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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 8-K**

**CURRENT REPORT**

**Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported) **October 31, 2005**

**Brush Engineered Materials Inc.**

(Exact name of registrant as specified in its charter)

Ohio

(State or other jurisdiction  
of incorporation)

001-15885

(Commission  
File Number)

34-1919973

(IRS Employer  
Identification No.)

17876 St. Clair Avenue, Cleveland, Ohio

(Address of principal executive offices)

44110

(Zip Code)

Registrant's telephone number, including area code

216-486-4200

Not Applicable

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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**Item 7.01 Regulation FD Disclosure**

On October 31, 2005, Brush Engineered Materials Inc., an Ohio corporation (the “Company”), updated its website with a slide presentation that will be presented by Richard Hipple, President and Chief Operating Officer and John Grampa, Vice President Finance and Chief Financial Officer, to investors on November 2 and 3, 2005. A copy of the presentation is attached hereto as Exhibit 99.1.

**Item 9.01 Financial Statements and Exhibits**

Exhibits:

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
99.1	November 2005 materials provided to investors

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Brush Engineered Materials Inc.

October 31, 2005

By: Michael C. Hasychak  
Michael C. Hasychak  
Vice President, Treasurer and Secretary





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***Investor Presentation***  
***November 2-3, 2005***

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## Forward-Looking Statements

These slides contain (and the accompanying oral discussion will contain) “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other factors that could cause the actual results of the Company to differ materially from the results expressed or implied by these statements, including health issues, litigation and regulation relating to our business, our ability to achieve profitability, significant cyclical fluctuations in our customers’ businesses, competitive substitutes for our products, risks associated with our international operations, including foreign currency rate fluctuations, energy costs and the availability and prices of raw materials and other factors disclosed in periodic reports filed with the Securities and Exchange Commission. Consequently these forward looking statements should be regarded as the Company’s current plans, estimates and beliefs.

The Company does not undertake and specifically declines any obligation to publicly release the results of any revisions to these forward-looking statements that may be made to reflect any future events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events.

# Management Team

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**Gordon D. Harnett – Chairman and CEO**

Chairman and CEO since 1991

**Richard J. Hipple – President and COO**

President and COO since 2005

**John D. Grampa – Vice President and CFO**

Vice President and CFO since 1999

**Daniel A. Skoch – Senior Vice President, Administration**

Senior Vice President since July 2000

# Overview

- **Company:** **Brush Engineered Materials Inc.**  
founded 1931, publicly traded since 1956
- **NYSE Ticker:** **BW**
- **Shares Outstanding:** **Approximately 19.3 million at 9/30/05**
- **Market Cap:** **Approximately \$305 million at 9/30/05**
- **Component of:** **S&P Super Composite 1500**  
**Russell 2000**  
**S&P Small Cap 600**
- **Annual Revenue:** **Approximately \$500 million @ 12/31/04**
- **Diluted EPS:** **\$.86 in 2004**
- **Debt to Total Capitalization:** **21% at 9/30/05**



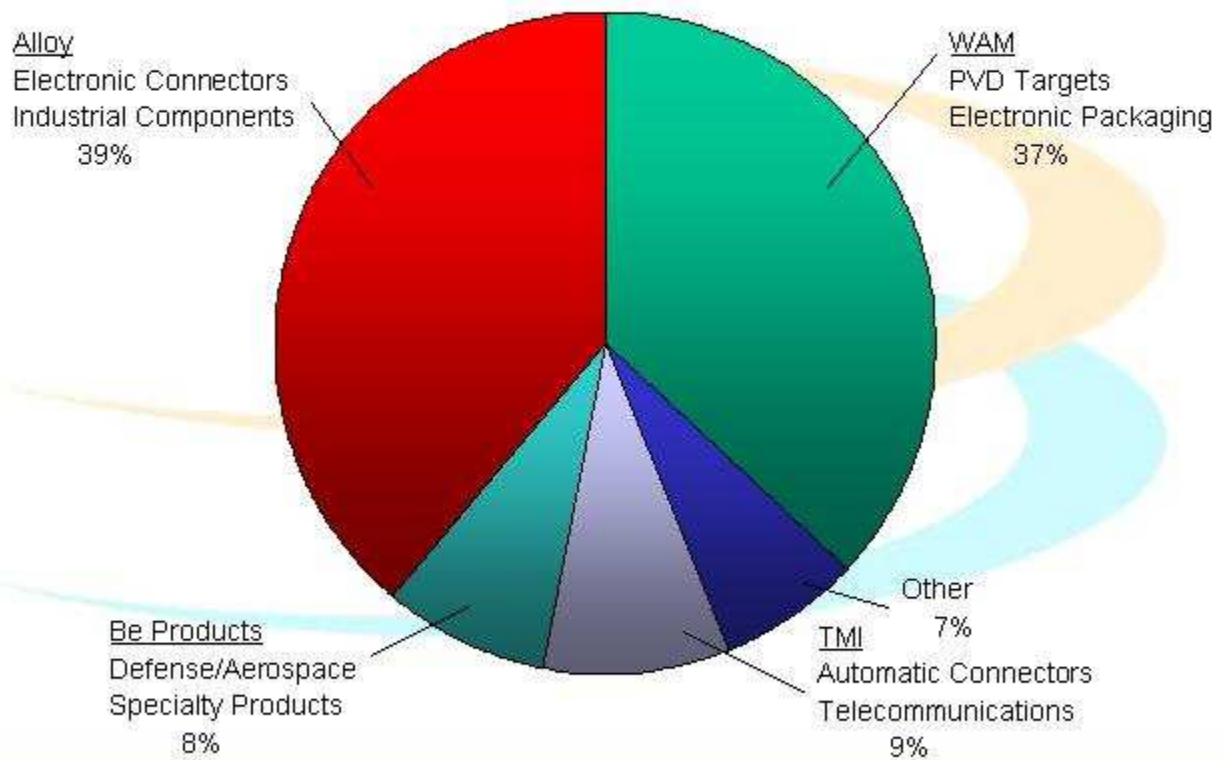
# Investment Highlights

- Global Leader in High Performance Engineered Materials
- Unique Status as Fully Integrated Provider of Beryllium-Containing Products
- Broad Metallurgical Capabilities in Precious and Non-precious Metals
- Global Sales and Distribution Network
- Sales Based on End User Specifications
- Strong Value Proposition in Served Markets
- Strategic Customer Relationships
- Significant Technical Capabilities
- Positive Long-Term Market Trends
- Strong Growth in New Products
- High Barriers to Entry
- Capacity to Support Profitable Market Growth
- Strong Balance Sheet

# Corporate Overview

- Leading global provider of high performance engineered materials
- Our engineered materials enable our customers' high performance products to be made stronger, smaller and lighter with significantly enhanced overall thermal, electrical and mechanical properties
- Product applications include a variety of end-use markets
  - Telecommunications & computer
  - Automotive electronics
  - Magnetic & optical data storage
  - Industrial components
  - Aerospace & defense
  - Appliance

## Brush Engineered Materials – Major Business Units



# Corporate Overview

- Beryllium is a key raw material in many of our products. It is stiffer than steel, lighter than aluminum and possesses other unique mechanical and thermal properties
- Precious metals and other metals are also an important part of our product mix
- Operate manufacturing, service and distribution facilities throughout the world

# Global Sales and Distribution Network

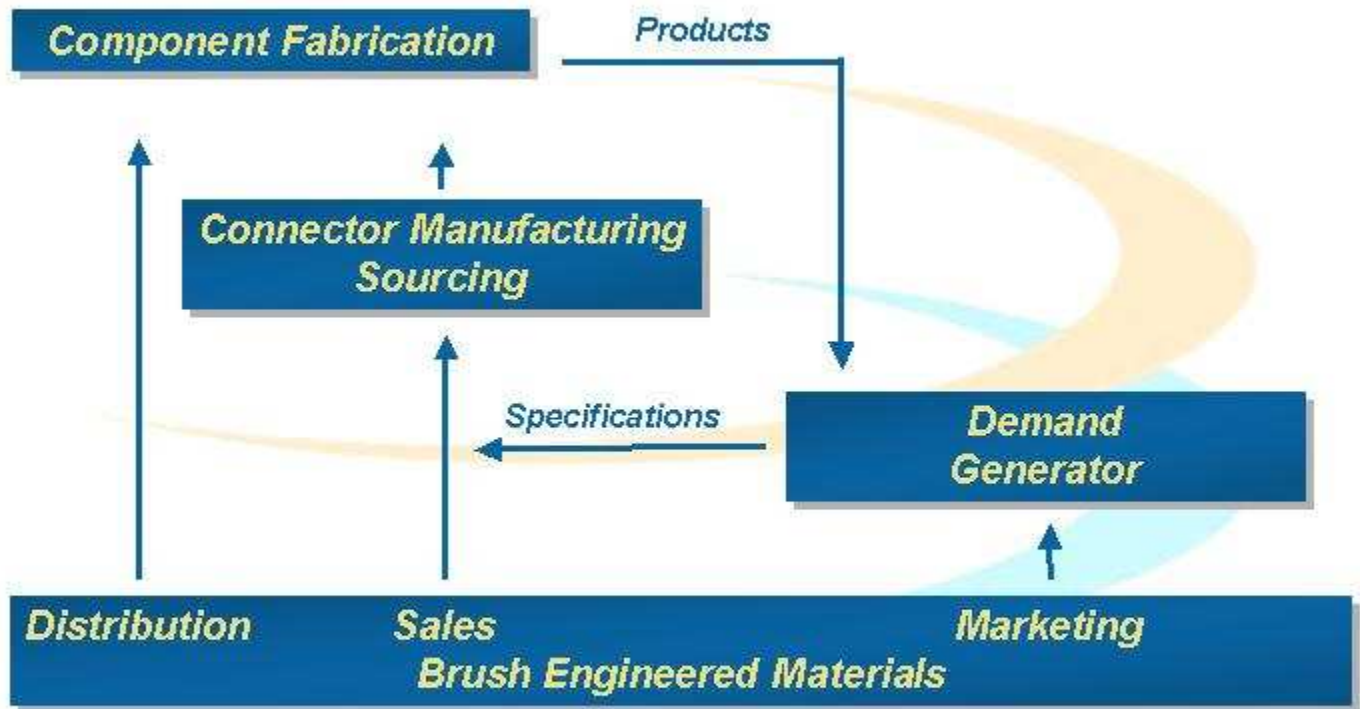
- Operations in the U.S. and ten foreign locations
- Recent expansion to Taiwan, China and Korea
- International sales are 33% and growing

◀ ----- Asia / Pacific ----- ▶    ◀ ----- Europe ----- ▶    ◀ - Exports from USA - ▶





## Sales Based on End User Specifications



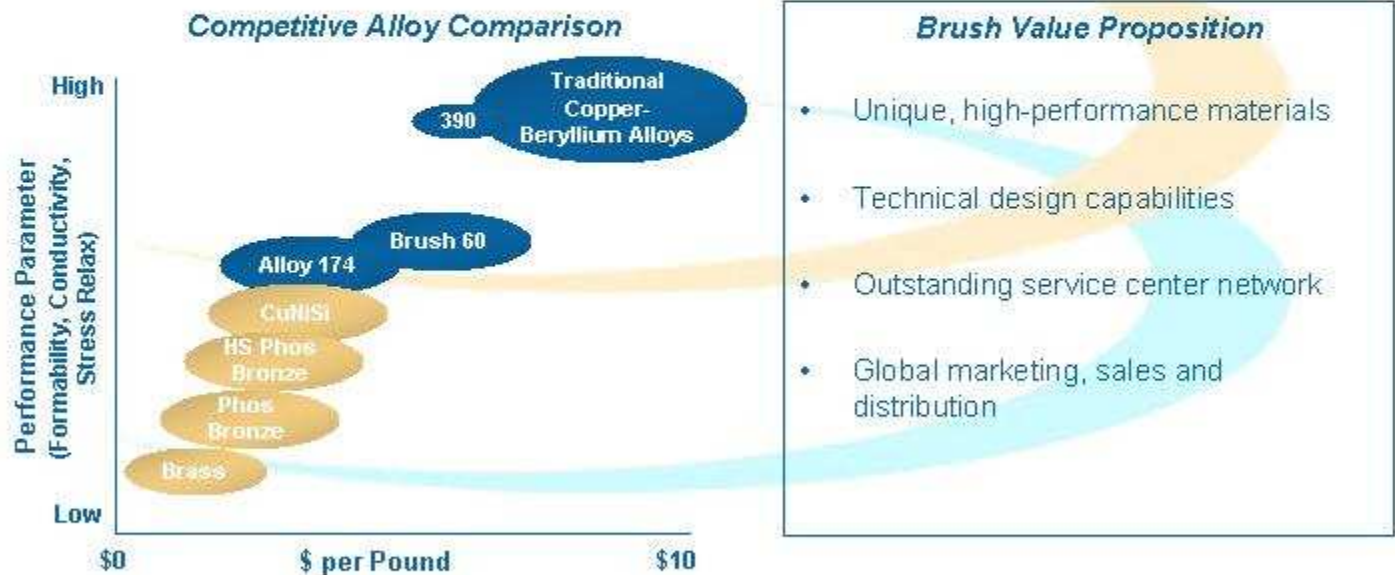
# Fully Integrated Beryllium Producer

- Beryllium and beryllium alloys are critical to many high performance applications
  - Strong
  - High reliability
  - Lightweight
  - Thermal and electrical conductivity
  - Good formability
  - Corrosion and wear resistant
- Operate the only active bertrandite ore mine in the developed world
  - 7,500 acres in Juab County, Utah
  - Approximately 100 years of proven reserves



# Strong Value Proposition in Served Markets

*Copper-beryllium alloys, while premium priced, provide best-in-class performance*



Note: Blue denotes Brush Engineered Materials' alloys; beige represents competitive materials.



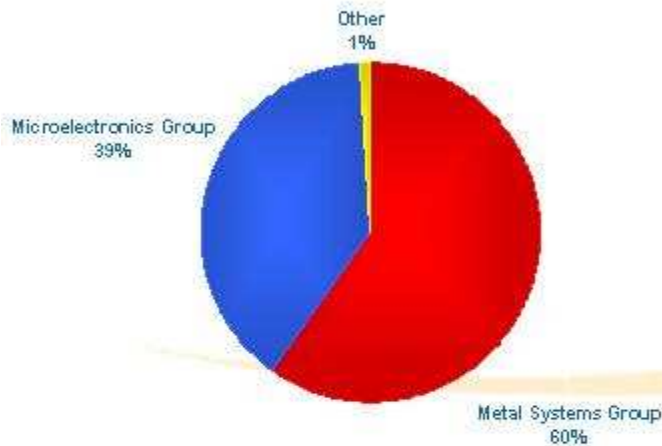
## Broad Metallurgical and Significant Technical Capabilities

***Williams Advanced Materials also has broad capabilities in precious and non-precious metal fabrication***

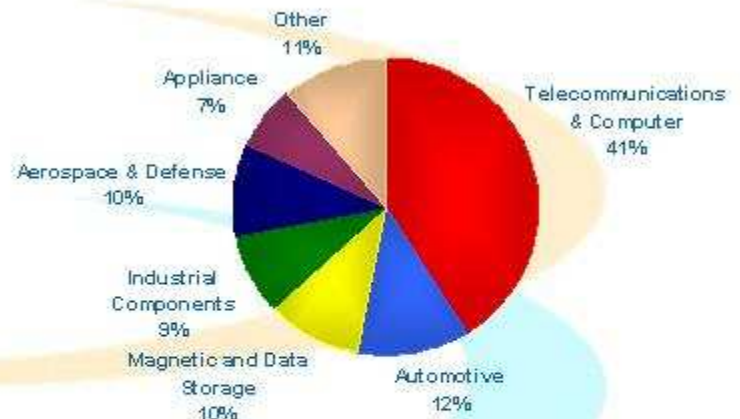
- Comprehensive product line
  - High purity / proprietary PVD targets
  - Micro-electronic packaging materials
  - Refining services
  - Bonding centers
- Strong end use markets
  - Data storage
  - Optical media
  - Wireless / handsets
  - Semiconductor
- Industry leading service and support
  - Global sales and applications support
  - “Best-in-class” response times
  - Low-cost operations in Singapore, Taiwan and the Philippines

# Global Leader in High Performance Engineered Materials

## 2004 Revenue by Segment



## 2004 Revenue by Market



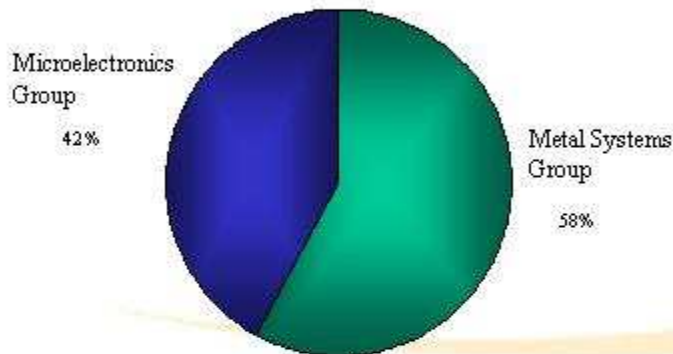
## Applications

- |            |              |                 |                      |             |                      |
|------------|--------------|-----------------|----------------------|-------------|----------------------|
| ▪ Handsets | ▪ Routers    | ▪ Plastic Molds | ▪ Bushings           | ▪ Lasers    | ▪ Relays             |
| ▪ PDAs     | ▪ Servers    | ▪ X-Ray Windows | ▪ Bearings           | ▪ Switches  | ▪ Thin Film Circuits |
| ▪ DVDs     | ▪ Connectors | ▪ Shielding     | ▪ Notebook Computers | ▪ Fine Wire |                      |

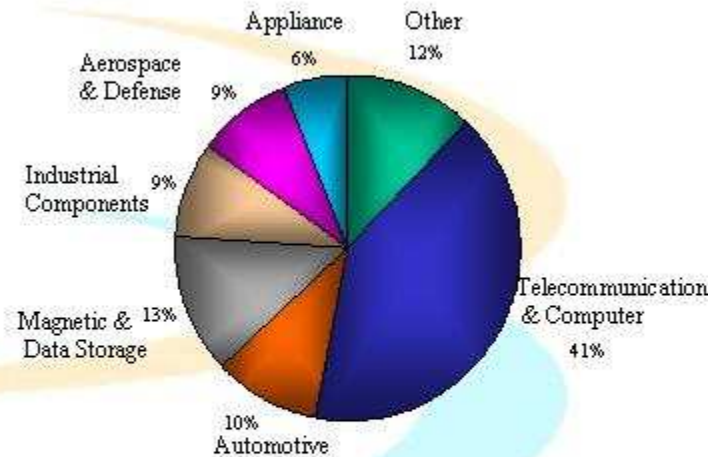
Note: Total 2004 revenues were \$496.3 million

# Global Leader in High Performance Engineered Materials

Q3 2005 YTD Revenue by Segment



Q3 2005 YTD Revenue by Market



## Applications

- Handsets
- PDAs
- DVDs
- Hard Drives
- Routers
- Servers
- Connectors
- Semiconductors
- Plastic Molds
- X-Ray Windows
- Shielding
- Bushings
- Bearings
- Notebook Computers
- Lasers
- Switches
- Fine Wire
- Relays
- Thin Film Circuits

Note: Total YTD 2005 revenues were \$400.6 million



## Metal Systems Group (YTD Q3 2005 Sales: \$232 million)

### Alloy Products

**\$155.1 million; 39%**

- Copper and nickel-based alloy materials, most of which incorporate beryllium
- Strip products are used in electronic connectors including PDA's, wireless communications equipment, notebook and network computers and automotive electronics that require high strength, formability and electrical conductivity
- Bulk products are rod, bar, tube and plate products for industrial and aerospace bushings and bearings, oil & gas components and plastic mold materials where strength, corrosion and wear resistance, thermal conductivity and lubricity are critical performance requirements

### Technical Materials, Inc. (TMI)

**\$37.1 million; 9%**

- Engineered material systems, including clad, plated and electron beam welded metals used in demanding connector applications
- Combines precious and non-precious metals in strip form for use in complex electrical components for telecommunications systems, computers and automotive electronics



## Metal Systems Group (YTD Q3 2005 Sales: \$232 million)

### Beryllium Products

**\$33.8 million; 8%**

- Pure beryllium and aluminum-beryllium composites for high-performance applications, principally for aerospace and defense applications where stiffness, strength, lightweight, dimensional stability and reflectivity are critical



### Brush Resources

**\$5.7 million; 2%**

- Brush Resources sells beryllium hydroxide produced through its Utah operations to outside customers and to businesses within the Metal Systems Group.



## Microelectronics Group (YTD Q3 2005 Sales: \$169 million)

### Williams Advanced Materials (WAM)

**\$149.6 million; 37%**

- Precious metal and specialty alloys for high reliability applications
- Products include precious and non-precious metal vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high-temperature braze materials and ultra fine wire
- Industries served include optical media, semi-conductor, data storage, performance film and wireless



### Electronic Products

**\$19.3 million; 5%**

- Products include beryllia ceramic materials, electronic packaging and thick-film circuitry
- Products designed to meet exacting performance requirements of target customers
- Industries served include wireless telecommunications, medical laser, aerospace, defense and automotive





## Positive Global Market Trends

- Electronic component manufacturers are being driven by end user demands to produce products that are smaller, lighter and faster
- Increased electronic component performance characteristics require materials that have enhanced mechanical, electrical and thermal properties
- Growing opportunity for thin film physical vapor deposition (PVD) products in the LCD, data storage and semiconductor markets
- Spending and conditions in the telecommunications and computer market are improving
- Conditions are improving in the oil and gas, undersea and heavy equipment markets

***Brush generated YOY sales growth in eleven consecutive quarters***

## Capacity to Support Profitable Market Growth

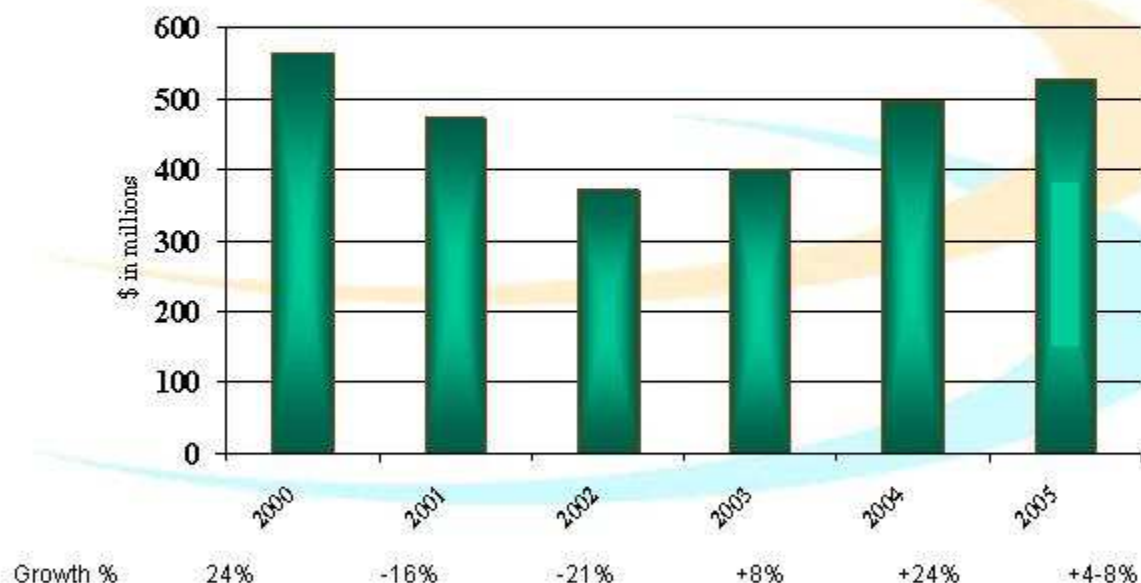
*Well-positioned to support rapid sales growth without significant incremental cash investment*

- \$160 million invested between 1996 and 2001
- Operating with significant available excess capacity
- Significant productivity gains in recent years
- Capital spending in 2002, 2003 and 2004 averaged \$7 million per year, depreciation in 2004 was approximately \$24 million. 2005 depreciation through Q-3 is \$16 million and capital spending is \$9 million



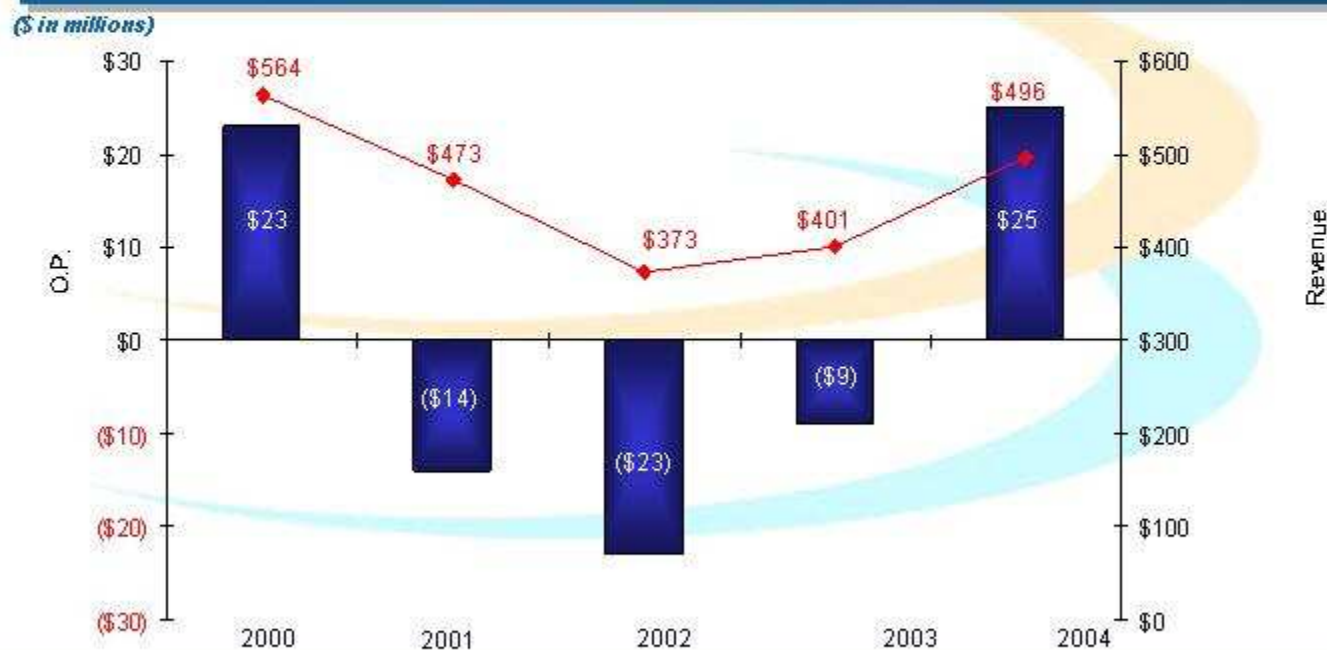
## Annual Revenue: Historical

*In 2001, the telecommunications and computer market declined; In 2003, our revenue growth began to return to historical rates*



## Annual Operating Profit (Loss) Compared to Revenue: Historical

*While this revenue decline resulted in operating losses, on-going performance improvement initiatives added to profitability as revenue returned to historical levels*



# Financial and Operational Initiatives

*Our on-going performance improvement initiatives are focused on five key areas*

- Expanding and diversifying the revenue base to lower volatility
  - New products
  - New markets
  - New applications
  - New geographies
- Improving margins through increased operating efficiency
  - Six Sigma and Lean Manufacturing
- Reducing overhead costs
- Reducing debt
- Positioning for global market growth and economic recovery
  - Improve quality, cost, speed and service

# Expand and Diversify Revenue Base

*BEM has aggressively worked to broaden its base with initiatives targeted at new products, new end use markets and new high-growth regions*

## *New Products*

- **Alloy 390** – Telecom & Auto
- **PM Plated Strip** – Telecom & Auto
- **Toughmet** – Bushings & Bearings
- **MoldMax XL** – Plastic Molds
- **Welded Tube** – Oil & Gas
- **Silver DVD Alloy (Silx)** – DVD
- **Visi-Lid** – Telecom & Military

## *New End Use Markets*

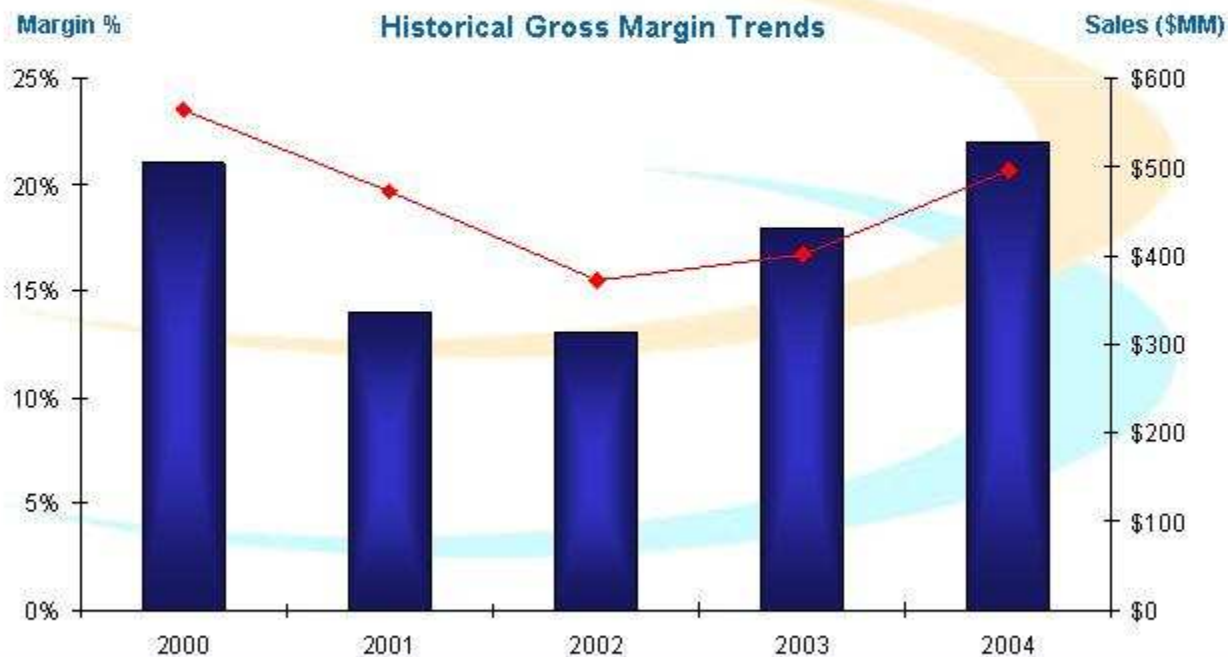
- Alloy
  - Heavy Equipment
  - Oil & Gas Components
  - Plastic Tooling
- WAM
  - Semiconductors
  - Data Storage
  - Magnetic Media
  - TFT / LCD

## *New High-Growth Regions*

- Singapore
- Taiwan
- Hong Kong
- Korea
- China

# Improve Margins

*Margins have improved through cost reduction and productivity improvement initiatives*





## Increase Operating Efficiency

*Lean Manufacturing and Six Sigma initiatives enabled Brush's Alloy Products business to improve operational efficiency and reduce costs in 2003 and 2004*

- Improved distribution inventory turns 29%
- Improved manufacturing inventory turns 16%
- Raised yields 7%
- Shipped 13% more pounds per manufacturing employee
- Reduce mill distribution operating cost by 3%
- Reduce strip rework by 28%
- Reduced unplanned equipment downtime 45%
- Improved safety performance by 40%

## Reduce Debt Obligations

*Total debt obligations have fallen over 50% from 2000 levels*

<i>(\$ in millions)</i>	<u>2000</u>	<u>2004</u>	<u>3Q05</u>
<b>Balance Sheet Debt and AEP Lease</b>	<b>\$128.4</b>	<b>\$72.5</b>	<b>\$58.3</b>
<b>Off-Balance Sheet Leases</b>	<b><u>\$17.9</u></b>	<b><u>\$13.1</u></b>	<b><u>\$12.1</u></b>
<b>Total</b>	<b>\$146.3</b>	<b>\$85.6</b>	<b>\$70.4</b>
<b>Debt to Debt plus Equity</b>	<b>36%</b>	<b>26%</b>	<b>21%</b>

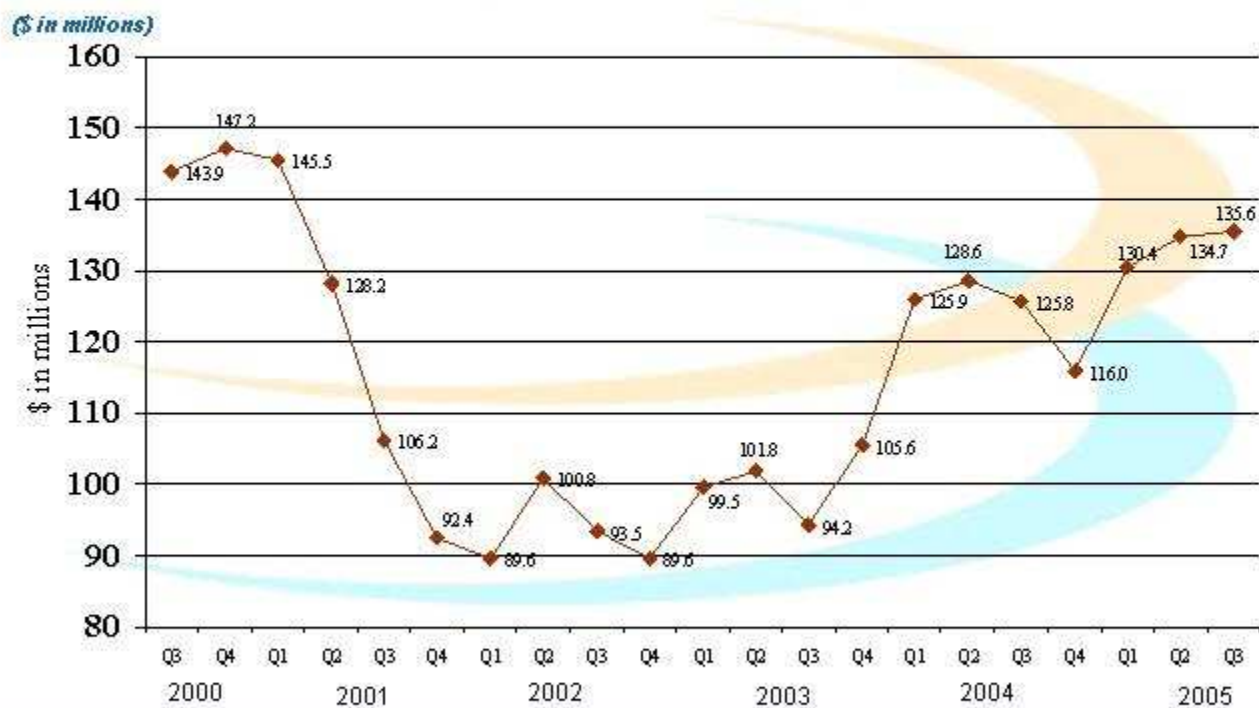
*Brush has continued to make progress on issues related to beryllium health and safety*

- Improved worker protection programs in place
- Rates of sensitization down among new workers
- CBD litigation claims have declined to 15 cases
- Strong focus on regulations related to beryllium exposure



## Quarterly Revenue: Historical

**Brush generated YOY sales growth in eleven consecutive quarters**



## YTD Q-3 2005

- Eleven consecutive quarters of year over year sales growth
- Sales up 5% to \$401 million
- Good, but not up to our expectations
- Weaker shipments to computer and telecom, automotive and defense limited our growth
  - Down approximately 11% vs prior year
  - Hurt margins by 2 pts
- Stronger conditions in other markets led to 5% growth
  - Webb telescope
  - Magnetic media, semiconductor and industrial components
  - Solid new products progress
- Tangible progress continues in other areas
  - Cash from working capital
  - SG&A % down 1 pt
  - Productivity gains
- Balance sheet continued to strengthen
  - Debt down an additional \$14 million
  - Debt to debt plus equity dropped to 21%
  - Capacity to pay down debt further at year end

## Q-3 2005 Results and Outlook

YTD ... hurt by weaker computer & telecom, automotive and defense markets. Also hurt by material cost increases.  
Helped by new product initiatives

Fourth Quarter Outlook ... while automotive and defense remain uncertain, our other markets are gaining momentum

- **Consumer electronics is strengthening**
- **Telecom infrastructure seems to be recovering from an inventory correction**
- **Magnetic media is healthy and growing**
- **Industrial components continues to strengthen**

# Strategic Highlights

- Markets served offer strong, global organic growth
- Global market expansion adds to opportunities
- New products and new levels of service for new and existing markets adds to growth
- Niche oriented product offerings bring higher margins
- Augmenting product offerings via bolt on acquisitions provides additional growth and leverage
- High margins, significant capacity yield earnings leverage and strong cash flow
- Focus on operational excellence reduces cost, speeds delivery and raises fixed and working capital turns
- Strong balance sheet provides liquidity to support growth