFFICIENCY

We intend to build upon the success of our existing cost reduction and manufacturing efficiency initiatives to improve margins and position ourselves for profitable growth in both strong and weak economic environments. Despite the fall in revenue, variable margins, defined as sales less materials and direct manufacturing costs, have improved approximately 2.3% since 2000.

In 2003, for example, Alloy Products reduced manufacturing cycle times by 18%, improved manufacturing inventory turns by 48%, raised yields by 11% and shipped 23% more pounds per manufacturing employee. At TMI, margins improved and earnings increased despite lower sales. At WAM, after considering metal prices, operating margin increased approximately 10%. In 2003, margins also improved in all of our other units.

We have programs in place, including Six Sigma and lean manufacturing techniques, to address and improve costs, manufacturing processes and inventory utilization on an ongoing basis.

As the following chart indicates, our efforts to improve margins have succeeded, despite the fall in our revenue:

YEAR ----	VARIABLE MARGIN % -----	GROSS MARGIN % -----
2000	39.7%	21.0%

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2001	40.1%	14.3%
2002	40.3%	12.9%
2003	42.0%	18.2%

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### PURSUE SELECTIVE ACQUISITIONS IN OUR SELECTIVE MARKETS

We intend to selectively pursue acquisitions that can extend our geographic reach, expand and diversify our customer base or increase the breadth of our product and services offerings.

### SEGMENT REPORTING

Our operations are organized under two reportable segments, the Metal Systems Group and the Microelectronics Group, as follows:

(FLOWCHART)

The Metal Systems Group includes Brush Wellman Inc. (Alloy Products and Beryllium Products) and TMI. The Microelectronics Group includes WAM and Electronic Products, which in turn, consists of Zentrix, and Brush Ceramic Products Inc., a wholly owned subsidiary of Brush Wellman Inc. Portions of Brush International, Inc. are included in both segments. Included in "All Other" in our consolidated financial statements included elsewhere in this prospectus are the operating results from BEM Services, Inc. and Brush Resources Inc., two of our wholly owned subsidiaries. BEM Services charges a management fee for services, such as administrative and financial oversight, to the other businesses within our company on a cost-plus basis. Brush Resources sells beryllium hydroxide produced through its Utah operations to outside customers and to businesses within the Metal Systems Group.

### METAL SYSTEMS GROUP

The Metal Systems Group is comprised of Alloy Products, Beryllium Products and TMI. In 2003, 60% of our sales were from this segment (61% in 2002 and 63% in 2001). As of December 31, 2003 the Metal Systems Group had 1,125 employees.

### Alloy Products

Alloy Products, the largest unit within our company and this segment, manufactures and sells copper and nickel-based alloy systems, the majority of which also contain beryllium. These products are metallurgically tailored to meet specific customer performance requirements. Copper-beryllium alloys exhibit high electrical and thermal conductivities, high strength and hardness, good formability and excellent resistance to corrosion, wear and fatigue. These alloys, sold in strip and bulk form, are ideal choices for demanding applications in the following markets:

- telecommunications and computer;
- automotive electronics;
- aerospace;
- oil and gas;
- undersea housings for electronics equipment;
- foundry;

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- appliances; and
- plastic mold tooling.

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Copper-beryllium strip is an ideal electronic connector material for telecommunications and computer and automotive electronic product applications. As electronic components require miniaturization, thinner connector design, lighter material and faster processing, copper-beryllium can provide the appropriate level of physical properties for applications such as electromagnetic imaging shieldings, burn-in test sockets, modular jacks, processor sockets and battery and subscriber identity module, or SIM, card contacts. Alloy Products recently introduced Alloy 390(TM) specifically designed for high-power applications, providing a unique combination of high strength and high thermal and electrical conductivity.

Alloy Products also manufactures non-beryllium-containing alloys including ToughMet(R), a copper-nickel-tin alloy. Bearings made with ToughMet(R) last longer and require less frequent maintenance and lubrication while significantly reducing unplanned downtime. These alloys are corrosion and wear resistant and have excellent lubricity properties and are used in plastic mold tooling, heavy equipment, aerospace and oil and gas product applications.

Alloy products are sold domestically through our distribution centers and internationally through our independent distribution centers and independent sales representatives. NGK Insulators, Ltd. of Nagoya, Japan, with subsidiaries in the United States and Europe, competes with beryllium alloy strip products and beryllium products. Alloy Products also competes with alloy systems manufactured by Olin Corporation, Wieland Electric, Inc. and Stolberger Metallwerke GmbH, Nippon Mining, PMX and other generally less expensive materials, including phosphor bronze, stainless steel and other specialty copper and nickel alloys that are produced by a variety of companies around the world. In the area of beryllium alloy bulk products (bar, plate, tube and rod), in addition to NGK Insulators, we compete with several smaller regional producers such as Freedom Alloys in the United States, LaBronze Industriel in Europe and Young II in Asia.

The following charts highlight the markets and applications for Alloy Products:

### ALLOY STRIP PRODUCTS

MARKET	APPLICATION
Automotive	Power, communication, and signal distribution components such as connectors, switches and relays used in cars and light trucks.
Telecommunications	Strip and wire components used as connectors, contacts, shielding, switch on cell phones, pagers, wireless base stations, transmission equipment and other communication networks.
Computers	Strip and wire components used as connectors, shielding and contacts on desktop computers, PDAs, workstations, servers and other data storage devices made by major brands such as

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Sun, HP, Compaq and Intel.

Appliance

Strip and wire components for power delivery and controls.

### ALLOY BULK PRODUCTS

MARKET	APPLICATION
Automotive	Plate and bar products for tooling for plastic molded components resistance welding equipment, valve and suspension components.
Oil & Gas	Rod and tube product for instrumentation housings, control valves and drilling components.
Aerospace	Rod and tube products for bushings and bearings.
Foundry	Casting products for power delivery systems, automotive castings, and industrial equipment.
Marine	Rod, tube, and custom engineered products for signal transmission and amplification.
Consumer	Plate and rod products for containers.

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### Beryllium Products

Beryllium Products manufactures products that include beryllium, AlBeMet (R) and E-materials. Beryllium is a lightweight metal possessing unique mechanical and thermal properties. Its specific stiffness is much greater than other engineered structural materials such as aluminum, titanium and steel. Beryllium is extracted from both bertrandite and beryl ores.

In September 2003, beryllium was chosen by Northrop Grumman Space Technology as the material for the 18 segment, 6.5-meter primary mirror of NASA's James Webb Space Telescope. This state-of-the-art lightweight beryllium mirror will allow scientists to see ten to eleven billion light years away. We expect this application to add approximately \$15 million in sales of optical grade beryllium over the next two to three years.

Beryllium-containing products are sold throughout the world through a direct sales organization and through our independent distribution centers. While Beryllium Products is the only domestic producer of metallic beryllium, it competes primarily with engineering designs utilizing other materials. Our Beryllium Products include:

- Beryllium metal -- One of the lightest, low density metals, beryllium metal is a vacuum cast and hot/cold isostatically pressed powder-derived metal. Beryllium metal exhibits high stiffness, thermal conductivity and low thermal expansion. Beryllium metal is transparent and is a neutron reflector.
- AlBeMet (R) -- These lightweight aluminum/beryllium composites are powder-derived metals and are either extruded, rolled sheet or

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isostatically pressed. AlBeMet(R) exhibits many of the same properties as beryllium metal but is easier to fabricate.

- E-Materials -- These low expansion, lightweight electronic packaging materials are composites of beryllium metals and beryllium oxide.
- Beryllium oxide and chemicals -- Beryllium oxide and chemicals are specialty beryllium-containing chemicals and ceramic-grade beryllium oxide powder.

The following chart highlights the markets and applications for our Beryllium Products:

### BERYLLIUM PRODUCTS

MARKET	APPLICATION
Optics	Optical substrate and support structures for visual and infrared target acquisition systems in fighter aircraft, helicopters and tanks, surveillance systems and astronomical telescopes.
Aerospace/Defense	Structures and sensors for defense and commercial telecommunications satellites.
Electronics	Electronic packaging, including circuit boards, covers and packages, for defense avionics, radar and electronic countermeasures systems for helicopters and fighter aircraft.
Medical	Radiographic tube components for medical diagnostic equipment such as x-ray, mammography and CAT-scan equipment and industrial x-ray equipment.
Optical Scanning	Mirrors for laser scanners used in reprographic and other high-performance laser applications.
Motion Control	Structural components for high-precision semi-conductor processing and industrial robotic equipment.

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### TMI

TMI manufacturers engineered material systems that are combinations of precious and non-precious metals in continuous strip form and are used in complex electronic and electrical components in telecommunications systems, automotive electronics, semi-conductors and computers. TMI's products are sold directly and through its sales representatives. TMI has limited competition in the United States and several European manufacturers are competitors for the sale of inlaid strip. Strip with selective electroplating is a competitive alternative as are other design approaches. Additional competition for TMI exists in the plating area in North America and worldwide. The following chart indicates some of the applications of TMI products:

### TMI PRODUCT APPLICATIONS

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- |                  |                  |                |                              |
|------------------|------------------|----------------|------------------------------|
| - Capacitors     | - Leadframes     | - Relays       | - Medical Devices            |
| - Connectors     |                  |                | - Heat Transfer Applications |
|                  | - Micro Motors   | - Sensors      |                              |
| - Contact Probes | - Microwaves     | - Solder Clips | - Fuel Cells                 |
| - Fuses          | - Potentiometers | - Switches     | - Computer Disk Drive Arms   |

### Sales and Backlog

The backlog of unshipped orders for the Metal Systems Group as of December 31, 2003, 2002 and 2001 was \$47.7 million, \$35.1 million and \$61.0 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2003 will be filled during 2004.

Sales are made to approximately 1,700 customers. Government sales, principally subcontracts, accounted for about 7.9% of Metal Systems Group net sales in 2003 as compared to 9.3% in 2002 and 3.3% in 2001. Sales outside the United States, principally to Western Europe, Canada and the Pacific Rim, accounted for approximately 42% of the Metal Systems Group sales in 2003, 35% in 2002 and 38% in 2001. Other segment reporting and geographic information is set forth in Note M to the consolidated financial statements included elsewhere in this prospectus.

### Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations for the Metal Systems Group. Expenditures for research and development amounted to \$2.8 million in 2003, \$2.5 million in 2002 and \$4.7 million in 2001. A staff of 21 scientists, engineers and technicians was employed in this effort as of year end 2003. Some research and development projects, expenditures for which are not material, were externally sponsored.

### MICROELECTRONICS GROUP

The Microelectronics Group is comprised of WAM and Electronic Products, which consists of Zentrix and Brush Ceramic Products. In 2003, 39% of our sales were from this segment, compared to 37% in 2002 and 36% in 2001. As of December 31, 2003, the Microelectronics Group had 552 employees.

### WAM

WAM manufactures and fabricates precious metal and specialty alloy metal products for the optical media, magnetic head, including magnetic resistive, or MR, and giant magnetic resistive, or GMR, materials, electron tube, performance film and the wireless, semi-conductor, photonic and hybrid segments of the microelectronics market. WAM's major product lines include vapor deposition plating materials, clad and precious metals preforms, high temperature braze materials, ultra fine wire, sealing lids for the semi-

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conductor/hybrid markets and restorative dental alloys. The following chart indicates the businesses, markets and end uses for WAM products:

WILLIAMS ADVANCED MATERIALS



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BUSINESS	MARKET	EXAMPLE OF END USE
Physical Vapor Deposition Products	<ul style="list-style-type: none"> <li>- Wireless microelectronics</li> <li>- Optical media</li> <li>- Photonics</li> <li>- Glass decorative</li> <li>- Wear resistance materials</li> </ul>	Wireless and photonic components; recordable CDs; DVDs; and faucets.
Packaging Material Products	<ul style="list-style-type: none"> <li>- Wireless</li> <li>- Photonics</li> <li>- Hybrid microelectronic devices</li> </ul>	Cellular phones, LEDs; fiber-optic networks; personal computers; military electronics; avionics; medical electronics; and appliances.
Specialty Alloy Products	<ul style="list-style-type: none"> <li>- Electron tubing</li> <li>- Photonics</li> <li>- Aerospace</li> <li>- Microelectronic packaging</li> </ul>	Cellular base stations; lasers; x-ray machines; and industrial microwaves.

WAM's products are sold directly from WAM's facilities in Buffalo, Brewster and Wheatfield, New York, Singapore, Taiwan and the Philippines, as well as through direct sales offices and independent sales representatives throughout the world. Principal competition includes companies such as Sumitomo Metals, Praxair, Inc., Honeywell International Inc. and a number of smaller regional and national suppliers.

### Electronic Products

Electronic Products has two business groups: Zentrix and Brush Ceramic Products. Zentrix processes electronic packages at our production site in Newburyport, Massachusetts. Its products are used in wireless, telecommunications, fiberoptic, automotive and defense applications. Zentrix competes with other electronic packaging suppliers, including Kyocera Corporation.

Circuits Processing Technology Inc., or CPT, a subsidiary of Zentrix, manufactures electronic circuitry and circuit components at its production site in Oceanside, California. Its products are used in defense and wireless telecommunications applications. CPT competes with other circuitry suppliers, including Anaren Microwave and Aeroflex, Inc.

Brush Ceramic Products, located in Tucson, Arizona, produces beryllia ceramics used in wireless telecommunications, laser, automotive and defense product applications. Principal competitors include CBL Ceramics Ltd. and American Beryllia, Inc. Competitive materials include aluminum nitride and metal matrix composites.

The following chart indicates the businesses and applications for Electronic Products:

#### ELECTRONIC PRODUCTS GROUP

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BUSINESS	APPLICATION
Electronic Packaging Products (Zentrix)	<ul style="list-style-type: none"><li>- RF power packages for cellular base stations and wireless data networks, cellular handsets and military radar applications.</li><li>- Automotive components for ignition systems in cars and trucks.</li><li>- Power circuit assemblies for DC motor controls.</li></ul>
Circuit Processing Technology (Zentrix)	<ul style="list-style-type: none"><li>- High frequency military and aerospace circuitry for military radar and missile guidance.</li><li>- High frequency wireless circuitry for satellite communications.</li><li>- Package components for amplifiers in fiber optic networks.</li></ul>
Brush Ceramic Products	<ul style="list-style-type: none"><li>- RF power package components for cellular base stations and high reliability military applications.</li><li>- Package components for amplifiers in fiber optic networks.</li><li>- Components for medical laser applications.</li><li>- Automotive components for ignition systems in cars and trucks.</li></ul>

### Sales and Backlog

The backlog of unshipped orders for the Microelectronics Group as of December 31, 2003, 2002 and 2001 was \$13.7 million, \$19.8 million and \$20.5 million, respectively. Backlog is generally represented by purchase orders that may be terminated under certain conditions. We expect that substantially all of our backlog of orders for this segment at December 31, 2003 will be filled during 2004.

Sales are made to approximately 1,700 customers. Government sales, principally subcontracts, accounted for less than 1% of Microelectronics Group net sales in 2003 as compared to less than 1% in 2002 and 2.8% in 2001. Sales outside the United States, principally to Western Europe, Canada and the Pacific Rim, accounted for approximately 15% of Microelectronics Group net sales in 2003, 18% in 2002 and 13% in 2001. Other segment reporting and geographic information is set forth in Note M to the consolidated financial statements included elsewhere in this prospectus.

### Research and Development

Active research and development programs seek new product compositions and designs as well as process innovations for the Microelectronics Group. Expenditures for Microelectronics Group research and development amounted to \$1.4 million for 2003, \$1.7 million for 2002 and \$1.6 million in 2001. A staff of 6 scientists, engineers and technicians was employed in this effort as of year end 2003.

### RAW MATERIALS

Our principal raw materials are beryllium (extracted from both imported beryl ore and bertrandite mined from our Utah properties), copper, gold, silver, nickel, platinum, palladium and aluminum. See ore reserve data in "Management's

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Discussion and Analysis" included elsewhere in this prospectus. We have agreements to purchase stated quantities of beryl ore, beryllium metal and beryllium-copper master alloy from the Defense Logistics Agency of the United States government. In addition, we have a long-term supply arrangement with Ulba/Kazatomprom of the Republic of Kazakhstan and its marketing representative, Nukem, Inc. of New York, to purchase quantities of beryllium-copper master and beryllium vacuum cast billet. The availability of these raw materials, as well as other materials used by us, is adequate and generally not dependent on any one supplier.

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### PATENTS AND LICENSES

We own patents, patent applications and licenses relating to certain of our products and processes. While our rights under the patents and licenses are of some importance to our operations, our business is not materially dependent on any one patent or license or on all of our patents and licenses as a group.

### REGULATORY MATTERS

We are subject to a variety of laws which regulate the manufacture, processing, use, handling, storage, transport, treatment, emission, release and disposal of substances and wastes used or generated in manufacturing. For decades, we have operated our facilities under applicable standards of inplant and outplant concentrations of beryllium in the air. The inhalation of airborne beryllium particulate may present a health hazard to certain individuals. The Occupational Safety and Health Administration is currently reviewing its beryllium standards.

### PROPERTIES

We have 16 manufacturing facilities, which are located in Arizona, California, Massachusetts, New York, Ohio, Pennsylvania, Rhode Island, Utah, the Philippines and Singapore. We also have global service and distribution centers in England, Germany, Japan, Singapore and the United States, and sales offices throughout the United States, China and Taiwan. Our material properties, all of which are owned in fee except as otherwise indicated, are as follows:

#### MANUFACTURING FACILITIES

- Brewster, New York -- A 35,000-square-foot leased facility on a 6.0-acre site for manufacturing services relating to non-precious metals.
- Buffalo, New York -- A complex of approximately 97,000 square feet on a 3.8-acre site providing facilities for manufacturing, refining and laboratory services relating to high purity precious metals.
- Delta, Utah -- An ore extraction plant consisting of 86,000 square feet of buildings and large outdoor facilities situated on a 4,400-acre site. This plant extracts beryllium from bertrandite ore from our mines as well as from imported beryl ore.
- Elmore, Ohio -- A complex containing approximately 856,000 square feet of building space on a 439-acre plant site. This facility employs diverse chemical, metallurgical and metalworking processes in the production of beryllium, beryllium oxide, beryllium alloys and related products.
- Fremont, California -- A 16,800-square-foot leased facility for the fabrication of precision electron beam welded, brazed and diffusion bonded beryllium structures.

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- Juab County, Utah -- 7,500 acres with respective mineral rights from which the beryllium-bearing ore, bertrandite, is mined by the open pit method. A portion of the mineral rights is held under lease.
- Lincoln, Rhode Island -- A manufacturing facility consisting of 140,000 square feet located on 7.5 acres. This facility produces reel-to-reel strip metal products which combine precious and non-precious metals in continuous strip form and related metal systems products.
- Lorain, Ohio -- A manufacturing facility consisting of 55,000 square feet located on 15 acres. This facility produces non-beryllium metal alloys in electronic induction furnaces which are continually cast into bar stock and heat treated.
- Newburyport, Massachusetts -- A 30,000-square-foot manufacturing facility on a four-acre site that produces alumina, beryllia ceramic and direct bond copper products.
- Oceanside, California -- Two leased facilities totaling 20,200 square feet on 1.25 acres of leased land. Over three-quarters of these facilities are comprised of clean rooms for the production of thick-film circuits and other complex circuits.
- Santa Clara, California -- A 5,800-square-foot leased facility that provides bonding services relating to physical vapor deposition materials.

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- Shoemakersville, Pennsylvania -- A 123,000-square-foot plant on a 55-acre site that produces thin precision strips of copper beryllium and other alloys and copper beryllium rod and wire.
- Singapore -- A 4,500-square-foot leased facility for the assembly and sale of precious metal hermetic sealing lids.
- Subic Bay, Philippines -- A 5,000-square-foot leased facility that manufactures Combo-Lid(R) and performs preform assembly, inspection and packaging.
- Taipei, Taiwan -- A 5,000-square-foot leased service/bonding center supporting the physical vapor deposition product market in Asia.
- Tucson, Arizona -- A complex containing approximately 63,000 square feet of building space on a ten-acre site for the production of beryllium oxide ceramic substrates.
- Wheatfield, New York -- A 29,000-square-foot facility on a 10.2-acre site for manufacturing services relating to braze material and specialty alloys.

### RESEARCH FACILITIES AND ADMINISTRATIVE OFFICES

- Cleveland, Ohio -- A 110,000-square-foot building on an 18-acre site housing corporate and administrative offices, data processing and research and development facilities.

### SERVICE AND DISTRIBUTION CENTERS

- Elmhurst, Illinois -- A 28,500-square-foot leased facility principally

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for distribution of copper beryllium alloys.

- Fairfield, New Jersey -- A 24,500-square-foot leased facility principally for distribution of copper beryllium alloys.
- Fukaya, Japan -- A 35,500-square-foot facility on 1.8 acres of land in Saitama Prefecture principally for distribution of copper beryllium alloys.
- Singapore -- A 2,500-square-foot leased sales office that houses employees of Alloy Products and WAM Far East.
- Stuttgart, Germany -- A 24,750-square-foot leased facility principally for distribution of copper beryllium alloys.
- Theale, England -- A 19,700-square-foot leased facility principally for distribution of copper beryllium alloys.
- Warren, Michigan -- A 34,500-square-foot leased facility principally for distribution of copper beryllium alloys.

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### MANAGEMENT

The following table sets forth the names and ages of our directors and executive officers, as well as the positions and offices held by those persons.

NAME	AGE	POSITION
----	---	-----
Gordon D. Harnett	61	Chairman of the Board, President, Chief Executive Officer and Director
John D. Grampa	56	Vice President Finance and Chief Financial Officer
Daniel A. Skoch	54	Senior Vice President Administration
Albert C. Bersticker	70	Director
David H. Hoag	64	Director
Joseph P. Keithley	55	Director
William B. Lawrence	59	Director
William P. Madar	64	Director
William G. Pryor	64	Director
N. Mohan Reddy	50	Director
William R. Robertson	62	Director
John Sherwin, Jr.	65	Director

Set forth below is biographical information for our directors and executive officers.

**GORDON D. HARNETT.** Mr. Harnett was elected our Chairman of the Board, Chief Executive Officer and Director effective January 1991. In addition, Mr. Harnett has served as our President from January 1991 to May 2001 and from May 2002 to the present. He is a director of Lubrizol Corporation, EnPro Industries, Inc. and PolyOne Corporation.

**JOHN D. GRAMPA.** Mr. Grampa was elected our Vice President Finance and Chief Financial Officer in November 1999. He had served as our Vice President Finance since October 1998. Prior to that, he had served as Vice President,

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Finance for the Worldwide Materials Business of Avery Dennison Corporation since March 1994 and held other various financial positions at Avery Dennison Corporation from 1984.

DANIEL A. SKOCH. Mr. Skoch was elected our Senior Vice President Administration in July 2000. Prior to that time, he had served as our Vice President Administration and Human Resources since March 1996.

ALBERT C. BERSTICKER. Mr. Bersticker has been a Director since 1993. He was elected Chairman of Ferro Corporation, a producer of a diverse array of performance materials, in February 1996 and retired in 1999. He served as Chief Executive Officer of Ferro Corporation, a producer of performance materials, from 1991 until January 1999 and as its President from 1988 until February 1996. Mr. Bersticker is the non-executive Chairman of the Board of Oglebay Norton Company. Oglebay Norton Company filed for chapter 11 bankruptcy protection in February 2004. He is currently Secretary, Treasurer and a member of the Board of Directors of St. John's Medical Center in Jackson, Wyoming.

DAVID H. HOAG. Mr. Hoag has been a Director since 1999. He retired as Chairman of the Board of The LTV Corporation in January 1999. He had served as its Chairman since June 1991, as Chief Executive Officer from February 1991 until September 1998 and as President from January 1991 until July 1997. The LTV Corporation filed for chapter 11 bankruptcy protection in December 2000. Mr. Hoag is a director of Lubrizol Corporation, NACCO Industries, Inc., PolyOne Corporation and The Chubb Corporation. He is also a member of the Boards of Trustees of Allegheny College and University Hospitals of Cleveland.

JOSEPH P. KEITHLEY. Mr. Keithley has been a Director since 1997. He has been Chairman of the Board of Keithley Instruments, Inc., a designer, developer, manufacturer and marketer of complex electronic instruments and systems, since 1991. He has served as Chief Executive Officer of Keithley Instruments, Inc. since November 1993 and as its President since May 1994. He is a director of Keithley Instruments, Inc. and Nordson Corporation, a designer, manufacturer and marketer of precision dispensing systems.

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WILLIAM B. LAWRENCE. Mr. Lawrence has been a Director since 2003. He served as Executive Vice President, General Counsel & Secretary of TRW Inc., an automotive, defense, aerospace and information technology company, from 1997 until the sale of TRW to Northrop Grumman Corporation in December 2002. Prior to 1997, he also held various other positions at TRW since 1976. Mr. Lawrence has been a director of Ferro Corporation since 1999.

WILLIAM P. MADAR. Mr. Madar has been a Director since 1988. He retired as Chairman of the Board of Nordson Corporation effective March 2004, a position he held since December 1997. Prior to that time, he served as Vice Chairman of Nordson Corporation from August 1996 until October 1997 and as Chief Executive Officer from February 1986 until October 1997. From February 1986 until August 1996, he also served as its President. He is a director of Lubrizol Corporation and Nordson Corporation.

WILLIAM G. PRYOR. Mr. Pryor has been a Director since 2003. He retired as President of Van Dorn Demag Corporation, a manufacturer of plastic injection molding equipment, in 2002. He had also served as President and Chief Executive Officer of Van Dorn Corporation, predecessor to Van Dorn Demag Corporation. Mr. Pryor is a director of Oglebay Norton Company and Oxis International, Inc., a biopharmaceutical/nutraceutical/diagnostic company.

DR. N. MOHAN REDDY. Dr. Reddy has been a Director since 2000. He has been a professor at the Weatherhead School of Management, Case Western Reserve

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University for the past five years. Dr. Reddy is a director of Keithley Instruments, Inc.

WILLIAM R. ROBERTSON. Mr. Robertson has been a Director since 1997. He has been a Managing Partner of Kirtland Capital Partners, a private venture capital fund business, since September 1997. Prior to that time, he was president and a director of National City Corporation from October 1995 until July 1997. He also served as Deputy Chairman and a director of National City Corporation from August 1988 until October 1995. Mr. Robertson is a member of the Board of Managers of the Prentiss Foundation and a member of and a vice president of the Board of Trustees of the Cleveland Museum of Art. He is a director of Gries Financial LLC, Fairport Asset Management LLC, and Instron Corporation, a designer, manufacturer, marketer and servicer of materials and structural testing systems, software and accessories.

JOHN SHERWIN, JR. Mr. Sherwin has been a Director since 1981. He has been President of Mid-Continent Ventures, Inc., a private venture capital fund business, during the past five years. Mr. Sherwin is a director of John Carroll University and Shorebank Cleveland, a trustee of The Cleveland Clinic Foundation and Chairman of The Cleveland Foundation.

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### SELLING SHAREHOLDERS

In connection with the debt refinancing we completed on December 4, 2003, we issued warrants to purchase 115,000 common shares to our subordinated lenders as part of the consideration for a \$35.0 million subordinated loan. One of these warrants to purchase 16,429 of our common shares was issued to Bank One, NA, which subsequently transferred the warrant to one of its affiliates, First Chicago Capital Corporation. In addition, one of the warrants to purchase 20,000 of our common shares was issued to H/Z Acquisition Partners LLC, which subsequently transferred the warrant to one of its affiliates, Cochran Road, LLC. The common shares registered for sale by the selling shareholders in the registration statement of which this prospectus is a part are the common shares the selling shareholders have acquired or may acquire upon exercise of those warrants. The table below sets forth information regarding ownership of our common shares by the selling shareholders and the number of shares that may be sold by them under this prospectus.

None of the selling shareholders has had any position or office or material relationship with us during the past three years, other than as a security holder, except that certain affiliates of the selling shareholders are lenders under the above-mentioned subordinated loan and/or our \$105.0 million senior secured credit facility. The \$35.0 million subordinated loan and the \$105.0 million senior secured credit facility are described in the notes to our consolidated financial statements included elsewhere in this prospectus.

NAME -----	SHARES BENEFICIALLY OWNED PRIOR TO THIS OFFERING		SHARES OFFERED IN THIS OFFERING	SHARE BENEFICI AFTER TH
	NUMBER -----	PERCENT -----		
First Chicago Capital Corporation.....	16,429 (1)	*	16,429	
Cochran Road, LLC.....	20,000 (2)	*	20,000	
Upper Columbia Capital Company, LLC.....	78,571 (3)	*	78,571	

-----  
\* Less than 1% of outstanding common shares.

(1) Includes 16,429 common shares issuable upon exercise of the warrants.

(2) Includes 20,000 common shares issuable upon exercise of the warrants.

(3) Includes 78,571 common shares issuable upon exercise of the warrants.

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#### DESCRIPTION OF CAPITAL STOCK AND WARRANTS

Upon completion of this offering, there will be 18,559,184 common shares issued and outstanding, based on the number of shares outstanding as of March 31, 2004, and no shares of preferred stock issued and outstanding.

As of March 31, 2004, our authorized capital stock consisted of 60,000,000 common shares, no par value, of which 16,744,184 shares were issued and outstanding, and 5,000,000 shares of preferred stock, no par value, of which no shares were issued and outstanding.

#### COMMON SHARES

Each outstanding common share is entitled to one vote on all matters submitted to a vote of shareholders. Pursuant to Ohio law, holders of our common shares have the right to cumulative voting. Our articles of incorporation provide for our board to be divided into three classes of directors, as nearly equal in number as possible, serving staggered terms. Approximately one-third of our board will be elected by the shareholders each year.

Subject to any superior rights of any holders of preferred stock, each outstanding common share will be entitled to such dividends as may be declared from time to time by our board of directors out of legally available funds. We have no current intention to declare dividends on our common shares in the near term. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business, and our ability to pay dividends is restricted by the terms of our credit facilities. In the event of our liquidation, dissolution or winding up, holders of our common shares will be entitled to their proportionate share of any assets remaining after payment of liabilities and any amounts due to the holders of preferred stock. Holders of our common shares have no preemptive rights and no right to convert or exchange their common shares into any other securities. No redemption or sinking fund provisions apply to our common shares. All outstanding common shares are, and all common shares to be outstanding upon completion of this offering will be, fully paid and non-assessable.

Under the terms of our shareholder rights plan, one preferred share purchase right is associated with each of our outstanding common shares. Until the occurrence of specified events described in the shareholder rights plan, the rights are not exercisable, are evidenced by the certificates for our common shares and may be transferred only with our common shares. The rights will expire on May 16, 2010.

#### PREFERRED STOCK

Our board of directors is authorized, without shareholder approval, to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions granted to or imposed upon



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the preferred stock, including voting rights, dividend rights, conversion rights, terms of redemption, liquidation preference, sinking fund terms and the number of shares constituting any series or the designation of a series. Our board of directors can, without shareholder approval, issue preferred stock with voting and conversion rights that could adversely affect the voting power of the holders of common shares. Any preferred stock issued would also rank senior to our common shares as to rights up on liquidation, winding-up or dissolution. The issuance of convertible preferred stock could have the effect of delaying, deferring or preventing a change in control of our company. We have no present plan to issue any shares of preferred stock.

### WARRANTS

In connection with the debt refinancing completed on December 4, 2003, we issued warrants to purchase 115,000 common shares to our subordinated lenders as part of the consideration for a \$35 million subordinated loan. One of these warrants to purchase 16,429 of our common shares was issued to Bank One, NA, which subsequently transferred the warrant to one of its affiliates, First Chicago Capital Corporation. In addition, one of the warrants to purchase 20,000 of our common shares was issued to H/Z Acquisition Partners LLC, which subsequently transferred the warrant to one of its affiliates, Cochran Road, LLC. The initial exercise price of the

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warrants is \$0.01 per share. The warrants are subject to anti-dilution and other adjustments. The warrants are immediately exercisable and expire at 5:00 p.m., New York time, on December 5, 2008. All of the warrants have been or will be exercised in connection with this offering.

### REGISTRATION RIGHTS

The selling shareholders have demand registration rights with respect to common shares that may be issued upon exercise of the warrants pursuant to the terms of their warrants. Pursuant to those rights, we are required, upon request, to file a registration statement relating to the common shares as expeditiously as possible after the filing of our annual report on Form 10-K for the fiscal year ending December 31, 2003. We are also required to use our commercially reasonable efforts to cause such registration statement to become and remain effective for a period of time not to exceed 120 days. We have also granted the selling shareholders "piggyback" registration rights pursuant to the warrants, which entitle the selling shareholders to notice and to include, at our expense, their common shares in some registrations of our common shares. The selling shareholders have exercised their rights to include in this offering the common shares they have received or will receive upon exercise of the warrants described above.

### OHIO CONTROL SHARE STATUTE

Section 1701.831 of the Ohio Revised Code requires the prior authorization of the shareholders of certain corporations in order for any person to acquire, either directly or indirectly, shares of that corporation that would entitle the acquiring person to exercise or direct the exercise of 20% or more of the voting power of that corporation in the election of directors or to exceed specified other percentages of voting power. In the event an acquiring person proposes to make such an acquisition, the person is required to deliver to the corporation a statement disclosing, among other things, the number of shares owned, directly or indirectly, by the person, the range of voting power that may result from the proposed acquisition and the identity of the acquiring person. Within 10 days after receipt of this statement, the corporation must call a special meeting of shareholders to vote on the proposed acquisition. The acquiring person may

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complete the proposed acquisition only if the acquisition is approved by the affirmative vote of a majority of the voting power of the corporation in the election of directors represented at the meeting and a majority of the portion of the voting power of all shares entitle to vote in the election of directors represented at the meeting excluding the voting power of all "interested shares" represented at the meeting. Interested shares include any shares held by the acquiring person and those held by officers and directors of the corporation as well as by certain others, including many holders commonly characterized as arbitrageurs. Section 1701.831 does not apply to a corporation if its articles of incorporation or code of regulations state that the statute does not apply to that corporation. Neither our articles of incorporation nor our regulations contain a provision opting out of this statute.

### OHIO INTERESTED SHAREHOLDER STATUTE

Chapter 1704 of the Ohio Revised Code prohibits certain corporations from engaging in a "chapter 1704 transaction" with an "interested shareholder" for a period of three years after the date of the transaction in which the person became an interested shareholder, unless, among other things:

- the articles of incorporation expressly provide that the corporation is not subject to the statute (we have not made this election); or
- the board of directors of the corporation approves the chapter 1704 transaction or the acquisition of the shares before the date the shares were acquired.

After the three-year moratorium period, the corporation may not consummate a chapter 1704 transaction unless, among other things, it is approved by the affirmative vote of the holders of at least two-thirds of the voting power in the election of directors and the holders of a majority of the voting shares, excluding all shares beneficially owned by an interested shareholder or an affiliate or associate of an interested shareholder, or the shareholders receive certain minimum consideration for their shares. A "chapter 1704 transaction" includes certain mergers, sales of assets, consolidations, combinations and majority share acquisitions

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involving an interested shareholder. An "interested shareholder" is defined to include, with limited exceptions, any person who, together with affiliates and associates, is the beneficial owner of a sufficient number of shares of the corporation to entitle the person, directly or indirectly, alone or with others, to exercise or direct the exercise of 10% or more of the voting power in the election of directors after taking into account all of the person's beneficially owned shares that are not then outstanding.

### RELATED PARTY TRANSACTIONS

Pursuant to our articles of incorporation, related party transactions require the affirmative vote of both a majority of our outstanding voting stock and a majority of the portion of our outstanding voting stock not including the voting stock owned by the related party involved in the related party transaction. A "related party" means any party, together with its affiliates or associates, that is the beneficial owner of 10% or more but less than 90% of our voting stock. A "related party transaction" means:

- any merger or consolidation between us or a subsidiary with a related party;
- any transaction outside the ordinary course of business between us or a subsidiary and a related party involving the acquisition or

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disposition of assets for \$5 million or more in value;

- the issuance or transfer of any of our securities or that of our subsidiaries to a related party, excluding pro rata distributions to all of our shareholders;
- any reclassification of our securities or any recapitalization or other transaction that would increase the voting power of a related party; and
- the adoption by us of any liquidation or dissolution plan or proposal which the related party votes in favor of.

TRANSFER AGENT AND REGISTRAR

National City Bank, N.A. is the transfer agent and registrar for our common shares.

LISTING

Our common shares are listed on the New York Stock Exchange under the symbol "BW."

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UNDERWRITING

Subject to the terms and conditions set forth in an underwriting agreement by and among the selling shareholders, KeyBanc Capital Markets, a division of McDonald Investments Inc., as representative for the underwriters named in the agreement, and us, we and the selling shareholders have agreed to sell to each underwriter, and each underwriter has severally agreed to purchase from the selling shareholders and us, the number of common shares set forth opposite its name in the table below.

UNDERWRITER -----	NUMBER OF SHARES -----
KeyBanc Capital Markets, a division of McDonald Investments Inc. ....	
Total.....	1,815,000 =====

Under the terms of the underwriting agreement, the underwriters are committed to purchase all of these common shares if any shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We and the selling shareholders have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or to contribute to payments the underwriters may be required to make because of any of those liabilities.

The underwriting agreement provides that the underwriters' obligations to purchase the common shares depend on the satisfaction of the conditions

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contained in the underwriting agreement. The conditions contained in the underwriting agreement include the requirement that the representations and warranties made by the selling shareholders and us to the underwriters are true, that there is no material change in the financial markets and that we deliver to the underwriters customary closing documents.

The underwriters propose to offer the selling shareholders' and our common shares directly to the public at \$ \_\_\_\_\_ per share and to certain dealers at such price less a concession not in excess of \$ \_\_\_\_\_ per share. The underwriters may allow, and such dealers may reallow, a concession not in excess of \$ \_\_\_\_\_ per share to other dealers. If all of the shares are not sold at the public offering price, the representatives of the underwriters may change the public offering price and the other selling terms.

The following table shows the per share and total underwriting discount that the selling shareholders and we will pay to the underwriters. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase 272,250 additional common shares.

	PER SHARE	TOTAL WITHOUT OPTION EXERCISED	TOTAL WITH OPTION EXERCISED
Public offering price.....	\$	\$	\$
Underwriting discount(1)			
Payable by us.....	\$	\$	\$
Payable by the selling shareholders....	\$	\$	\$
Proceeds			
Proceeds to us (before expenses).....	\$	\$	\$
Proceeds to the selling shareholders (before expenses).....	\$	\$	\$

-----  
 (1) The underwriting discount is \_\_\_\_\_ %, or \$ \_\_\_\_\_ per share.

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We estimate that the total expenses related to this offering payable by us, excluding underwriting discounts and commissions, will be approximately \$ \_\_\_\_\_.

We have granted the underwriters an option to purchase up to 272,250 additional common shares at the public offering price less the underwriting discount. The underwriters may exercise the option for 30 days from the date of this prospectus solely to cover any over-allotments. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional common shares proportionate to that underwriter's initial amount reflected in the above table.

We, our officers and directors and the selling shareholders have agreed with the underwriters, for a period of 90 days after the date of this prospectus, subject to certain exceptions, not to offer, sell, hedge or otherwise dispose of any common shares or any securities convertible into or exchangeable for common shares, without the prior written consent of McDonald Investments Inc. However, McDonald Investments Inc. may, in its sole discretion and at any time without notice, release all or any portion of the securities subject to these lock-up agreements.

Until the distribution of common shares is completed, Securities and

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Exchange Commission rules may limit the underwriters and selling group members from bidding for and purchasing our common shares. However, the underwriters may engage in transactions that stabilize the price of the common shares, such as bids or purchases of shares in the open market while the offering is in progress to peg, fix, or maintain that price. These transactions also may include short sales and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares from the selling shareholders in the offering. The underwriters may reduce that short position by purchasing shares in the open market and/or by exercising all or part of the over-allotment option described above. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option granted to them. "Naked" short sales are any sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common shares in the open market after pricing that could adversely affect investors who purchase in the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representative has repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Neither we nor the underwriters makes any representation or prediction as to the effect the transactions described above may have on the price of the common shares. Any of these activities may have the effect of preventing or retarding a decline in the market price of our common shares. They may also cause the price of our common shares to be higher than the price that would otherwise exist on the open market in the absence of these transactions. The underwriters may conduct these transactions on the New York Stock Exchange or in the over-the-counter market, or otherwise. If the underwriters commence any of these transactions, they may discontinue them without notice at any time.

Victory Capital Management, Inc., an affiliate of McDonald Investments Inc., manages accounts that beneficially own 54,298 of our common shares as of April 1, 2004. In addition, some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other transactions with us and perform services for us in the ordinary course of their business. They have received customary fees and commissions for those transactions.

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### LEGAL MATTERS

Jones Day, Cleveland, Ohio, will pass upon the validity of the issuance of the shares being sold in this offering. Certain matters will be passed upon for the underwriters by Calfee, Halter & Griswold LLP, Cleveland, Ohio.

### EXPERTS

Ernst & Young LLP, independent auditors, have audited our consolidated financial statements (including a schedule incorporated by reference) at December 31, 2003 and 2002, and for each of the three years in the period ended December 31, 2003 as set forth in their reports included herein and incorporated by reference in our Annual Report on Form 10-K, which is incorporated by

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reference in this prospectus and elsewhere in the registration statement. Our financial statements are included and incorporated by reference in this prospectus and registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

### WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational reporting requirements of the Securities Exchange Act of 1934. We file reports, proxy statements and other information with the Securities and Exchange Commission. These reports, proxy statements and other information can be read and copied at the SEC's Public Reference Room at Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The SEC maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC, including Brush Engineered Materials Inc. Our website is [www.beminc.com](http://www.beminc.com). The information on our website is not a part of this prospectus.

### INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" the documents that we file with the SEC. This means that we can disclose important information to you by referring you to those documents rather than repeating them in full in this prospectus. The information incorporated by reference into this prospectus includes important business and financial information. Any information we incorporate in this manner is considered part of this prospectus except to the extent updated and superseded by information contained in this prospectus. Some information we file with the SEC after the date of this prospectus and until this offering is completed will automatically update and supersede the information contained in this prospectus.

We incorporate by reference the following documents (Commission File No. 1-15885) that we have filed with the SEC and any filings that we will make with the SEC in the future under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 until this offering is completed:

- Annual Report on Form 10-K for the year ended December 31, 2003;
- the "Description of the Common Shares" and the "Description of the Rights" contained in the Form 8-A filed on May 16, 2000; and
- Current Report on Form 8-K filed on March 12, 2004.

We will provide without charge, upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus. Requests should be directed to:

Brush Engineered Materials Inc.  
Attention: Michael C. Hasychak  
Vice President, Treasurer and Secretary  
17876 St. Clair Avenue  
Cleveland, Ohio 44110  
Telephone number: (216) 486-4200

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### BRUSH ENGINEERED MATERIALS INC. AND CONSOLIDATED SUBSIDIARIES

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### REPORT OF INDEPENDENT AUDITORS

#### REPORT OF INDEPENDENT AUDITORS

Board of Directors and Shareholders  
Brush Engineered Materials Inc.

We have audited the accompanying consolidated balance sheets of Brush Engineered Materials Inc. and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2003. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Brush Engineered Materials Inc. and subsidiaries at December 31, 2003 and 2002, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2003 in conformity with accounting principles generally accepted in the United States.

/s/ Ernst & Young LLP

Cleveland, Ohio  
January 28, 2004

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### CONSOLIDATED STATEMENTS OF INCOME

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	YEAR ENDED DECEMBER 31,		
	2003	2002	2001
	(DOLLARS IN THOUSANDS, EXCEPT PER SHARE D		
Net sales.....	\$ 401,046	\$ 372,829	\$ 472,
Cost of sales.....	328,008	324,932	404,
Gross profit.....	73,038	47,897	67,
Selling, general and administrative expense.....	68,834	61,293	75,
Research and development expense.....	4,230	4,265	6,
Other -- net.....	9,314	5,184	
Operating loss.....	(9,340)	(22,845)	(14,
Interest expense.....	3,355	3,010	3,
LOSS BEFORE INCOME TAXES.....	(12,695)	(25,855)	(17,
Minority interest.....	(45)	--	
Income taxes (benefit):			
Currently payable.....	855	(8,018)	(
Deferred.....	(279)	17,767	(6,
	576	9,749	(7,
NET LOSS.....	\$ (13,226)	\$ (35,604)	\$ (10,
Net loss per share of common stock -- basic and diluted.....	\$ (0.80)	\$ (2.15)	\$ (0
Weighted average number of shares of common stock outstanding.....	16,562,864	16,557,388	16,518,

See Notes to Consolidated Financial Statements.

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	YEAR ENDED DECEMBER 31,		
	2003	2002	2001
	(DOLLARS IN THOUSANDS)		
Cash flows from operating activities:			
Net loss.....	\$ (13,226)	\$ (35,604)	\$ (10,274)
Adjustments to reconcile net loss to net cash provided from operating activities:			
Depreciation, depletion and amortization.....	19,503	20,356	20,944
Amortization of mine development.....	1,228	284	665
Impairment from asset writedown.....	--	4,393	--
Deferred tax (benefit) expense.....	(279)	17,767	(6,367)
Derivative financial instruments ineffectiveness.....	5,054	(253)	555
Decrease (increase) in accounts receivable.....	(6,590)	9,654	36,589
Decrease (increase) in inventory.....	8,646	16,587	5,283



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Decrease (increase) in prepaid and other current assets.....	4,871	(1,387)	360
Increase (decrease) in accounts payable and accrued expenses.....	2,308	(3,914)	(29,534)
Increase (decrease) in interest and taxes payable.....	1,221	(3,086)	(1,951)
Increase (decrease) in other long-term liabilities.....	(443)	(7,879)	2,747
Other -- net.....	4,019	(1,229)	3,458
	-----	-----	-----
NET CASH PROVIDED FROM OPERATING ACTIVITIES.....	26,312	15,689	22,475
Cash flows from investing activities:			
Payments for purchase of property, plant and equipment....	(6,162)	(5,248)	(23,130)
Payments for mine development.....	(157)	(166)	(154)
Purchase of equipment previously held under operating lease.....	(51,846)	--	--
Proceeds from sale of property, plant and equipment.....	203	140	16
Other investments -- net.....	--	(57)	--
	-----	-----	-----
NET CASH USED IN INVESTING ACTIVITIES.....	(57,962)	(5,331)	(23,268)
Cash flows from financing activities:			
Proceeds from issuance/(repayment) of short-term debt.....	(9,266)	(1,941)	3,869
Proceeds from issuance of long-term debt.....	72,000	12,000	39,446
Repayment of long-term debt.....	(26,034)	(23,000)	(35,500)
Debt issuance costs.....	(4,636)	--	--
Issuance of common stock under stock option plans.....	25	--	1,760
Payments of dividends.....	--	--	(5,967)
	-----	-----	-----
NET CASH PROVIDED FROM (USED IN) FINANCING ACTIVITIES.....	32,089	(12,941)	3,608
Effects of exchange rate changes on cash and cash equivalents.....	266	(74)	(115)
	-----	-----	-----
NET CHANGE IN CASH AND CASH EQUIVALENTS.....	705	(2,657)	2,700
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR.....	4,357	7,014	4,314
	-----	-----	-----
CASH AND CASH EQUIVALENTS AT END OF YEAR.....	\$ 5,062	\$ 4,357	\$ 7,014
	=====	=====	=====

See Notes to Consolidated Financial Statements.

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

	YEAR ENDED DECEMBER 31,	
	2003	2002
	-----	-----
	(DOLLARS IN THOUSANDS)	
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents.....	\$ 5,062	\$ 4,357
Accounts receivable (less allowance of \$1,427 for 2003, and \$1,317 for 2002).....	55,102	47,543
Inventories.....	87,396	94,324
Prepaid expenses.....	5,454	9,766
Deferred income taxes.....	291	244

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TOTAL CURRENT ASSETS.....	153,305	156,234
OTHER ASSETS.....	26,761	25,629
LONG-TERM DEFERRED INCOME TAXES.....	704	472
PROPERTY, PLANT, AND EQUIPMENT		
Land.....	7,284	6,972
Buildings.....	98,576	97,184
Machinery and equipment.....	385,505	328,722
Software.....	20,008	19,983
Construction in progress.....	4,691	4,222
Allowances for depreciation.....	(329,328)	(309,742)
	186,736	147,341
Mineral resources.....	5,029	5,029
Mine development.....	14,328	14,171
Allowances for amortization and depletion.....	(15,247)	(13,997)
	4,110	5,203
PROPERTY, PLANT, AND EQUIPMENT--NET.....	190,846	152,544
	\$ 371,616	\$ 334,879
	=====	=====
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Short-term debt.....	\$ 13,387	\$ 27,235
Accounts payable.....	16,038	15,129
Salaries and wages.....	17,443	12,043
Taxes other than income taxes.....	2,379	2,883
Other liabilities and accrued items.....	17,544	15,513
Income taxes.....	1,373	786
	68,164	73,589
TOTAL CURRENT LIABILITIES.....	68,164	73,589
OTHER LONG-TERM LIABILITIES.....	14,739	17,459
RETIREMENT AND POST-EMPLOYMENT BENEFITS.....	49,358	48,518
LONG-TERM DEBT.....	85,756	36,219
MINORITY INTEREST IN SUBSIDIARY.....	26	--
SHAREHOLDERS' EQUITY		
Serial preferred stock, no par value; 5,000,000 shares authorized, none issued.....	--	--
Common stock, no par value; authorized 60,000,000 shares; 22,919,518 issued shares (22,917,618 for 2002).....	93,336	93,311
Common stock warrants.....	1,616	--
Retained income.....	181,156	194,382
	276,108	287,693
Common stock in treasury, 6,294,128 shares in 2003 (6,281,355 in 2002).....	(105,633)	(105,245)
Other comprehensive income (loss).....	(16,794)	(22,859)
Other equity transactions.....	(108)	(495)
	153,573	159,094
TOTAL SHAREHOLDERS' EQUITY.....	153,573	159,094
	\$ 371,616	\$ 334,879
	=====	=====

See Notes to Consolidated Financial Statements.

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

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CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY  
YEARS ENDED DECEMBER 31, 2003, 2002 AND 2001

	COMMON STOCK	WARRANTS	RETAINED INCOME	COMMON STOCK IN TREASURY	OTHER COMPREHENSIVE INCOME (LOSS)	OT
	-----	-----	-----	-----	-----	-----
	(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)					
BALANCES AT JANUARY 1, 2001.....	\$90,743	\$ --	\$244,221	\$ (104,887)	\$ (1,205)	\$ 1
Net loss.....	--	--	(10,274)	--	--	
Foreign currency translation adjustment.....	--	--	--	--	(1,084)	
Derivative and hedging activity.....	--	--	--	--	(2,061)	
Comprehensive loss.....						
Declared dividends \$0.24 per share.....	--	--	(3,961)	--	--	
Proceeds from sale of 95,230 shares under option plans...	1,530	--	--	--	--	
Income tax benefit from employees' stock options....	230	--	--	--	--	
Other equity transactions.....	358	--	--	277	--	
Forfeiture of restricted stock.....	--	--	--	(431)	--	
BALANCES AT DECEMBER 31, 2001...	92,861	--	229,986	(105,041)	(4,350)	
Net loss.....	--	--	(35,604)	--	--	
Foreign currency translation adjustment.....	--	--	--	--	832	
Derivative and hedging activity.....	--	--	--	--	(5,778)	
Minimum pension liability.....	--	--	--	--	(13,563)	
Comprehensive loss.....						
Other equity transactions.....	450	--	--	(75)	--	(1
Forfeiture of restricted stock.....	--	--	--	(129)	--	
BALANCES AT DECEMBER 31, 2002...	93,311	--	194,382	(105,245)	(22,859)	
Net loss.....	--	--	(13,226)	--	--	
Foreign currency translation adjustment.....	--	--	--	--	475	
Derivative and hedging activity.....	--	--	--	--	4,623	
Minimum pension liability.....	--	--	--	--	967	
Comprehensive loss.....						
Proceeds from sale of 1,900 shares under option plans...	21	--	--	--	--	
Income tax benefit from employees' stock options....	4	--	--	--	--	
Issuance of 115,000 warrants.....	--	1,616	--	--	--	
Other equity transactions.....	--	--	--	(229)	--	
Forfeiture of restricted stock.....	--	--	--	(159)	--	

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BALANCES AT DECEMBER 31, 2003...	\$93,336	\$1,616	\$181,156	\$(105,633)	\$(16,794)	\$
	=====	=====	=====	=====	=====	=====

See Notes to Consolidated Financial Statements.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

##### NOTE A -- SIGNIFICANT ACCOUNTING POLICIES

**ORGANIZATION:** The Company is a holding company with subsidiaries that have operations in the United States, Western Europe and Asia. These operations manufacture engineered materials used in a variety of markets, including telecommunications and computer electronics, automotive electronics, optical media, data storage, decorative and performance film, industrial components, aerospace and defense, and appliance. The Company's operations are aggregated into two business segments -- the Metal Systems Group and the Microelectronics Group -- based upon the commonalities of their products, manufacturing processes, customers and other factors. The Metal Systems Group produces strip and bulk alloys (primarily copper beryllium), beryllium metal products and engineered material systems while the Microelectronics Group manufactures precious and non-precious vapor deposition targets, frame lid assemblies, other precious and non-precious metal products, ceramics, electronic packages and thick film circuits. The Company is vertically integrated and distributes its products through a combination of company-owned facilities and independent distributors and agents.

**USE OF ESTIMATES:** The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates.

**CONSOLIDATION:** The Consolidated Financial Statements include the accounts of Brush Engineered Materials Inc. and its subsidiaries. All of the Company's subsidiaries are wholly owned except for an insignificant joint venture in Taiwan established in 2003. Inter-company accounts and transactions are eliminated in consolidation.

**CASH EQUIVALENTS:** All highly liquid investments with a put option or maturity of three months or less when purchased are considered to be cash equivalents.

**ACCOUNTS RECEIVABLE:** An allowance for doubtful accounts is maintained for the estimated losses resulting from the inability of customers to pay the amounts due.

**INVENTORIES:** Inventories are stated at the lower of cost or market. The cost of domestic inventories except ore and supplies is principally determined using the last-in, first-out (LIFO) method. The remaining inventories are stated principally at average cost.

**PROPERTY, PLANT AND EQUIPMENT:** Property, plant and equipment is stated on the basis of cost. Depreciation is computed principally by the straight-line method, except certain facilities for which depreciation is computed by the sum-of-the-years digits or units-of-production method. Depreciable lives that are used in computing the annual provision for depreciation by class of asset are as follows:

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	YEARS -----
Land improvements.....	5 to 25
Buildings.....	10 to 40
Leasehold improvements.....	Life of lease
Machinery and equipment.....	3 to 15
Furniture and fixtures.....	4 to 15
Automobiles and trucks.....	2 to 8
Research equipment.....	6 to 12
Computer hardware.....	3 to 10
Computer software.....	3 to 10

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

Depreciation expense was \$18.6 million in 2003, \$19.8 million in 2002, and \$19.9 million in 2001. Repair and maintenance costs are expensed as incurred.

**MINERAL RESOURCES AND MINE DEVELOPMENT:** Property acquisition costs and mining costs associated with waste rock removal are recorded at cost and are depleted or amortized by the units-of-production method based on recoverable proven beryllium reserves. Exploration and pre-production mine development expenses are charged to operations in the period in which they are incurred.

**INTANGIBLE ASSETS:** The Company adopted Statement No. 142, "Goodwill and Other Intangible Assets" as of January 1, 2002. Under this statement, goodwill and other indefinite-lived intangible assets are no longer amortized, but instead reviewed annually, or more frequently under certain circumstances, for impairment. The Company determined that a goodwill impairment charge was not required upon adoption of the statement or subsequently during 2002 and 2003. The Company had goodwill of \$7.9 million on its balance sheet as of December 31, 2003 and 2002. Goodwill amortization expense was \$0.3 million in 2001, all of which was recorded by the Microelectronics Group. Intangible assets with finite lives will continue to be amortized. The cost of intangible assets is amortized using the straight-line method over the periods estimated to be benefited, which is generally 20 years or less.

**ASSET IMPAIRMENT:** In the event that facts and circumstances indicate that the carrying value of long-lived and intangible assets may be impaired, an evaluation of recoverability is performed. If an evaluation is required, the estimated future undiscounted cash flow associated with the asset or asset group would be compared to the carrying amount to determine if a write-down is required. In August 2001, the FASB issued Statement No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets". The statement amends prior pronouncements and prescribes a uniform approach to accounting for long-lived assets to be held and used, long-lived assets to be disposed of by other than a sale and long-lived assets to be disposed of by sale. The statement was effective January 1, 2002 and had no effect on the Company upon adoption.

**DERIVATIVES:** The Company records the changes in the fair values of derivative financial instruments in accordance with Statement No. 133, "Accounting for Derivative Instruments and Hedging Activities". The Company recognizes all derivatives on the balance sheet at their fair values. If the derivative is a hedge, depending upon the nature of the hedge, changes in the

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fair value of the derivative are either offset against the change in fair value of the hedged asset, liability or firm commitment through earnings or recognized in other comprehensive income (loss) until the hedged item is recognized in earnings. The ineffective portion of a derivative's change in fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in its fair value are adjusted through income.

**ASSET REMOVAL OBLIGATION:** The Company adopted Statement No. 143, "Accounting for Asset Retirement Obligations" in the fourth quarter 2002. Under this statement, a liability must be recorded to recognize the legal obligation to remove an asset at the time the asset is acquired or when the legal liability arises. The liability is recorded for the present value of the ultimate obligation by discounting the estimated future cash flows using a credit-adjusted risk-free interest rate. The liability is accreted over time, with the accretion charged to expense. An asset equal to the fair value of the liability is recorded concurrent with the liability. The asset is then depreciated over the life of the asset. Adoption of this statement did not have a material effect on the Company's results of operations or financial position.

**REVENUE RECOGNITION:** The Company recognizes revenue when the title to the goods passes to the customer.

**SHIPPING AND HANDLING COSTS:** The Company records shipping and handling costs for products sold to customers in cost of sales on the Consolidated Statements of Income.

**ADVERTISING COSTS:** The Company expenses all advertising costs as incurred. Advertising costs were immaterial for the years presented in the Consolidated Financial Statements.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

**INCOME TAXES:** The Company uses the liability method in measuring the provision for income taxes and recognizing deferred tax assets and liabilities on the balance sheet. The Company records a valuation allowance to reduce the deferred tax assets to the amount that is more likely than not to be realized.

**RECLASSIFICATION:** Certain amounts in prior years have been reclassified to conform to the 2003 consolidated financial statement presentation.

**NET INCOME PER SHARE:** Basic earnings per share (EPS) is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the assumed conversion of all dilutive common stock equivalents as appropriate under the treasury stock method.

**STOCK OPTIONS:** The Company provides a stock incentive plan for eligible employees. See Note H to the Consolidated Financial Statements for further details. The Company has adopted the disclosure-only provisions of SFAS No. 123, "Accounting for Stock Based Compensation" and applies the intrinsic value method in accordance with APB Opinion No. 25, "Accounting for Stock Issued to Employees" and related interpretations in accounting for its stock incentive plan. If the Company had elected to recognize compensation expense for its stock incentive plan awards based on the estimated fair value of the awards on the grant dates, consistent with the method proscribed by SFAS No. 123 by amortizing the expense over the options' vesting period, the pro forma net loss and loss per share (E.P.S.) would have been as noted below:

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	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)		
Net loss -- as reported.....	\$(13,226)	\$(35,604)	\$(10,274)
Pro forma stock option expense.....	(1,095)	(1,494)	(1,352)
	-----	-----	-----
Net loss -- pro forma.....	\$(14,321)	\$(37,098)	\$(11,626)
	=====	=====	=====
E.P.S. -- as reported.....	\$ (0.80)	\$ (2.15)	\$ (0.62)
E.P.S. -- pro forma.....	\$ (0.86)	\$ (2.24)	\$ (0.70)

Note: The pro forma disclosures shown are not representative of the effects on net income and earnings per share in future years.

The weighted-average fair value of the Company's stock options used to compute the pro forma net income and earnings per share disclosures is \$2.79, \$6.40 and \$9.10 for 2003, 2002 and 2001, respectively. The fair value is the estimated present value at grant date using the Black-Scholes option-pricing model with the following weighted-average assumptions for the various grants in 2003, 2002 and 2001:

	2003	2002	2001
	-----	-----	-----
Risk-free interest rate.....	3.63%	4.52%	5.09%
Dividend yield.....	0%	0%	1.40%
Volatility of stock.....	39.50%	39.60%	36.50%
Expected life of option.....	8 years	8 years	7 years

NEW PRONOUNCEMENT: The FASB issued FIN 46, "Consolidation of Variable Interest Entities" in January 2003 effective for periods ending subsequent to June 15, 2003 for variable entities for which an enterprise holds a variable interest that it acquired prior to February 1, 2003. The release clarifies the application of Accounting Research Bulletin No. 51, "Consolidated Financial Statements" to certain entities in which the equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from others. The Company adopted FIN 46 as proscribed and its adoption did not have a material impact on the Company's results of operations or financial position.

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

NOTE B -- INVENTORIES

Inventories in the Consolidated Balance Sheets are summarized as follows:

DECEMBER 31,

-----

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	2003	2002
	-----	-----
	(DOLLARS IN THOUSANDS)	
Principally average cost:		
Raw materials and supplies.....	\$ 24,990	\$ 22,572
Work in process.....	65,212	65,809
Finished goods.....	20,637	29,522
	-----	-----
Gross inventories.....	110,839	117,903
Excess of average cost over LIFO inventory value.....	23,443	23,579
	-----	-----
Net inventories.....	\$ 87,396	\$ 94,324
	=====	=====

Average cost approximates current cost. Gross inventories accounted for using the LIFO method totaled \$73.9 million at December 31, 2003 and \$81.8 million at December 31, 2002. The liquidation of LIFO inventory layers in 2003 reduced cost of sales by \$3.6 million.

NOTE C -- IMPAIRMENT CHARGE

The Company recorded asset impairment charges of \$4.4 million in the fourth quarter 2002 in accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets". The impairment charges resulted from the assets' undiscounted projected cash flows being less than their carrying values. The Metal Systems Group wrote off \$3.1 million of equipment and related facilities formerly used in the production of beryllium. The equipment has been shut down due to the use of alternate input materials and manufacturing processes. Management does not believe these assets are salable. The Microelectronics Group wrote down equipment and a building \$1.3 million from its net book value of \$1.9 million to its estimated fair market value of \$0.6 million. The fair market value was determined by an appraisal by an independent firm. The equipment was shut down in 2003. The impairment charges were recorded in other-net on the Company's 2002 Consolidated Statement of Income.

NOTE D -- INTEREST

Interest expense associated with active construction and mine development projects is capitalized and amortized over the future useful lives of the related assets. The following chart summarizes the interest incurred, capitalized and paid, as well as the amortization of capitalized interest for 2003, 2002 and 2001.

	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN THOUSANDS)		
Interest incurred.....	\$3,269	\$3,095	\$3,918
Less capitalized interest.....	(86)	85	591
	-----	-----	-----
Total expense.....	\$3,355	\$3,010	\$3,327
	=====	=====	=====
Interest paid.....	\$2,558	\$3,162	\$4,092
	=====	=====	=====
Amortization, included principally in cost of sales.....	\$ 623	\$ 716	\$ 742
	=====	=====	=====



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In 1986, the Company purchased company-owned life insurance policies insuring the lives of certain United States employees. The contracts are recorded at cash surrender value, net of policy loans, in other assets. The net contract (income) expense, including interest expense recorded in selling, general and

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

administrative expenses, was \$1.4 million, (\$0.5) million and (\$0.3) million in 2003, 2002 and 2001, respectively. The related interest expense was \$1.3 million, \$1.5 million and \$1.4 million, in 2003, 2002 and 2001, respectively.

#### NOTE E -- DEBT

A summary of long-term debt follows:

	DECEMBER 31,	
	2003	2002
	(DOLLARS IN THOUSANDS)	
Senior Credit Agreement:		
Revolving credit agreement.....	\$20,000	\$ --
Senior five-year term note payable in installments beginning in 2004.....	12,000	--
Senior five-year term note payable in installments beginning in 2004.....	8,000	--
Variable rate demand bonds payable in installments beginning in 2005.....	3,000	3,000
Variable rate promissory note -- Utah land purchase payable in 20 annual installments through 2021.....	915	946
Variable rate industrial development revenue bonds payable in 2016.....	8,305	8,305
Revolving credit agreement.....	--	24,000
Subordinated five-year term note.....	35,000	--
	87,220	36,251
Current portion of long-term debt.....	(1,464)	(32)
	\$85,756	\$36,219
Total.....	\$85,756	\$36,219

Maturities on long-term debt instruments as of December 31, 2003 are as follows:

	(DOLLARS IN THOUSANDS)	
2004.....	\$ 1,464	
2005.....	3,493	
2006.....	3,493	
2007.....	3,493	
2008.....	65,644	

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Thereafter.....	9,633 -----
Total.....	\$87,220 =====

In December 2003, the Company refinanced its existing revolving credit agreement and a synthetic operating lease with a new debt structure totaling \$147.5 million. The refinancing included a five-year \$105.0 million senior secured credit agreement, a five-year \$35.0 million subordinated term loan and a \$7.5 million Exim line of credit.

The senior secured credit agreement is with six financial institutions and provides a maximum availability of \$105.0 million. It consists of an \$85.0 million revolving credit line secured by a portion of the Company's working capital, a \$12.0 million term note secured by a portion of the Company's real estate and an \$8.0 million term note secured by the Company's machinery and equipment. At December 31, 2003, there was \$20.0 million in long-term borrowings outstanding against the revolving credit portion of the agreement at an average rate of 5.00% that is fixed through January 2004, at which time it will be reset according to the terms and options available to the Company under the agreement. The credit agreement allows the Company

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

to borrow money at a premium over LIBOR or prime rate and at varying maturities. Also at December 31, 2003, there was \$20.0 million outstanding on the two term loans at an average rate of 5.35%, which is fixed through March 2004, at which time it will be reset according to the terms and conditions available under the agreement. The term notes are payable in quarterly installments beginning in July 2004 and include a balloon payment upon maturity in 2008.

The \$35.0 million subordinated term note is secured by a second lien on the Company's working capital, real estate and machinery and equipment and is payable in five years with the option to prepay \$5.0 million prior to September 2004 without penalty. The interest rate is based on variable prime plus a premium and resets quarterly. To hedge a portion of this variability, the company entered into an interest rate swap that fixed the rate on a notional value of \$10.0 million over the life of the note. At December 2003, the Company had \$35.0 million in long-term borrowings outstanding on this note at an average effective rate of 14.10%.

Both the credit agreement and the subordinated term note are subject to restrictive covenants including leverage, fixed charges and capital expenditures. The subordinated term loan restricts the issuance of dividends. The senior credit agreement and the subordinated term note are also secured by a first and second lien on the stock of certain of the Company's direct and indirect subsidiaries.

The \$7.5 million Exim facility is secured by certain foreign accounts receivable of the Company. The interest rate is LIBOR-based plus a premium. There were no outstanding borrowings against this facility at the end of 2003.

Proceeds from the December 2003 refinancing were used to retire the existing revolving credit agreement and to terminate an off-balance sheet operating lease by purchasing the assets being leased for \$51.8 million. See Note F to the Consolidated Financial Statements. Financing fees of \$6.2 million associated with the debt refinancing were deferred and are included in other

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assets on the Consolidated Balance Sheet. The deferred costs are being amortized using the effective interest method over the life of the underlying debt. Included in the \$6.2 million deferred financing cost was the fair value of 115,000 warrants for the purchase of the Company's common stock.

The following table summarizes the Company's short-term lines of credit. Amounts shown as outstanding are included in short-term debt on the Consolidated Balance Sheets.

	DECEMBER 31, 2003			DECEMBER 31,	
	TOTAL	OUTSTANDING	AVAILABLE	TOTAL	OUTSTANDING
	(DOLLARS IN THOUSANDS)				
Domestic.....	\$34,634	\$ 2,049	\$32,585	\$16,669	\$13,239
Foreign.....	4,439	142	4,297	14,713	5,707
Precious metal.....	9,732	9,732	--	8,257	8,257
	-----	-----	-----	-----	-----
Total.....	\$48,805	\$11,923	\$36,882	\$39,639	\$27,203
	=====	=====	=====	=====	=====

The domestic line is committed and included in the \$85.0 million maximum borrowing under the revolving credit agreement and the \$7.5 million Exim facility. The foreign lines are uncommitted, unsecured and renewed annually. The precious metal facility (primarily gold) is secured and renewed annually. The average interest rate on short-term debt was 5.50% and 4.50% as of December 31, 2003 and 2002, respectively.

In November 1996, the Company entered into an agreement with the Lorain Port Authority, Ohio to issue \$8.3 million in variable rate industrial revenue bonds, maturing in 2016. The variable rate ranged from 0.85% to 1.81% in 2003 and 1.28% to 2.12% during 2002.

In 1994, the Company refunded its \$3.0 million industrial development revenue bonds. The 7.25% bonds were refunded into variable rate demand bonds. The variable rate ranged from 0.78% to 1.65% during 2003

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

and from 1.15% to 1.95% during 2002. In December 1995, the Company entered into an interest rate swap agreement to manage its interest rate exposure on the bond. The Company converted the variable rate to a fixed rate of 4.75% under the interest rate swap agreement. This swap matured in 2002.

The prior revolving credit agreement, as amended, was terminated in December 2003. A portion of the Company's domestic receivables and inventory up to a maximum of \$55.0 million secured the agreement. In January and March 2003, this agreement was amended to waive and revise various covenants and to extend the maturity until April 2004. At December 31, 2002, there was \$24.0 million in long-term borrowings outstanding at an average interest rate of 4.92%.

#### NOTE F -- LEASING ARRANGEMENTS

The Company leases warehouse and manufacturing space and manufacturing and

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computer equipment under operating leases with terms ranging up to 14 years. Rent expense amounted to \$16.2 million, \$17.3 million, and \$13.1 million during 2003, 2002, and 2001, respectively. The future estimated minimum lease payments under non-cancelable operating leases with initial lease terms in excess of one year at December 31, 2003 are as follows: 2004 -- \$5.0 million; 2005 -- \$4.2 million; 2006 -- \$3.6 million; 2007 -- \$3.3 million; 2008 -- \$3.3 million and thereafter -- \$9.7 million.

The Company has an operating lease for one of its major production facilities. This facility is owned by a third party and cost approximately \$20.3 million to build. Occupancy of the facility began in 1997. Lease payments for the facility continue through 2011 with options for renewal. The estimated minimum payments are included in the preceding paragraph. The facility lease is subject to certain restrictive covenants including leverage, fixed charges and annual capital expenditures.

In December 2003, the Company terminated an operating lease for certain equipment located in Elmore, Ohio and purchased the assets for a residual value of \$51.8 million as part of the Company's refinancing. See Note E to the Consolidated Financial Statements. This leasing arrangement, which began in 1996, was structured as a synthetic lease, which meant it was an operating lease for financial reporting purposes and a capital lease for federal income tax purposes. Lease payments for the related equipment began in 1999 and continued through the initial lease term expiring in 2001. The Company then exercised its option to renew the lease of the equipment annually for one-year periods and in 2003 purchased the equipment. The 2003 expense for this lease was \$9.3 million and is included in the amounts in the above paragraph.

### NOTE G -- DERIVATIVE FINANCIAL INSTRUMENTS AND FAIR VALUE INFORMATION

The Company is exposed to commodity price, interest rate and foreign currency exchange rate differences and attempts to minimize the effects of these exposures through a combination of natural hedges and the use of derivative financial instruments. The Company has policies approved by the Board of Directors that establish the parameters for the allowable types of derivative instruments to be used, the maximum allowable contract periods, aggregate dollar limitations and other hedging guidelines. The Company will only secure a derivative if there is an identifiable underlying exposure that is not otherwise covered by a natural

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

hedge. In general, derivatives will be held until maturity. The following table summarizes the fair value of the Company's outstanding derivatives and debt as of December 31, 2003 and 2002.

ASSET/(LIABILITY)	DECEMBER 31, 2003		DECEMBER 31, 2002	
-----	NOTIONAL AMOUNT	CARRYING AMOUNT	NOTIONAL AMOUNT	CARRYING AMOUNT
	(DOLLARS IN THOUSANDS)			
FOREIGN CURRENCY CONTRACTS				
Forward contracts				
Yen.....	\$16,242	\$ (677)	\$ 4,344	\$ 276

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Euro.....	13,697	(1,307)	--	--
Sterling.....	3,536	(155)	2,928	(98)
	-----	-----	-----	-----
Total.....	\$33,475	\$ (2,139)	\$ 7,272	\$ 178
	=====	=====	=====	=====
Options				
Yen.....	\$ --	\$ --	\$ 2,420	\$ (38)
Euro.....	6,290	(749)	16,750	(1,025)
	-----	-----	-----	-----
Total.....	\$ 6,290	\$ (749)	\$19,170	\$ (1,063)
	=====	=====	=====	=====
INTEREST RATE EXCHANGE CONTRACTS				
Floating to fixed.....	\$55,858	\$ (5,314)	\$50,477	\$ (6,665)
COMMODITY PRICE CONTRACTS				
Floating to fixed.....	--	--	1,813	69
SHORT- AND LONG-TERM DEBT.....	--	(99,143)	--	(63,454)

The fair values equal the carrying amounts in the Company's Consolidated Balance Sheets as of December 31, 2003 and 2002. SFAS No. 107 defines fair value as the amount at which an instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The fair value of the foreign currency forward contracts and options and the commodity and interest rate contracts was calculated by third parties on behalf of the Company using the applicable market rates at December 31, 2003 and December 31, 2002. The fair value of the Company's debt was estimated using a discounted cash flow analysis based on the Company's current incremental borrowing rates for similar types of borrowing arrangements.

The Company records derivatives in its financial statements in accordance with SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" and SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities", which amended SFAS No. 133. Each of the Company's commodity swaps, interest rate swaps and foreign currency derivative contracts have been designated as cash flow hedges as defined under these statements. SFAS No. 133 requires the fair value of outstanding derivative instruments to be recorded on the balance sheet. Accordingly, derivative fair values were included in the balance sheet line items as follows:

DEBIT/(CREDIT) BALANCE	DECEMBER 31,	
	2003	2002
-----	-----	-----
	(DOLLARS IN THOUSANDS)	
Prepaid expenses.....	\$ --	\$ 306
Other liabilities and accrued items.....	(3,952)	(2,147)
Other long-term liabilities.....	(4,250)	(5,640)
	-----	-----
Total.....	\$ (8,202)	\$ (7,481)
	=====	=====

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The balance sheet classification of the fair values is dependent upon the

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Company's rights and obligations under each derivative and the remaining term to maturity. Changes in fair values of derivatives are recorded in income or other comprehensive income (loss) (hereafter "OCI") as appropriate under SFAS No. 133 guidelines. A reconciliation of the changes in fair values and other derivative activity recorded in OCI for 2003 and 2002 is as follows:

	2003	2002
	(DOLLARS IN THOUSANDS)	
Balance in other comprehensive income (loss) at January 1...	\$(7,839)	\$(2,061)
Changes in fair values and other current period activity....	(107)	(6,569)
Matured derivatives -- charged to expense.....	95	797
Derivative ineffectiveness -- (credited)/charged to expense.....	4,635	(6)
	-----	-----
Balance in other comprehensive income (loss) at December 31.....	\$(3,216)	\$(7,839)

One of the Company's interest rate swaps has a notional value of \$45.9 million and initially was designated as a hedge of the variable rate portion of an operating lease. As a result of the refinancing in December 2003, as further described in Notes E and F to the Consolidated Financial Statements, that lease was terminated and the \$4.6 million cumulative loss previously recorded in OCI that was associated with the swap was charged to expense on the Consolidated Statements of Income as the swap no longer qualified for hedge accounting treatment. The swap remained in place after the refinancing as payments under the swap serve as a hedge against the interest rate payments on the new variable rate debt. However, changes in the fair value of the swap due to movements in the market interest rates from the date of the refinancing going forward will be charged to income or expense in the current period. The majority of the \$6.6 million change in fair value and other current period hedging activity in 2002 was caused by a decline in the fair value (an increase to the loss) on this interest rate swap as a result of a decline in interest rates during that year. Hedge ineffectiveness, including amounts charged from OCI and other adjustments to the fair values of derivatives that did not flow through OCI, was a \$5.1 million expense in 2003 and a \$0.3 million credit in 2002 and was included in other -- net expense on the Company's Consolidated Statements of Income. The Company estimates that approximately \$3.0 million of the balance in OCI at December 31, 2003 will be charged to income during 2004 as a result of maturing derivatives.

The Company hedged a portion of its net investment in its Japanese subsidiary using yen-denominated debt until this loan was repaid in December 2003. A net loss of \$0.6 million associated with translating this debt into dollars was recorded in the cumulative translation adjustment as of December 31, 2003. This balance will remain in cumulative translation adjustment and will only be charged to income should the Company ever liquidate its investment. The comparable balance in cumulative translation adjustment as of December 31, 2002 was a net loss of \$29,000.

### FOREIGN EXCHANGE HEDGE CONTRACTS

The Company uses forward and option contracts to hedge anticipated foreign currency transactions, primarily foreign sales. The purpose of the program is to protect against the reduction in value of the foreign currency transactions from adverse exchange rate movements. Should the dollar strengthen significantly, the decrease in the translated value of the foreign currency transactions should be

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partially offset by gains on the hedge contracts. Depending upon the method used, the contract may limit the benefits from a weakening of the dollar. The Company's policy limits contracts to maturities of two years or less from the date of issuance. All of the contracts outstanding as of December 31, 2003 are scheduled to mature during 2004. Realized gains and losses on foreign exchange contracts are recorded in other--net on the Consolidated Statements of Income. The total exchange gain/(loss), which includes realized and unrealized losses, was \$(0.9) million in 2003, \$1.5 million in 2002 and \$2.3 million in 2001.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

##### INTEREST RATE HEDGE CONTRACTS

The Company attempts to minimize its exposure to interest rate variations by using combinations of fixed and variable rate instruments with varying lengths of maturities. Depending upon the interest rate yield curve, credit spreads, projected borrowing requirements and rates, cash flow considerations and other factors, the Company may elect to secure interest rate swaps, caps, collars, options or other related derivative instruments. Both fixed-to-variable and variable-to-fixed interest rate swaps may be used.

In December 2003, the Company entered into a five-year variable-to-fixed interest rate swap with a \$10.0 million notional value designated as a hedge of a portion of its new variable rate debt.

The Company also has the previously discussed \$45.9 million interest rate swap that does not qualify for hedge accounting under the current regulations, but cash payments made or received under this swap will tend to offset changes in the interest payments made on portions of its outstanding variable rate debt not otherwise hedged. The swap matures in 2008 and its notional value declines over time. Gains and losses on this swap were charged to cost of sales over its life until the underlying hedged item, an equipment operating lease, was terminated in December 2003. Gains and losses from that point forward are recorded as derivative ineffectiveness within other-net on the Consolidated Statements of Income.

In December 1995, the Company entered into an interest rate swap, converting to a fixed rate from a variable rate on a \$3.0 million industrial revenue development bond. Gains and losses on this swap were recorded in interest expense on the Consolidated Statements of Income. This swap matured during 2002.

##### COMMODITY PRICE CONTRACTS

The Company purchases and manufactures products containing copper. Purchases are exposed to price fluctuations in the copper market. However, for the majority of its copper-based products, the Company will adjust its selling prices to customers to reflect the change in its copper purchase price. This program is designed to be profit neutral; i.e., any changes in copper prices, either up or down, will be directly passed on to the customer.

The Company may use commodity price contracts (i.e., swaps) to hedge the copper purchase price for those volumes where price fluctuations cannot be passed on to the customer. Under these swaps, which are purchased from financial institutions, the Company makes or receives payments based on a difference between a fixed price (as specified in each individual contract) and the market price of copper. These payments will offset the change in prices of the underlying purchases and effectively fix the price of copper at the swap rate

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for the contracted volume. The Company's policy limits commodity hedge contracts to maturities of 27 months or less from the original date of issuance. The Company did not have any copper swaps outstanding as of December 31, 2003. While various copper swaps that matured during 2002 were deemed to be effective as defined by SFAS No. 133, all of the swaps outstanding as of December 31, 2002 were deemed to be ineffective. Realized gains and losses on copper swap contracts are recorded in cost of sales on the Consolidated Statements of Income.

### NOTE H -- CAPITAL STOCK

In connection with the Company's refinancing agreement dated December 4, 2003, 115,000 \$0.01 common stock warrants were issued to the lenders as part of their fee. Holders of the warrants are entitled to redeem them for an equal number of shares of Company common stock. The warrants were recorded as a component of shareholders' equity at their fair value at the time of issuance. The warrants expire December 5, 2008.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The Company has 5 million shares of Serial Preferred Stock authorized (no par value), none of which has been issued. Certain terms of the Serial Preferred Stock, including dividends, redemption and conversion, will be determined by the Board of Directors prior to issuance.

On January 27, 1998 the Company's Board of Directors adopted a new share purchase rights plan and declared a dividend distribution of one right for each share of common stock outstanding as of the close of business on February 9, 1998. The plan allows for new shares issued after February 9, 1998 to receive one right subject to certain limitations and exceptions. Each right entitles the shareholder to buy one one-hundredth of a share of Serial Preferred Stock, Series A, at an initial exercise price of \$110. A total of 450,000 unissued shares of Serial Preferred Stock will be designated as Series A Preferred Stock. Each share of Series A Preferred Stock will be entitled to participate in dividends on an equivalent basis with 100 shares of common stock and will be entitled to one vote. The rights will not be exercisable and will not be evidenced by separate right certificates until a specified time after any person or group acquires beneficial ownership of 20% or more (or announces a tender offer for 20% or more) of common stock. The rights expire on January 27, 2008, and can be redeemed for 1 cent per right under certain circumstances.

The amended 1995 Stock Incentive Plan authorizes the granting of five categories of incentive awards: option rights, performance restricted shares, performance shares, performance units and restricted shares. As of December 31, 2003, no performance units have been granted.

Option rights entitle the optionee to purchase common shares at a price equal to or greater than market value on the date of grant. Option rights outstanding under the amended 1995 Stock Incentive Plan and previous plans generally become exercisable over a four-year period and expire 10 years from the date of the grant. In 1995, the Company's right to grant options on a total of 228,565 shares (under the Company's 1979, 1984 and 1989 stock option plans) was terminated upon shareholder approval of the amended 1995 Stock Incentive Plan. No further stock awards will be made under the Company's 1979, 1984 and 1989 stock option plans except to the extent that shares become available for grant under these plans by reason of termination of options previously granted.

The 1990 Stock Option Plan for Non-employee Directors (the "1990 Plan") was



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terminated effective May 7, 1998. The 1997 Stock Incentive Plan for Non-employee Directors replaced the 1990 Plan and provided for a one-time grant of 5,000 options to up to six new non-employee directors who have not yet received options under the 1990 Plan at an option price equal to the fair market value of the shares at the date of the grant. Options are non-qualified and become exercisable six months after the date of grant. The options generally expire 10 years after the date they were granted. The 1997 Stock Incentive Plan for Non-employee Directors was amended on May 1, 2001. The amendment added 100,000 shares to the Plan and established a grant of up to 2,000 options to each Director annually.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

Stock option, performance restricted share award, performance share award, and restricted share award activities are summarized in the following table:

	2003		2002		2001
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES
<b>STOCK OPTIONS</b>					
Outstanding at beginning of year.....	1,394,688	\$17.82	1,346,568	\$18.83	1,214,488
Granted.....	262,800	5.62	256,750	12.17	277,650
Exercised.....	(1,900)	12.89	--	--	(95,230)
Cancelled.....	(180,645)	16.76	(208,630)	17.42	(50,340)
	-----		-----		-----
Outstanding at end of year.....	1,474,943	15.78	1,394,688	17.82	1,346,568
	=====		=====		=====
Exercisable at end of year.....	1,231,103	16.78	1,166,908	18.18	1,108,763
	=====		=====		=====
<b>PERFORMANCE AWARDS</b>					
Allocated at beginning of year....	--		--		78,000
Forfeited.....	--		--		(78,000)
	-----		-----		-----
Allocated at end of year.....	--		--		--
	=====		=====		=====
<b>RESTRICTED AWARDS</b>					
Awarded and restricted at beginning of year.....	77,845		60,745		88,183
Awarded during the year.....	--		33,100		20,000
Vested.....	(26,845)		(15,700)		(37,160)
Forfeited.....	(4,050)		(300)		(10,278)
	-----		-----		-----
Awarded and restricted at end of year.....	46,950		77,845		60,745
	=====		=====		=====

The market value of the performance restricted shares and the performance shares adjusted for management's expectation of reaching the management objectives as outlined in the Plan agreement, and the related dividends on the

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performance restricted shares have been recorded as deferred compensation-restricted stock and are a component of other equity transactions of shareholders' equity. Deferred compensation is amortized over the vesting period. Amounts recorded against selling, general and administrative expense on the Consolidated Statements of Income totaled \$0.3 million in 2003, \$0.4 million in 2002 and \$0.4 million in 2001.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The following table provides additional information about stock options outstanding as of December 31, 2003:

RANGE OF OPTION PRICES	OPTIONS OUTSTANDING			OPTIONS EXERCISABLE	
	NUMBER OUTSTANDING	WEIGHTED- AVERAGE REMAINING CONTRACT LIFE	WEIGHTED- AVERAGE EXERCISE PRICE	NUMBER EXERCISABLE	WEIGHTED- AVERAGE EXERCISE PRICE
\$ 5.55 - \$ 8.10.....	257,300	9.15	\$ 5.62	131,000	\$ 5.59
\$12.15 - \$15.06.....	361,150	6.96	13.15	301,120	13.34
\$15.75 - \$18.63.....	484,868	3.59	16.83	467,058	16.87
\$20.64 - \$23.78.....	231,050	6.97	22.33	191,350	22.31
\$26.44 - \$26.72.....	140,575	4.35	26.71	140,575	26.71
	-----	----	-----	-----	-----
	1,474,943	5.99	\$15.78	1,231,103	\$16.78
	=====	====	=====	=====	=====

The weighted-average remaining contractual life of options outstanding at December 31, 2002 and 2001 is 6.04 years and 6.22 years, respectively. The number of shares available for future grants as of December 31, 2003, 2002 and 2001 is 472,331 shares, 550,986 shares and 631,906 shares, respectively.

#### NOTE I -- INCOME TAXES

Income (loss) before income taxes and income taxes (benefit) are comprised of the following components, respectively:

	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN THOUSANDS)		
Income (loss) before income taxes:			
Domestic.....	\$ (14,721)	\$ (24,996)	\$ (18,035)
Foreign.....	2,071	(859)	639
	-----	-----	-----
Total before income taxes.....	\$ (12,650)	\$ (25,855)	\$ (17,396)
	=====	=====	=====
Income taxes (benefit):			
Current income taxes:			
Domestic.....	\$ 158	\$ (8,311)	\$ (1,588)

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Foreign.....	697	293	833
	-----	-----	-----
Total current.....	855	(8,018)	(755)
Deferred income taxes:			
Domestic.....	\$ (5,291)	\$ (1,068)	\$ (5,785)
Foreign.....	(279)	(1,095)	(582)
Valuation allowance.....	5,291	19,930	--
	-----	-----	-----
Total deferred.....	(279)	17,767	(6,367)
Total income taxes (benefit).....	\$ 576	\$ 9,749	\$ (7,122)
	=====	=====	=====

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The reconciliation of the federal statutory and effective income tax rates follows:

	2003	2002	2001
	-----	-----	-----
Federal statutory rate.....	(34.0)%	(34.0)%	(34.0)%
State and local income taxes, net of federal tax effect.....	0.9	0.5	1.0
Effect of excess of percentage depletion over cost depletion.....	(7.6)	(2.2)	(3.4)
Company-owned life insurance.....	3.6	(0.6)	(0.4)
Taxes on foreign source income.....	(3.7)	(4.1)	(5.6)
Valuation allowance.....	41.8	77.1	--
Other items.....	3.5	1.0	1.5
	-----	-----	-----
Effective tax rate.....	4.5%	37.7%	(40.9)%
	=====	=====	=====

In accordance with the provisions of SFAS No. 109, "Accounting for Income Taxes," the Company recorded a valuation allowance of \$5.3 million in 2003 and \$19.9 million in 2002 as part of tax expense. In addition, the Company recorded a \$1.9 million valuation allowance reduction to OCI in 2003 and \$7.3 million in 2002 for deferred tax assets associated with the changes to OCI for the minimum pension liability and derivative and hedging activities. No valuation allowance was required on \$1.0 million of net deferred tax assets associated with certain foreign subsidiaries.

The Company intends to maintain a valuation allowance on the net deferred tax assets until a realization event occurs to support reversal of all or a portion of the reserve.

Included in current domestic income taxes, as shown in the Consolidated Statements of Income, are \$0.2 million, \$0.2 million and \$0.3 million of state and local income taxes in 2003, 2002 and 2001, respectively.

The Company had domestic and foreign income tax payments (refunds), of \$(3.3) million, \$(1.1) million and \$0.6 million in 2003, 2002 and 2001, respectively.

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## BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting bases and the tax bases of assets and liabilities. Deferred tax assets and (liabilities) recorded in the Consolidated Balance Sheets consist of the following at December 31, 2003 and 2002:

	2003	2002
	-----	-----
	(DOLLARS IN THOUSANDS)	
Post-retirement benefits other than pensions.....	\$ 12,072	\$ 10,549
Alternative minimum tax credit.....	10,629	10,629
Other reserves.....	2,518	3,018
Environmental reserves.....	2,311	2,604
Pensions.....	2,416	1,958
Derivative instruments and hedging activities.....	2,051	2,592
Inventory.....	495	1,741
Tax credit carryforward.....	1,851	1,851
Net operating loss carryforward.....	32,232	27,892
Capitalized interest expense.....	419	--
Miscellaneous.....	64	339
	-----	-----
Valuation allowance.....	67,058	63,173
	(30,793)	(27,207)
	-----	-----
Total deferred tax assets.....	36,265	35,966
	-----	-----
Depreciation.....	(33,060)	(31,545)
Mine development.....	(2,210)	(2,566)
Capitalized interest expense.....	--	(1,139)
	-----	-----
Total deferred tax liabilities.....	(35,270)	(35,250)
	-----	-----
Net deferred tax asset.....	\$ 995	\$ 716
	=====	=====

At December 31, 2003, for income tax purposes, the Company had domestic net operating loss carryforwards of \$88.1 million, which are scheduled to expire in calendar years 2019 through 2023. The Company also had foreign net operating loss carryforwards for income tax purposes totaling \$5.3 million, comprised of \$4.7 million that do not expire, and \$0.6 million which are scheduled to expire in calendar year 2007.

At December 31, 2003, the Company had research and experimentation tax credit carryforwards of \$1.9 million that are scheduled to expire in calendar years 2008 through 2020.

A provision has not been made with respect to \$8.5 million of unremitted earnings at December 31, 2003 that have been invested by foreign subsidiaries. It is not practical to estimate the amount of unrecognized deferred tax liability for undistributed foreign earnings.

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## BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

#### NOTE J -- EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted loss per share (E.P.S.):

	2003	2002	2001
(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)			
Numerator for basic and diluted E.P.S.:			
Net loss.....	\$ (13,226)	\$ (35,604)	\$ (10,274)
Denominator for basic and diluted E.P.S.:			
Weighted-average shares outstanding.....	16,562,864	16,557,388	16,518,691
Basic and diluted E.P.S.....	\$ (0.80)	\$ (2.15)	\$ (0.62)

Under SFAS No. 128, "Earnings per Share," no potential common shares are included in the computation of diluted per-share amounts when a loss from continuing operations exists. Accordingly, dilutive securities have been excluded from the diluted E.P.S. calculation of 109,052 for 2003, 51,337 for 2002 and 131,896 for 2001.

Options to purchase common stock with exercise prices in excess of the average share price totaling 1,217,643 at December 31, 2003; 1,394,688 at December 31, 2002; and 749,488 at December 31, 2001 were excluded from the diluted E.P.S. calculations as their effect would have been anti-dilutive.

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## BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

#### NOTE K -- PENSIONS AND OTHER POST-RETIREMENT BENEFITS

The obligation and funded status of the Company's domestic defined benefit pension plan, unfunded supplemental retirement plan and retiree medical and life insurance plan are as follows:

	PENSION BENEFITS		OTHER BENEFITS	
	2003	2002	2003	2002
(DOLLARS IN THOUSANDS)				
CHANGE IN BENEFIT OBLIGATION				
Benefit obligation at beginning of year.....	\$100,821	\$ 92,878	\$ 43,453	\$ 40,220
Service cost.....	4,116	4,217	274	298
Interest cost.....	6,668	6,425	2,818	2,757
Amendments.....	--	347	--	--
Actuarial loss.....	4,312	3,920	2,336	3,447
Benefit payments.....	(5,413)	(6,174)	(3,433)	(3,269)

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Settlements.....	(35)	(792)	--	--
	-----	-----	-----	-----
Benefit obligation at end of year.....	110,469	100,821	45,449	43,453
CHANGE IN PLAN ASSETS				
Fair value of plan assets at beginning of year.....	78,086	94,713	--	--
Actual return on plan assets.....	13,058	(10,517)	--	--
Employer contributions.....	72	64	3,433	3,269
Benefit payments.....	(5,413)	(6,174)	(3,433)	(3,269)
	-----	-----	-----	-----
Fair value of plan assets at end of year....	85,803	78,086	--	--
	-----	-----	-----	-----
Funded status.....	(24,666)	(22,735)	(45,449)	(43,453)
Unrecognized net actuarial loss.....	26,831	26,179	10,826	8,821
Unrecognized prior service cost (benefit)...	5,519	6,166	(909)	(1,020)
Unrecognized initial net (asset) obligation.....	(1)	(362)	--	--
	-----	-----	-----	-----
Net amount recognized.....	\$ 7,683	\$ 9,248	\$ (35,532)	\$ (35,652)
	=====	=====	=====	=====
AMOUNTS RECOGNIZED IN THE CONSOLIDATED BALANCE SHEETS CONSIST OF:				
Accrued benefit liability.....	\$ (10,395)	\$ (10,416)	\$ (35,532)	\$ (35,652)
Intangible asset.....	5,482	6,101	--	--
Accumulated other comprehensive income.....	12,596	13,563	--	--
	-----	-----	-----	-----
Net amount recognized.....	\$ 7,683	\$ 9,248	\$ (35,532)	\$ (35,652)
	=====	=====	=====	=====
ADDITIONAL INFORMATION				
Increase in minimum liability included in other comprehensive income.....	\$ (967)	\$ 13,563	N/A	N/A
Accumulated benefit obligation for all pension plans.....	96,023	88,280	N/A	N/A

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

	PENSION BENEFITS			OTHER BENEFITS		
	2003	2002	2001	2003	2002	2001
	-----	-----	-----	-----	-----	-----
(DOLLARS IN THOUSANDS)						
COMPONENTS OF NET PERIODIC BENEFIT COST						
Service cost.....	\$ 4,116	\$ 4,217	\$ 3,622	\$ 274	\$ 298	\$ 303
Interest cost.....	6,668	6,425	6,244	2,818	2,757	2,596
Expected return on plan assets.....	(9,359)	(10,597)	(10,455)	--	--	--
Amortization of prior service cost (benefit).....	647	626	672	(112)	(112)	(112)
Amortization of initial net (asset) obligation.....	(361)	(412)	(412)	--	--	--
Recognized net actuarial (gain) loss.....	(26)	(113)	(958)	332	105	--
Settlement (gain).....	(48)	(993)	--	--	--	--

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Curtailment loss.....	--	--	570	--	--	--
	-----	-----	-----	-----	-----	-----
Net periodic (benefit) cost...	\$ 1,637	\$ (847)	\$ (717)	\$3,313	\$3,048	\$2,787
	=====	=====	=====	=====	=====	=====

The Company recorded a plan curtailment in the fourth quarter 2001 in accordance with SFAS No. 88, "Employers' Accounting for Settlement and Curtailment of Defined Benefit Pension Plans and for Termination Benefits". The curtailment was required because of the significant reduction in the number of plan participants. The curtailment increased the pension expense in 2001 by \$0.6 million and reduced the benefit obligation by \$2.4 million at December 31, 2001.

	PENSION BENEFITS			OTHER BENEFITS		
	2003	2002	2001	2003	2002	2001
	-----	-----	-----	-----	-----	-----
<b>ASSUMPTIONS</b>						
WEIGHTED-AVERAGE ASSUMPTIONS USED TO DETERMINE BENEFIT OBLIGATIONS AT FISCAL YEAR END						
Discount rate.....	6.375%	6.750%		6.375%	6.750%	
Rate of compensation increase.....	2.750%	2.000%		2.750%	2.000%	
WEIGHTED-AVERAGE ASSUMPTIONS USED TO DETERMINE NET COST FOR THE FISCAL YEAR						
Discount rate.....	6.750%	7.125%	8.000%	6.750%	7.125%	8.000%
Expected long-term return on plan assets.....	9.000%	10.000%	10.000%	N/A	N/A	N/A
Rate of compensation increase.....	2.000%	5.000%	5.000%	2.000%	5.000%	5.000%

The Company uses a December 31 measurement date for the above plans.

In 2003, the Company revised the expected long-term rate of return assumption used in calculating the annual expense for its domestic pension plan in accordance with SFAS No. 87, "Employers' Accounting for Pensions". The assumed expected rate of return was decreased to 9.0% from 10.0% with the impact being accounted for as a change in estimate.

Management establishes the expected long-term rate of return assumption by reviewing its historical trends and analyzing the current and projected market conditions in relation to the plan's asset allocation and risk management objectives. Management consults with outside investment advisors and actuaries when establishing the rate and reviews their assumptions with the Retirement Plan Review Committee of the Board

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

of Directors. The actual return on plan assets was 19.7% in 2003 and the 10-year average return as of year-end 2003 was 7.9%. While the current 10-year average is below the 9.0% assumption, primarily due to the poor performance of the U.S. equity markets in the 2000 to 2002 time frame, the 10-year rolling average return was over 10.0% in seven of the last 10 years. Management believes that the 9.0% expected long-term rate of return assumption is achievable and

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reasonable given current market conditions and forecasts.

The rate of compensation increase assumption was changed to use a graded assumption beginning at 2.0% for the 2003 fiscal year and increasing 0.75% per year until it reaches 5.0% for the 2007 fiscal year and later.

	2003	2002
	----	----
ASSUMED HEALTH CARE TREND RATES AT FISCAL YEAR END		
Health care trend rate assumed for next year.....	8.0%	9.0%
Rate that the trend rate gradually declines to (ultimate trend rate).....	6.0%	6.0%
Year that the rate reaches the ultimate trend rate.....	2008	2008

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

	1-PERCENTAGE-POINT INCREASE		1-PERCENTAGE-POINT DECREASE	
	-----	-----	-----	-----
	2003	2002	2003	2002
	-----	-----	-----	-----
	(DOLLARS IN THOUSANDS)			
Effect on total of service and interest cost components.....	\$ 155	\$ 149	\$ (137)	\$ (131)
Effect on post-retirement benefit obligation.....	2,439	2,297	(2,147)	(2,029)

On December 8, 2003, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 ("the Act") was signed into law. The Act expanded Medicare to include, for the first time, coverage for prescription drugs. The Company sponsors retiree medical programs for certain of its locations and expects that this legislation may eventually reduce the Company's costs for some of these programs. At present, no analysis of the potential reduction in the Company's costs or obligations has been performed as the Company awaits guidance from various governmental and regulatory agencies concerning the requirements that must be met to obtain these cost reductions, as well as the manner in which such savings should be measured. Because of various uncertainties related to the Company's response to this legislation and the appropriate accounting methodology for this event, the Company has elected to defer financial recognition of this legislation until the Financial Accounting Standards Board issues final accounting guidance. When issued, that final guidance could require the Company to change previously reported information. This deferral election is permitted under FSP No. FAS 106-1.

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

### PLAN ASSETS

The Company's domestic defined benefit pension plan weighted-average asset



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allocation at fiscal year-end 2003 and 2002 and target allocation are as follows:

ASSET CATEGORY	TARGET ALLOCATION RANGE -----	PERCENTAGE OF PENSION PLAN ASSETS AT FISCAL YEAR END	
		2003 -----	2002 -----
Equity securities.....	35-75%	73%	75%
Debt securities.....	10-25%	20%	24%
Real estate.....	0-5%	6%	0%
Other.....	0-10%	1%	1%
		---	---
Total.....		100%	100%

The Company's pension plan investment strategy, as approved by the Retirement Plan Review Committee, is to employ an allocation of investments that will generate returns equal to or better than the projected long-term growth of pension liabilities so that the plan will be self-funding. The return objective is to earn a real return (i.e., the actual return less inflation) of 6.0% as measured on a 10-year moving-average basis. The allocation of investments is designed to maximize the advantages of diversification while mitigating the risk to achieve the return objective. Risk is defined as the annual variability in value and is measured in terms of the standard deviation of investment return. Under the Company's investment policies, allowable investments include domestic equities, international equities, fixed income securities, alternative securities (which include real estate and private venture capital investments) and tactical allocation (a mix of equities and bonds). Ranges, in terms of a percentage of the total assets, are established for each allowable class of security. The Company may vary the actual asset mix based on the ratio of the plan assets and liabilities. The investment policy prohibits the use of derivative financial instruments that create or add leverage to an existing security position. Derivatives may be used to hedge an existing security or as a risk reduction strategy. Management reviews the asset allocation on an annual or more frequent basis and makes revisions as deemed necessary.

None of the plan assets noted above are invested in the Company's common stock.

### CASH FLOWS -- EMPLOYER CONTRIBUTIONS

The Company expects to contribute \$1.7 million to its pension benefit plans and \$3.6 million to its other benefit plans in 2004.

### OTHER BENEFIT PLANS

The Company also has accrued unfunded retirement arrangements for certain directors. The projected benefit obligation was \$0.1 million at December 31, 2003 and \$0.2 million at December 31, 2002. A corresponding accumulated benefit obligation of \$0.1 million at December 31, 2003 and \$0.2 million at December 31, 2002 has been recognized as a liability and is included in retirement and post-employment benefits. Certain foreign subsidiaries have funded and accrued unfunded pension and other post-employment arrangements. The liability for these plans was \$4.7 million at December 31, 2003 and \$3.6 million at December 31,

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2002 and was included in retirement and post-employment benefits on the Consolidated Balance Sheet.

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The Company also sponsors a defined contribution plan available to substantially all U.S. employees. Company contributions to the plan are based on matching a percentage of employee savings up to a specified savings level. The Company's contributions were \$1.0 million in 2003, \$1.0 million in 2002 and \$2.5 million in 2001. The Company reduced its matching percentage in half effective with the beginning of the fourth quarter 2001.

#### NOTE L -- CONTINGENCIES AND COMMITMENTS

##### CHRONIC BERYLLIUM DISEASE CLAIMS

The Company is a defendant in proceedings in various state and federal courts by plaintiffs alleging that they have contracted chronic beryllium disease, or CBD, or related ailments as a result of exposure to beryllium. Plaintiffs in CBD cases seek recovery under theories of intentional tort and various other legal theories and seek compensatory and punitive damages, in many cases of an unspecified sum. Spouses, if any, claim loss of consortium. Additional CBD claims may arise.

Management believes the Company has substantial defenses in these cases and intends to contest the suits vigorously. Employee cases, in which plaintiffs have a high burden of proof, have historically involved relatively small losses to the Company. Third-party plaintiffs (typically employees of customers) face a lower burden of proof than do the Company's employees, but these cases are generally covered by varying levels of insurance.

Although it is not possible to predict the outcome of the litigation pending against the Company and its subsidiaries, the Company provides for costs related to these matters when a loss is probable and the amount is reasonably estimable. Litigation is subject to many uncertainties, and it is possible that some of the actions could be decided unfavorably in amounts exceeding the Company's reserves. An unfavorable outcome or settlement of a pending CBD case or additional adverse media coverage could encourage the commencement of additional similar litigation. The Company is unable to estimate its potential exposure to unasserted claims. The Company recorded a reserve for CBD litigation of \$2.9 million at December 31, 2003 and \$4.2 million at December 31, 2002. The reserve was reduced in both 2003 and 2002 for settlement payments as well as for changes in estimates for the outstanding claims as a result of favorable rulings and agreements. An asset of \$3.2 million was recorded at December 31, 2003 and \$4.9 million at December 31, 2002 for recoveries from insurance carriers for outstanding claims that are insured and for prior settlements initially paid directly by the Company to the plaintiff on insured claims. The reserve is included in other long-term liabilities and the recovery is included in other assets on the Consolidated Balance Sheets.

While the Company is unable to predict the outcome of the current or future CBD proceedings based upon currently known facts and assuming collectibility of insurance, the Company does not believe that resolution of these proceedings will have a material adverse effect on the financial condition or cash flow of the Company. However, the Company's results of operations could be materially affected by unfavorable results in one or more of these cases.

##### ENVIRONMENTAL PROCEEDINGS

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The Company has an active program for environmental compliance that includes the identification of environmental projects and estimating their impact on the Company's financial performance and available resources. Environmental expenditures that relate to current operations, such as wastewater treatment and control of airborne emissions, are either expensed or capitalized as appropriate. The Company records reserves for the probable costs for environmental remediation projects. The Company's environmental engineers perform routine ongoing analyses of the remediation sites. Accruals are based upon their analyses and are established at either the best estimate or, absent a best estimate, at the low end of the estimated range of costs. The accruals are revised for the results of ongoing studies and for differences between actual and

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

projected costs. The accruals are also affected by rulings and negotiations with regulatory agencies. The timing of payments often lags the accrual, as environmental projects typically require a number of years to complete. The Company established undiscounted reserves for environmental remediation projects of \$6.9 million at December 31, 2003 and \$7.7 million at December 31, 2002. The current portion of the reserve totaled \$0.7 million at December 31, 2003 and was included in other liabilities and accrued items while the remaining \$6.2 million of the reserve at December 31, 2003 is considered long-term and is included in other long-term liabilities on the Consolidated Balance Sheet. These reserves cover existing or currently foreseen projects. It is possible that additional environmental losses may occur beyond the current reserve, the extent of which cannot be estimated.

The environmental reserve was reduced by \$0.6 million in 2003 as a result of revised estimates of the required remediation work and related costs, primarily for RCRA projects, SWMU closure and other projects at the Company's Elmore, Ohio site. Payments against the reserve totaled \$0.2 million in 2003. The environmental expense was \$0.6 million in 2002. The environmental reserve was reduced by \$1.0 million during 2001 as result of a revised cost estimate for an established Voluntary Action Plan and the completion of another project for less than the previously estimated cost. The reserve was increased by \$0.7 million in 2001 for various projects at the Elmore site. These items combined for a net credit of \$0.3 million to income in 2001.

#### LONG-TERM OBLIGATION

The Company has a long-term supply arrangement with Ulba/Kazatomprom of the Republic of Kazakhstan and their marketing representative, Nukem, Inc. of Connecticut. The agreement was signed in 2000 and amended in 2001 and 2003. Under the amended 2003 agreement, the purchase commitments for copper beryllium master alloy have been significantly reduced from the previous levels. The 2003 amended agreement also added purchase commitments for beryllium vacuum cast billets and extended the contract period to 2012. All materials under the arrangement are sourced from Ulba/Kazatomprom. The annual base purchase commitments total between \$5.3 and \$5.6 million for 2004 through 2007. The price per pound escalates each year through 2007. A new price will be renegotiated for the years 2008 through 2012. If a new price cannot be agreed to by December 31, 2007, then the material purchases will terminate with the 2008 delivery volumes. The contract allows for the Company to purchase additional quantities of copper beryllium master alloy up to an annual maximum of 150,000 pounds of beryllium contained in the master alloy. The purchase of beryllium vacuum cast billets can be plus or minus 10% of the annual base quantity. Purchases of

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beryllium-containing materials from Nukem were \$3.3 million in 2001 and immaterial in both 2003 and 2002.

The Company has agreements to purchase stated quantities of beryl ore, beryllium metal and copper beryllium master alloy from the Defense Logistics Agency of the U.S. Government. The agreements expire in 2007. Annual purchase commitments total approximately \$6.4 million in 2004 through 2007. The beryllium component of the contract price is adjusted quarterly from these stated totals based upon fluctuations in the non-seasonally adjusted consumer price index. The Company may elect to take delivery of the materials in advance of the commitment dates. Purchases under these agreements totaled approximately \$5.7 million in 2003, \$3.9 million in 2002 and \$6.4 million in 2001. The purchased material will serve as raw material input for operations within Brush Wellman Inc. and Brush Resources Inc.

### OTHER

The Company has outstanding letters of credit totaling \$7.1 million related to workers' compensation, consigned precious metal guarantees and environmental remediation issues that expire in 2004.

The Company is subject to various other legal or other proceedings that relate to the ordinary course of its business. The Company believes that the resolution of these other legal or other proceedings, individually

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

or in the aggregate, will not have a material adverse impact upon the Company's Consolidated Financial Statements.

#### NOTE M -- SEGMENT REPORTING AND GEOGRAPHIC INFORMATION

Selected financial data by business segment as proscribed by SFAS No.131, "Disclosures about Segments of an Enterprise and Related Information," for 2003, 2002 and 2001 are as follows:

	METAL SYSTEMS	MICRO- ELECTRONICS	TOTAL SEGMENTS	ALL OTHER	TOTAL
	-----	-----	-----	-----	-----
	(DOLLARS IN THOUSANDS)				
2003					
Revenues from external customers.....	\$239,404	\$157,323	\$396,727	\$4,319	\$401,0
Intersegment revenues.....	2,414	1,119	3,533	17,994	21,5
Depreciation, depletion and amortization.....	11,250	4,020	15,270	5,461	20,7
Profit (loss) before interest and taxes.....	(16,590)	12,618	(3,972)	(5,368)	(9,3
Assets.....	258,958	74,137	333,095	38,521	371,6
Expenditures for long-lived assets.....	2,830	2,930	5,760	559	6,3
2002					
Revenues from external customers.....	\$227,884	\$139,180	\$367,064	\$5,765	\$372,8
Intersegment revenues.....	3,118	1,566	4,684	12,171	16,8
Depreciation, depletion and amortization.....	12,060	3,930	15,990	4,650	20,6
Profit (loss) before interest and					

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taxes.....	(37,657)	3,845	(33,812)	10,967	(22,8
Assets.....	223,986	71,832	295,818	39,061	334,8
Expenditures for long-lived assets.....	1,930	2,370	4,300	1,114	5,4
2001					
Revenues from external customers.....	\$295,690	\$169,598	\$465,288	\$7,281	\$472,5
Intersegment revenues.....	2,596	2,066	4,662	12,036	16,6
Depreciation, depletion and amortization.....	12,560	3,780	16,340	5,269	21,6
Profit (loss) before interest and taxes.....	(20,117)	4,568	(15,549)	1,480	(14,0
Assets.....	265,371	68,401	333,772	69,881	403,6
Expenditures for long-lived assets.....	13,031	6,841	19,872	3,412	23,2

Segments are evaluated using earnings before interest and taxes. The "All Other" column includes the operating results of BEM Services, Inc. and Brush Resources Inc., two wholly owned subsidiaries of the Company, as well as the parent company's and other corporate expenses. BEM Services charges a management fee for the services provided to the other businesses within the Company on a cost-plus basis. Brush Resources sells beryllium hydroxide, produced from its mine and extraction mill in Utah, to external customers and to businesses within the Metal Systems Group. Assets shown in All Other include cash, computer hardware and software, deferred taxes, capitalized interest and the operating assets for Brush Resources. Inventories for Metal Systems and Microelectronics are shown at their FIFO values with the LIFO reserve included under the All Other column. Intersegment revenues are eliminated in consolidation. The revenues from external customer totals are presented net of the intersegment revenues. Assets for the Metals Systems Group include the \$51.8 million of equipment purchased in 2003 that was previously held under an operating lease.

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BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The Company's sales from U.S. operations to external customers, including exports, were \$311.5 million in 2003, \$301.1 million in 2002, and \$385.8 million in 2001. Revenues attributed to countries based upon the location of customers and long-lived assets deployed by the Company by country are as follows:

	2003	2002	2001
	-----	-----	-----
	(DOLLARS IN THOUSANDS)		
REVENUES			
United States.....	\$276,668	\$268,548	\$338,233
All other.....	124,378	104,281	134,336
	-----	-----	-----
Total.....	\$401,046	\$372,829	\$472,569
	=====	=====	=====
LONG-LIVED ASSETS			
United States.....	\$185,168	\$147,263	\$166,126
All other.....	5,678	5,281	5,170
	-----	-----	-----
Total.....	\$190,846	\$152,544	\$171,296
	=====	=====	=====

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No individual country, other than the United States, or customer accounted for 10% or more of the Company's revenues for the years presented. Revenues from outside the U.S. are primarily from Europe and Asia.

### NOTE N -- RELATED PARTY TRANSACTIONS

The Company has outstanding loans of \$0.4 million with six employees, including two executive officers, as of December 31, 2003. The loan balance was \$0.4 million as of December 31, 2002 as well. The loans were made in the first quarter 2002 pursuant to life insurance agreements between the Company and the employees. The portion of the premium paid by the Company is treated as a loan from the Company to the employee and the loans are secured by the insurance policies, which are owned by the employees. The agreements require the employee to maintain the insurance policy's cash surrender value in an amount at least equal to the outstanding loan balance. The loan is payable from the insurance proceeds upon the employee's death or at an earlier date due to the occurrence of specified events. The loans bear an interest rate equal to the applicable federal rate.

### NOTE O -- OTHER COMPREHENSIVE INCOME

The following table summarizes the net gain/(loss) by component within other comprehensive income as of December 31, 2003, 2002 and 2001.

	DECEMBER 31,		
	2003	2002	2001
(DOLLARS IN THOUSANDS)			
Foreign currency translation adjustment.....	\$ (982)	\$ (1,457)	\$ (2,289)
Change in the fair value of derivative financial instruments.....	(3,216)	(7,839)	(2,061)
Minimum pension liability.....	(12,596)	(13,563)	--
Total.....	\$ (16,794)	\$ (22,859)	\$ (4,350)

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### BRUSH ENGINEERED MATERIALS INC. AND SUBSIDIARIES

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

### NOTE P -- QUARTERLY DATA (UNAUDITED)

YEARS ENDED DECEMBER 31, 2003 AND 2002

	2003				
	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	TOTAL
(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)					
Net sales.....	\$99,518	\$101,805	\$94,156	\$105,567	\$401,046
Gross profit.....	17,113	18,864	14,370	22,691	73,038

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Percent of sales.....	17.2%	18.5%	15.3%	21.5%	18.2%
Net income (loss).....	(3,016)	37	(3,060)	(7,187)	(13,226)
Net income (loss) per share of common stock.....	(0.18)	--	(0.18)	(0.43)	(0.80)
Stock price range					
High.....	6.15	8.92	10.45	15.60	
Low.....	4.80	5.06	7.70	10.20	

2002

	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	TOTAL
	(DOLLARS IN THOUSANDS, EXCEPT PER SHARE DATA)				
Net sales.....	\$89,582	\$100,749	\$93,481	\$89,017	\$372,829
Gross profit.....	10,254	15,070	12,015	10,558	47,897
Percent of sales.....	11.4%	15.0%	12.9%	11.9%	12.8%
Net loss.....	(3,834)	(2,049)	(2,906)	(26,815)	(35,604)
Net loss per share of common stock.....	(0.23)	(0.12)	(0.18)	(1.62)	(2.15)
Stock price range					
High.....	14.00	13.24	12.20	8.00	
Low.....	10.25	11.15	6.98	4.50	

Fourth quarter 2003 results include a \$6.0 million pre-tax charge to write off deferred costs and recognize derivative ineffectiveness as a result of the debt refinancing.

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[DESCRIPTION OF ARTWORK]

The following is a description of photographs that will be included on the inside back cover of the prospectus.

[Company Logo]

1. A photograph of ToughMet(R) copper-nickel-tin alloy materials used in undersea oil and gas drilling.
2. A photograph of metallic beryllium and AlBeMet(R) materials used for fighter jet optical targeting systems.
3. A photograph of a cellular phone and a high-performance copper-beryllium strip for input-output connectors of cellular phones.
4. A photograph of high-strength and conductivity alloy for computer testing and production sockets.
5. A photograph of precious metal sputtering materials that form the metallic coating on semi-conductor wafers and data storage devices, including DVDs.

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6. A photograph of a high-purity beryllium transmission window used in medical diagnostic x-ray equipment.
7. A photograph of aluminum clad specialty alloys used in digital cameras and photo-capable cellular phones.
8. A photograph of NASA's Mars Rover, which utilizes AlBeMet (R) and metallic beryllium materials.

[Back Cover of Prospectus]

### PART II

#### INFORMATION NOT REQUIRED IN PROSPECTUS

##### ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

Set forth below is an estimate (except for the registration fee, the NASD filing fee and the New York Stock Exchange filing fee) of the fees and expenses (other than underwriting discounts and commissions) payable by us in connection with the sale of common shares being registered.

Registration fee.....	\$5,382
NASD filing fee.....	4,748
New York Stock Exchange listing application fee.....	5,000
Blue sky qualification fees and expenses.....	*
Printing and engraving expenses.....	*
Legal fees and expenses.....	*
Accounting fees and expenses.....	*
Transfer agent and registrar fees.....	*
Miscellaneous.....	*
	-----
Total.....	\$ *
	=====

-----  
\* To be completed by amendment.

##### ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

We will indemnify, to the full extent then permitted by law, any director or officer or former director or officer of our company who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a member of our Board of Directors or our officer, employee or agent, or is or was serving at our request as a director, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise. We will pay, to the full extent then required by law, expenses, including attorney's fees, incurred by a member of our Board of Directors in defending any such action, suit or proceeding as they are incurred, in advance of the final disposition thereof.

To the full extent then permitted by law, we may indemnify employees, agents and other persons and may pay expenses, including attorney's fees,



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incurred by any employee, agent or other person in defending any action, suit or proceeding as such expenses are incurred, in advance of the final disposition thereof.

The indemnification and payment of expenses described above will not be exclusive of, and will be in addition to, any other rights granted to any person seeking indemnification under any law, our amended and restated articles of incorporation, any agreement, vote of shareholders or disinterested members of our Board of Directors, or otherwise, both as to action in official capacities and as to action in another capacity while he or she is a member of our Board of Directors or our officer, employee or agent, and shall continue as to a person who has ceased to be a member of our Board of Directors, trustee, officer, employee or agent and shall inure to the benefit of the heirs, executors, and administrators of such a person.

We may, to the full extent then permitted by law and authorized by our Board of Directors, purchase and maintain insurance or furnish similar protection, including but not limited to trust funds, letters of credit or self-insurance, on behalf of or for any persons described above against any liability asserted against and incurred by any such person in any such capacity, or arising out of his status as such, whether or not we would have the power to indemnify such person against such liability. Insurance may be purchased from or maintained with a person in which we have a financial interest.

We, upon approval by our Board of Directors, may enter into agreements with any persons who we may indemnify under our amended and restated code of regulations or under law and may undertake thereby to

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indemnify such persons and to pay the expenses incurred by them in defending any action, suit or proceeding against them, whether or not we would have the power under law or our amended and restated code of regulations to indemnify any such person.

Under Ohio law, Ohio corporations are authorized to indemnify directors, officers, employees and agents within prescribed limits and must indemnify them under certain circumstances. Ohio law does not provide statutory authorization for a corporation to indemnify directors, officers, employees and agents for settlements, fines or judgments in the context of derivative suits. However, it provides that directors (but not officers, employees or agents) are entitled to mandatory advancement of expenses, including attorneys' fees, incurred in defending any action, including derivative actions, brought against the director, provided that the director agrees to cooperate with the corporation concerning the matter and to repay the amount advanced if it is proved by clear and convincing evidence that the director's act or failure to act was done with deliberate intent to cause injury to the corporation or with reckless disregard for the corporation's best interests.

Ohio law does not authorize payment of judgments to a director, officer, employee or agent after a finding of negligence or misconduct in a derivative suit absent a court order. Indemnification is permitted, however, to the extent such person succeeds on the merits. In all other cases, if a director, officer, employee or agent acted in good faith and in a manner he reasonably believed to be in or not opposed to be the best interests of the corporation, indemnification is discretionary except as otherwise provided by a corporation's articles, code of regulations or by contract except with respect to the advancement of expenses of directors.

Under Ohio law, a director is not liable for monetary damages unless it is proved by clear and convincing evidence that his action or failure to act was

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undertaken with deliberate intent to cause injury to the corporation or with reckless disregard for the best interests of the corporation. There is, however, no comparable provision limiting the liability of officers, employees or agents of a corporation. The statutory right to indemnification is not exclusive in Ohio, and Ohio corporations may, among other things, procure insurance for such persons.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

EXHIBIT NUMBER -----	DESCRIPTION OF DOCUMENT -----
1.1*	Form of Underwriting Agreement
3.1	Amended and Restated Articles of Incorporation of Brush Engineered Materials Inc. (filed as Annex B to the Registration Statement on Form S-4 filed by Brush Engineered Materials Inc. on February 1, 2000, Registration No. 333-95917), incorporated herein by reference.
3.2	Amended and Restated Code of Regulations of Brush Engineered Materials Inc. (filed as Exhibit 4(b) to the Current Report on Form 8-K filed by Brush Wellman Inc. on May 16, 2000), incorporated herein by reference.
4.1	Rights Agreement, dated as of May 10, 2000, by and between Brush Engineered Materials Inc. and National City Bank, N.A. as Rights Agent (filed as Exhibit 4(a) to the Current Report on Form 8-K filed by Brush Engineered Materials Inc. on May 16, 2000), incorporated herein by reference.
4.2	Warrant dated December 4, 2003 to purchase 78,571 Common Shares of Brush Engineered Materials Inc. granted to Upper Columbia Capital Company, LLC (filed as Exhibit 4(h) to the Annual Report on Form 10-K filed by Brush Engineered Materials Inc. on March 15, 2004), incorporated herein by reference.
4.3	Warrant dated December 4, 2003 to purchase 20,000 Common Shares of Brush Engineered Materials Inc. granted to H/Z Acquisition Partners LLC (filed as Exhibit 4(i) to the Annual Report on Form 10-K filed by Brush Engineered Materials Inc. on March 15, 2004), incorporated herein by reference.
4.4	Warrant dated December 4, 2003 to purchase 16,429 Common Shares of Brush Engineered Materials Inc. granted to Bank One, NA (filed as Exhibit 4(j) to the Annual Report on Form 10-K filed by Brush Engineered Materials Inc. on March 15, 2004), incorporated herein by reference.
5.1*	Opinion of Jones Day.

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EXHIBIT NUMBER -----	DESCRIPTION OF DOCUMENT -----
23.1	Consent of Ernst & Young LLP.
23.2*	Consent of Jones Day (included in Exhibit 5.1).
24.1	Power of Attorney.

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\* To be filed by amendment.

ITEM 17. UNDERTAKINGS.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and this offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described under Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cleveland, State of Ohio, on April 1, 2004.

BRUSH ENGINEERED MATERIALS INC.

Date: April 1, 2004

By: /s/ GORDON D. HARNETT  
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Gordon D. Harnett  
Chairman of the Board, President  
and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this  
Registration Statement has been signed by the following persons in the  
capacities and on the dates indicated:

Date: April 1, 2004

/s/ GORDON D. HARNETT  
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Gordon D. Harnett  
Chairman of the Board, President, Chief  
Executive Officer and Director (Principal  
Executive Officer)

Date: April 1, 2004

/s/ JOHN D. GRAMPA  
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John D. Grampa  
Vice President Finance and Chief Financial  
Officer (Principal Financial Officer and  
Principal Accounting Officer)

Date: April 1, 2004

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Albert C. Bersticker  
Director

Date: April 1, 2004

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David H. Hoag  
Director

Date: April 1, 2004

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Joseph P. Keithley  
Director

Date: April 1, 2004

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William B. Lawrence  
Director

Date: April 1, 2004

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William P. Madar  
Director

Date: April 1, 2004

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William G. Pryor  
Director

Date: April 1, 2004

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N. Mohan Reddy  
Director

Date: April 1, 2004

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William R. Robertson  
Director

Date: April 1, 2004

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John Sherwin, Jr.  
Director

\* This Registration Statement has been signed on behalf of the above officers and directors by John D. Grampa, as attorney-in-fact pursuant to a power of attorney filed as Exhibit 24.1 to this Registration Statement.

Date: April 1, 2004

By: /s/ JOHN D. GRAMPA

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John D. Grampa  
Attorney-in-Fact