
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) February 16, 2006

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 February 16, 2006, Brush Engineered Materials Inc., an Ohio corporation (the “Company”), updated the “Current Investor Update,” a slide presentation on its website, a copy of which is attached hereto as Exhibit 99.1. This slide presentation shows the Company’s corporate strategy and the financial results through the fourth quarter of 2005.

Item 9.01 Financial Statements and Exhibits

Exhibits:

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
99.1	Current Investor Update

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.

February 16, 2006

By: Michael C. Hasychak

Michael C. Hasychak
Vice President, Treasurer and Secretary

Brush Engineered Materials Inc.

Profile

- Publicly traded since 1956: NYSE-listed since 1972.
- Founded 1931 as Brush Beryllium Company, recently celebrated 75th anniversary.
 - Building off earlier pioneering technical work at Brush Laboratories
 - Initial scope was development of commercial markets
- With onset of WW II and post war period, significant growth in defense and eventually, aerospace applications
- Mid-70s: major expansion of new commercial markets.
- Today, commercial markets represent 90% + of revenues



Brush Engineered Materials Inc.

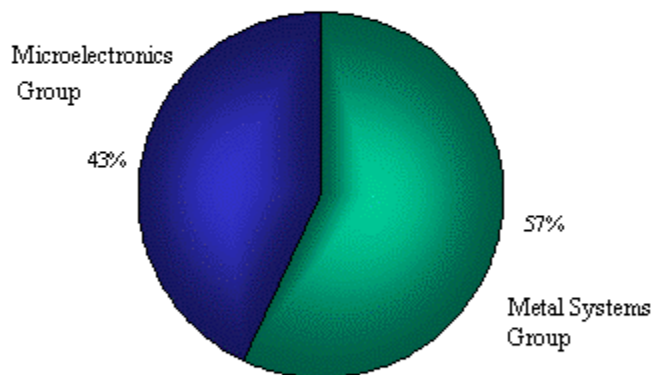
Profile

- A leading manufacturer of high performance engineered materials
- Operations, service centers and major office locations in North America, Europe and Asia
- Serving long-term growth oriented global markets:
 - Telecommunications and computers
 - Automotive electronics
 - Magnetic and optical data storage
 - Industrial components
 - Aerospace and defense
 - Appliance

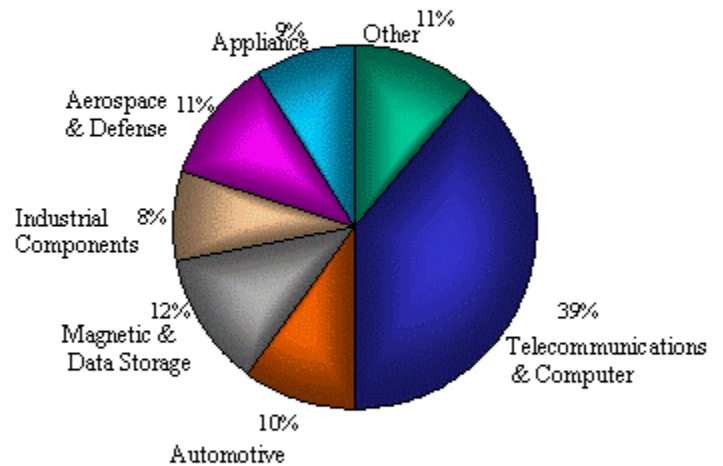


Global Leader in High Performance Engineered Materials

2005 Revenue by Segment



2005 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 2005 revenues were \$541.3 million



Brush Engineered Materials Inc.

“Advancing the World’s Technologies”

- BEM Materials are found in a wide range of critical and demanding applications requiring:
 - Strength
 - Reliability
 - Thermal & electrical conductivity
 - Miniaturization
 - Weight reduction
 - Corrosion resistance
 - Reflectivity



www.brush-engineeredmaterials.com

Brush Engineered Materials Inc.

End Uses



Notebook and network computers

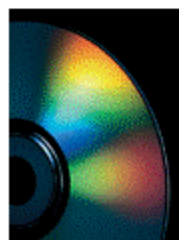
Cellular phones and other wireless communications



Electronic components in cars and trucks



Life enhancing devices



Magnetic & Optical
Data Storage

Industrial products



Investment Highlights and Strengths

- 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



Brush Engineered Materials Inc.
Organized into Two Separate Reportable Segments

Metal Systems

Alloy Products

Beryllium Products

Technical Materials, Inc.

Brush Resources Inc.

Microelectronics

Electronic Products

Williams Advanced Materials Inc.

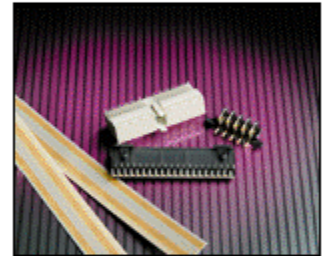
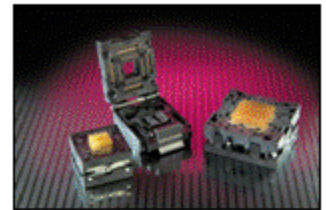


Metal Systems Group - 2005 Sales: \$306 million

Alloy Products

\$208.2 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 heavy equipment 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)

\$49.9 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 - 2005 Sales: \$306 million

Continued

Beryllium Products

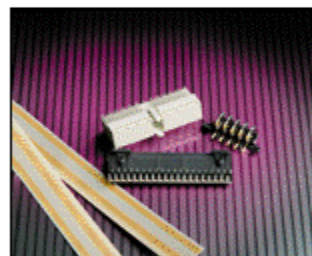
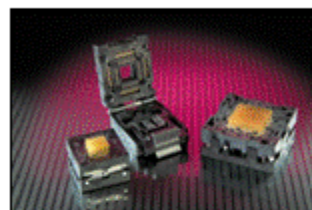
\$42.6 million; 8%

- Pure beryllium and aluminum-beryllium composites for high-performance applications, principally for medical, space and defense applications where stiffness, strength, lightweight, dimensional stability, reflectivity and x-ray/nuclear properties are critical.

Brush Resources

\$5.6 million; 1%

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



 **BRUSH**
ENGINEERED MATERIALS

Microelectronics Group - 2005 Sales: \$235 million

Williams Advanced Materials (WAM)

\$209.6 million; 38%

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 magnetic and optical data storage media, semi-conductor, performance film and wireless photonics

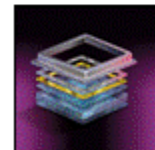
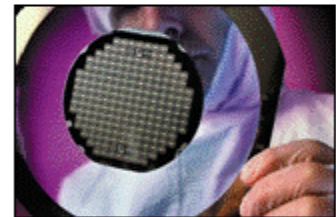
Electronic Products

\$25.4 million; 5%

Products include beryllia ceramic materials, electronic packaging and thick-film circuitry

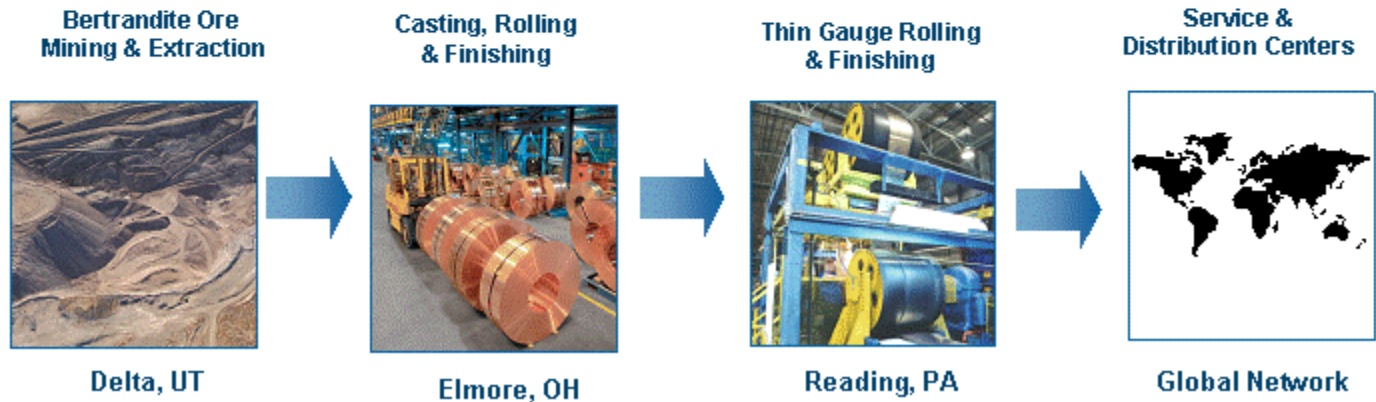
Products designed to meet exacting performance requirements of target customers

Industries served include wireless telecommunications, medical laser, aerospace, defense and automotive



Fully Integrated Beryllium Producer

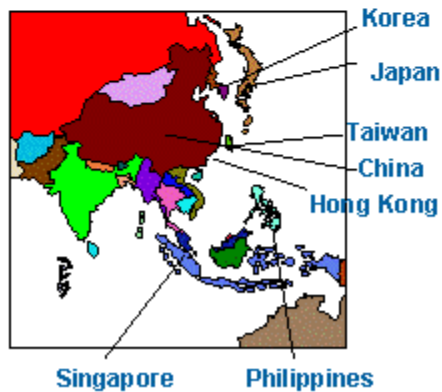
- Beryllium and beryllium alloys are critical to many high performance applications
 - Strong
 - Lightweight
 - Good formability
 - High reliability
 - Thermal and electrical conductivity
 - Corrosion and wear resistant
- Operate the only active bertrandite ore mine in the developed world
 - 7,500 acres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



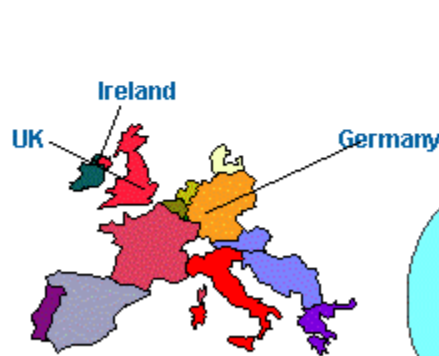
Global Sales and Distribution Network

- Operations in the U.S. and ten foreign locations
- Recent expansion to Taiwan, China and Korea
- International sales for 2005 were 33%

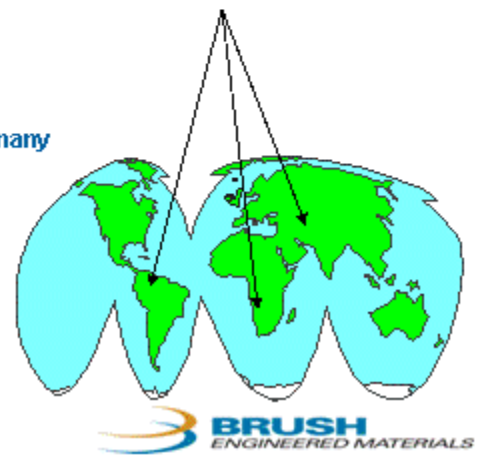
◀ ----- Asia / Pacific ----- ▶

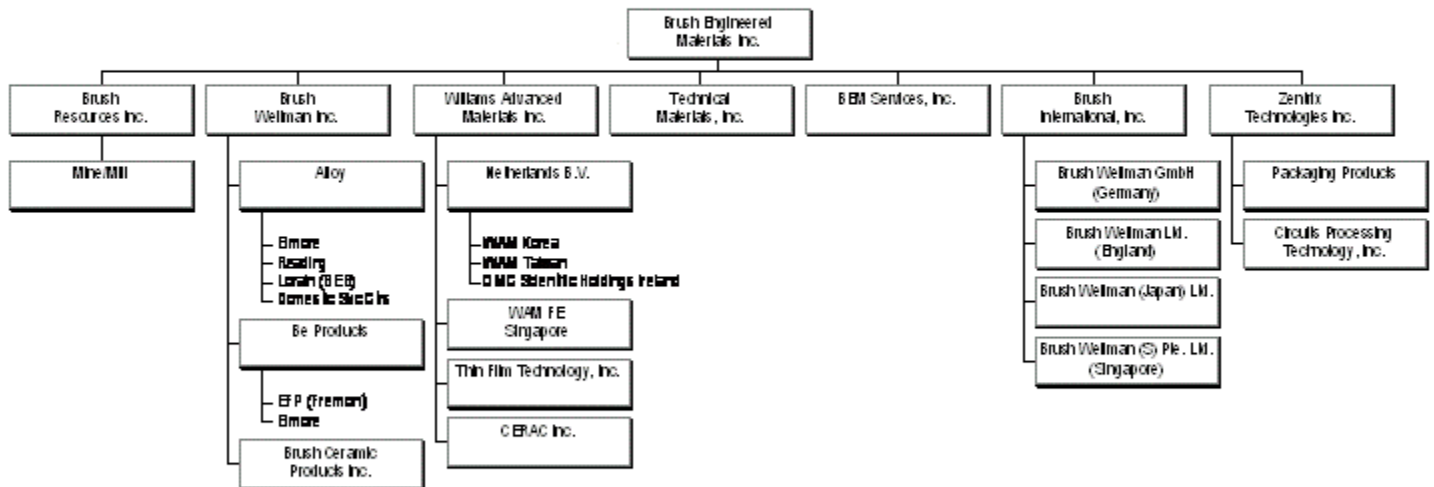


◀ ----- Europe ----- ▶



◀ - Exports from USA - ▶





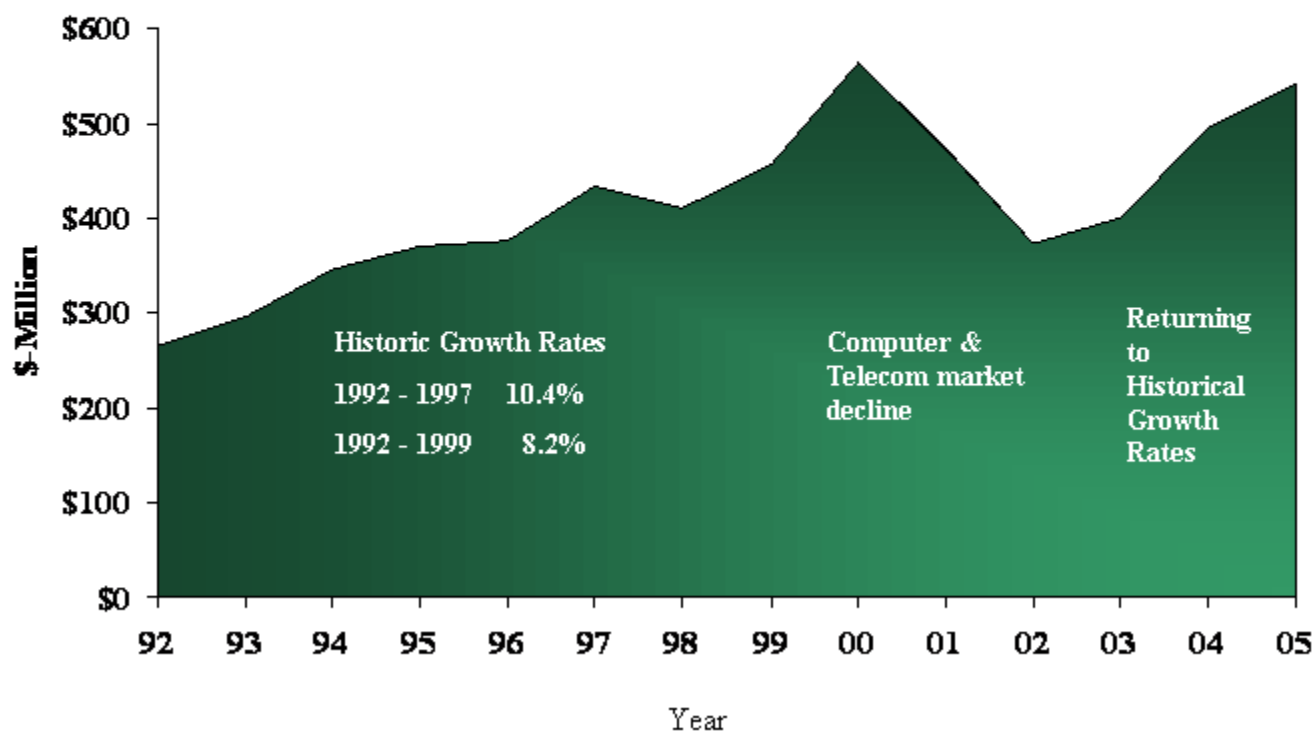
Key Financial Statistics

\$in millions

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Sales	\$372.8	\$401.1	\$496.3	\$541.3
EBIT	(22.6)	(8.9)	25.0	19.5
EPS	(2.15)	(.80)	.86	.92
G.P.%	12.9%	18.2%	22.4%	20.3%
O.P.%	(6.1%)	(2.2%)	5.0%	3.6%
Depreciation & Amort.	20.6	20.7	22.2	22.7
Capital Spending	5.4	6.3	10.1	14.2
Debt ⁽¹⁾	118.7	99.2	72.5	57.2
Cash	4.4	5.1	49.6	10.6
Debt/Total Cap.	43%	39%	26%	21%

⁽¹⁾ Includes in 2002, synthetic lease

In 2001, the computer and telecom market decline drove sales back to mid-90's levels
In 2003, growth began to return to historical rates
In 2004 and 2005 growth accelerated

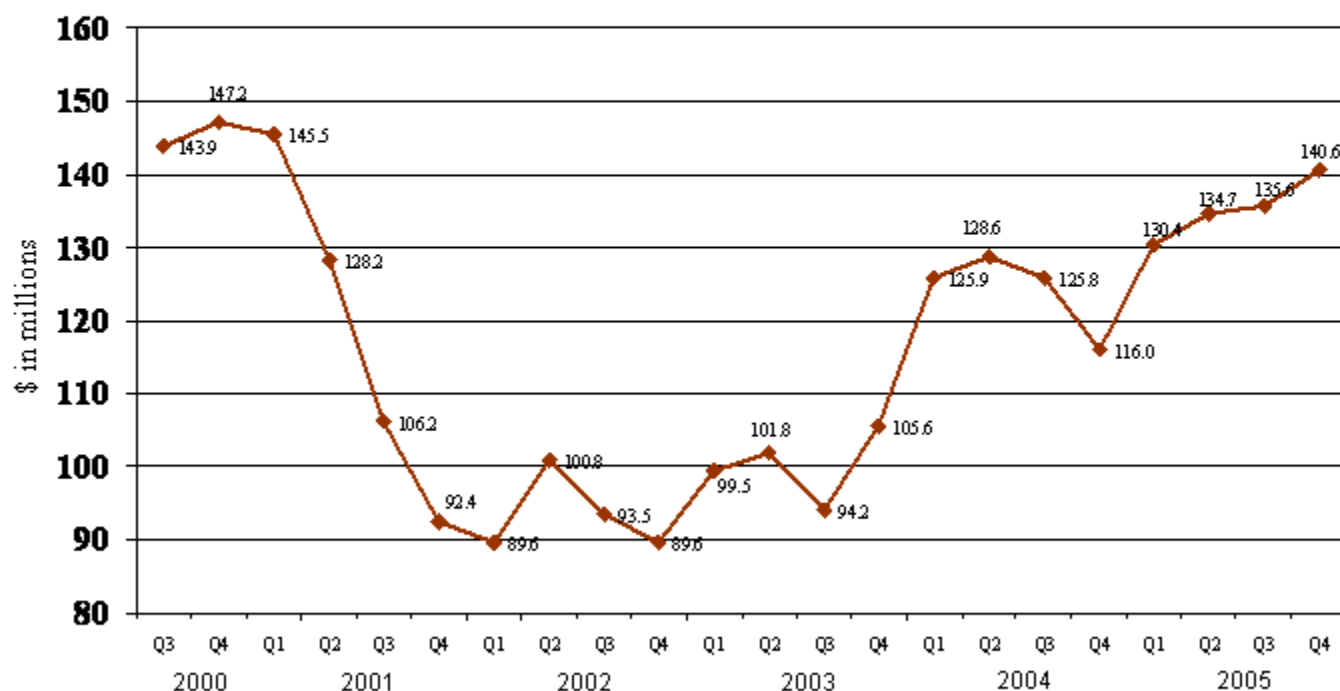


The decline in the telecom/computer market resulted in a 50% drop in the market segment's revenue comparing 2003 to 2000. Since 2004, this market continues to grow.

\$ in millions

	<u>2000</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>Change</u> <u>04-05</u>
Telecom/Computer	\$277	\$139	\$206	213	\$7
Automotive	62	53	59	53	(6)
Industrial	62	42	43	43	0
Magnetic and Optical Data Storage	56	53	52	67	15
Defense/Aerospace	34	37	49	58	9
Appliance	19	27	33	46	13
All Other	<u>54</u>	<u>50</u>	<u>55</u>	<u>61</u>	<u>6</u>
—	\$564	\$401	\$497	\$541	\$44—

The 4th quarter 2005 was the twelfth consecutive quarter where sales were higher than the comparable quarter of the prior year.



Positive 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 have improved
- Conditions have improved in the oil and gas, undersea, aerospace and heavy equipment markets.

Brush has generated year-over-year sales growth in twelve consecutive quarters

Capacity to Support Profitable Market Growth

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

- Operating with significant available excess capacity
 - \$140 million invested between 1996 and 2000
 - Alloy Products capacity utilization is currently at 50%
 - Significant productivity gains in recent years
-

Financial and Operational Initiatives

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

- Expanding and diversifying the revenue base
 - New products
 - New markets
 - New applications
 - New geographies
 - Improving margins through increased operating efficiency
 - Six Sigma and Lean Manufacturing
 - Controlling overhead costs
 - Maintaining a strong balance sheet
 - Positioning for global market growth
 - Improve quality, cost, speed and service
-

Expand and Diversify Revenue Base

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

New Products

- *Alloy 390* – Telecom & Datacom
- *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
 - Pumps, Valves, Fittings
 - Oil & Gas Safety Components
- WAM
 - Semiconductors
 - Data Storage
 - Magnetic Media
 - Thin Film Transistor/Liquid Crystal Display

New High-Growth Regions

- Singapore
 - Taiwan
 - Hong Kong
 - Korea
 - China
-

Improving Margins Through Increased Operating Efficiency

Lean Manufacturing and Six Sigma initiatives enabled Brush's Alloy Products business to improve operational efficiency and reduce costs from 2002 to 2005

- Increased pounds sold per employee 18%
- Increased pounds shipped 50%
- Reduced inventory¹ 41%
- Improved yields 12%
- Reduced manufacturing overhead 20%
- Improved safety performance 43%
- Reduced unplanned equipment downtime 35%

¹days of sales on hand

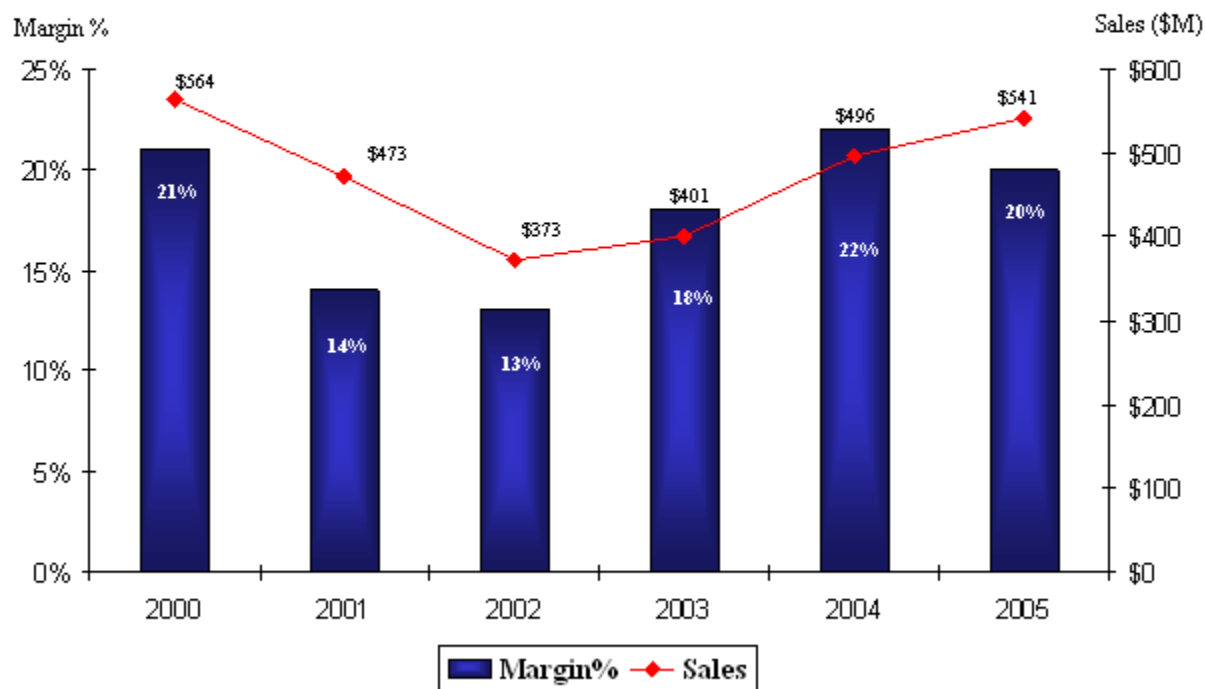
Reduce Debt Obligations

A significant reduction in debt obligations has occurred.

(\$ in millions)

	<u>2000</u>	<u>2004</u>	<u>2005</u>
Balance Sheet Debt & AEP Lease	\$128.4	\$ 72.5	\$57.2
*Off-balance Sheet Leases	<u>17.9</u>	<u>13.1</u>	<u>11.8</u>
Total	\$146.3	\$85.6	\$69.0
Debt to Debt Plus Equity	36%	26%	21%
 *Note - Excludes precious metal consignment and leases of:	 \$51.0	 \$17.1	 \$43.7

Historical Gross Margins



Segment Sales Review

\$ in millions	2002		2003	
	\$	%	\$	%
▪ Metal Systems	\$233.6	63%	\$243.7	61%
– Alloy	151.9	41%	162.3	40%
– TMI	44.4	12%	41.9	11%
– Beryllium Products	31.6	8%	35.2	9%
– Brush Resources*	5.7	2%	4.3	1%
▪ Microelectronics	\$139.2	37%	\$157.3	39%
– WAM	109.1	29%	127.8	32%
– Electronic Products	30.1	8%	29.5	7%
▪ TOTAL	<u>\$372.8</u>	100%	<u>\$401.0</u>	100%

*Effective 1/1/05 Brush Resources Inc. is included in Metal Systems Group.
Prior years have been restated to reflect this change.



Segment Sales Review

\$ in millions	2004		2005	
	\$	%	\$	%
▪ Metal Systems	\$300.7	61%	\$306.3	57%
- Alloy	202.9	41%	208.2	39%
- TMI	53.6	11%	49.9	9%
- Beryllium Products	39.5	8%	42.6	8%
- Brush Resources*	4.7	1%	5.6	1%
▪ Microelectronics	195.6	39%	235.0	43%
- WAM	165.7	33%	209.6	38%
- Electronic Products	29.9	6%	25.4	5%
▪ TOTAL	<u>\$496.3</u>	100%	<u>\$541.3</u>	100%

*Effective 1/1/05 Brush Resources Inc. is included in Metal Systems Group.
Prior years have been restated to reflect this change.



Segment Earnings 2001 - 2005

\$ in millions	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Metal Systems	\$(16.9)	\$(34.8)	\$(16.0)	\$4.5	\$6.3
Microelectronics	4.6	3.8	12.6	18.5	19.0
Other	<u>(1.8)</u>	<u>8.2</u>	<u>(5.5)</u>	<u>2.0</u>	<u>(5.8)</u>
Total Operating Profit	<u>\$(14.1)</u>	<u>\$(22.8)</u>	<u>\$(8.9)</u>	<u>\$25.0</u>	<u>\$19.5</u>

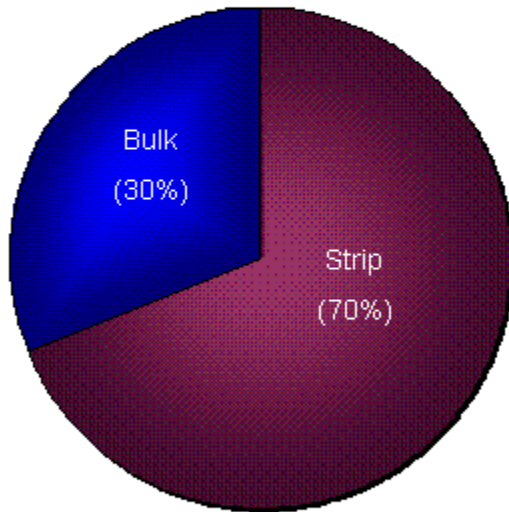


Brush Wellman Alloy Vision

Brush Wellman is the leading supplier of High Performance Copper Alloys worldwide, providing manufacturing excellence in the form of high reliability products and services to satisfy our customers' most demanding applications. We provide these services in a culture of local support and global teamwork.

BRUSHWELLMAN
ENGINEERED MATERIALS

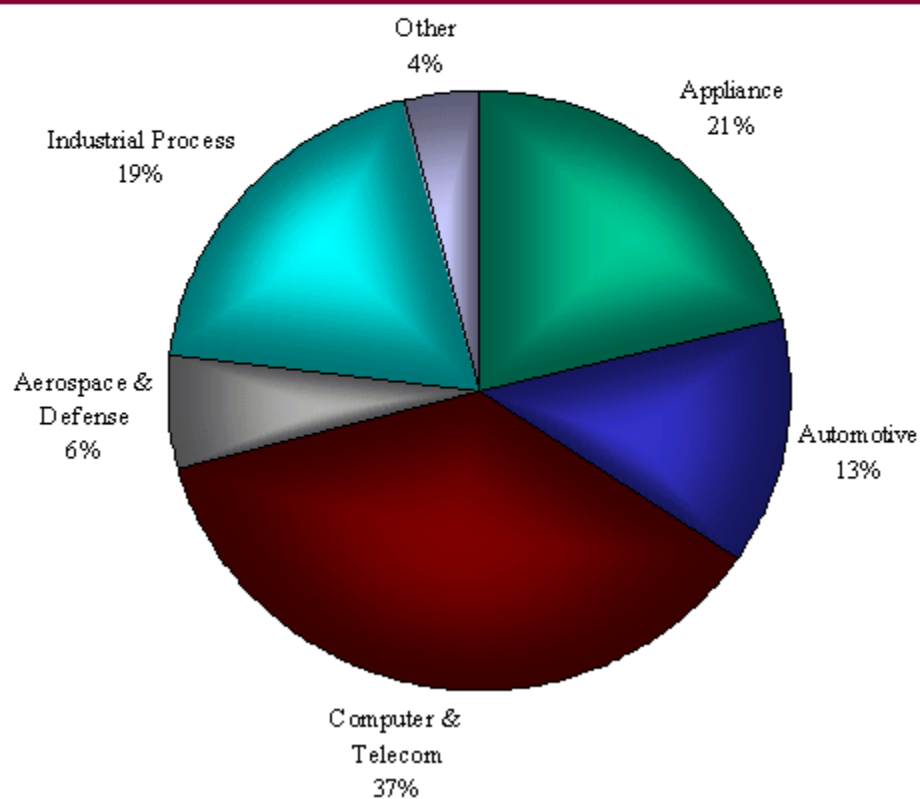
Alloy Products Markets



- *Strip Markets* (coils)
 - Telecommunications
 - Computers
 - Automotive Electronics
 - Appliance
- *Bulk Markets* (rod, bar, tube, plate)
 - Plastic injection & blow molds
 - Undersea/marine housings for telecom & instrumentation
 - Aircraft bushings & bearings
 - Oilfield well drilling, completion and production equipment
 - Heavy Equipment –Bearing and wear applications
 - Power Generation—Emerging
 - Welding Electrodes and Dies

Alloy Products Revenue by Market

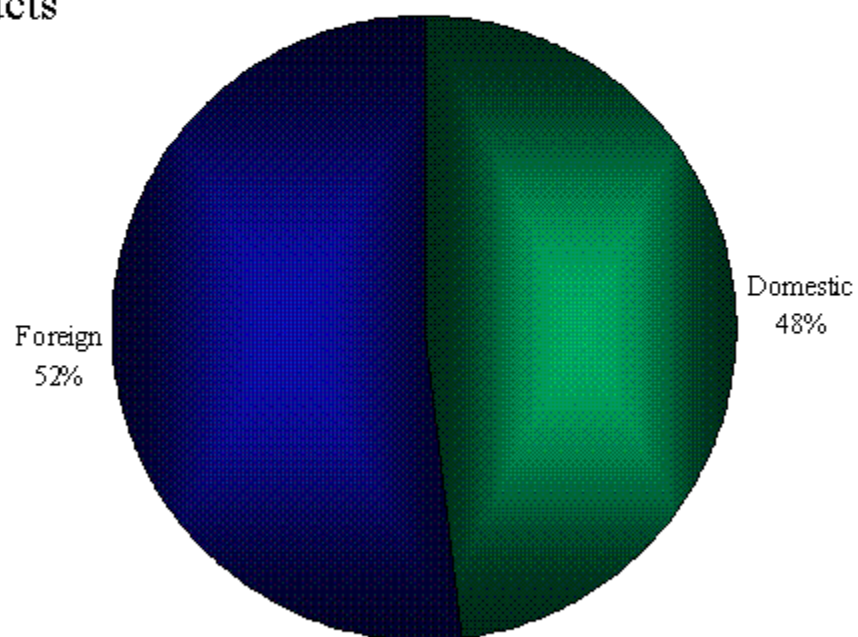
2005



International/Domestic Revenue

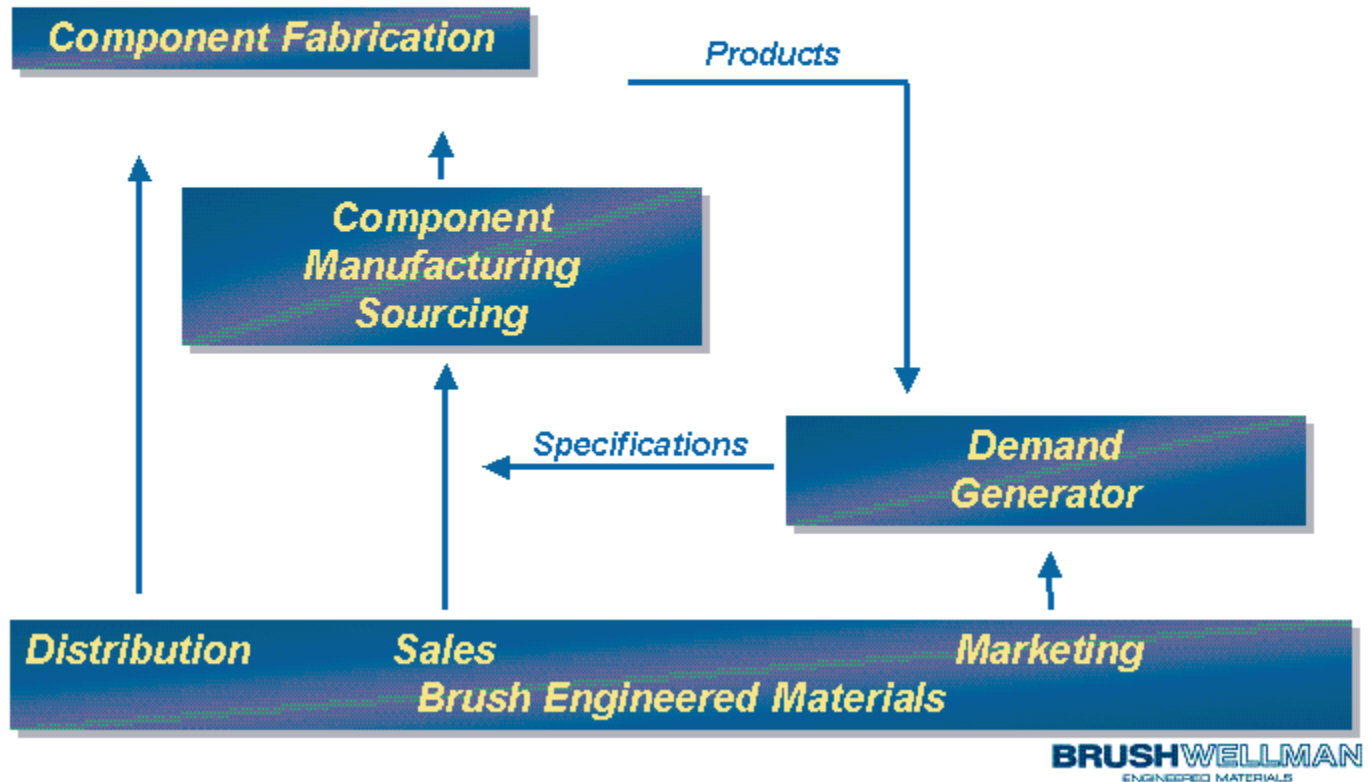
2005

Alloy Products



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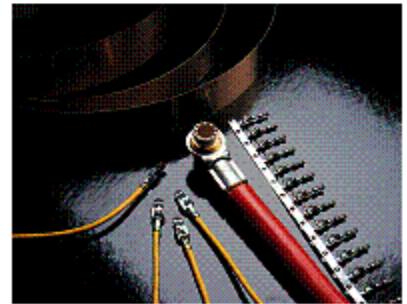
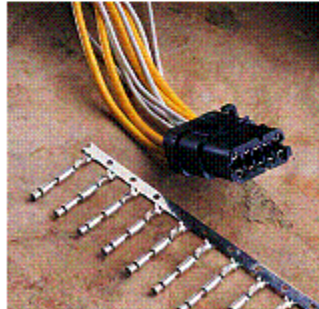
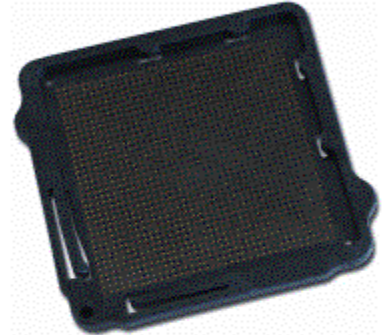
Sales Based on End User Specifications



Strip Alloy Applications

(strength, conductivity, spring characteristics)

- Current Carrying Springs and Relays
- Integrated Circuit Sockets
- Electrical and Electronic Connectors
- Air Bag Sensors
- Pressure Responsive Devices
- Fire Extinguisher Sprinkler Heads



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Alloy Products

Strip Products - Strategy

- **Maintain focus on major end-use markets**
 - Computer Telecommunications (mobile & Infrastructure) Automotive Appliance
 - Military Medical
- **Defend leadership in traditional alloy strip, rod & wire**
 - Reduce total cost of manufacture to allow penetration of mid-range alloy applications
 - Enhance product properties to provide additional value to customers
- **Introduce new alloys to meet needs of targeted market opportunities**
 - Brush 60®, ToughMet® Strip, Alloy 390™, BrushForm™ 47
- **Geographic Growth**
 - Expand commercial operations in Asia Pacific

BRUSHWELLMAN
ENGINEERED MATERIALS

New Strip Products - 2005

- Launched Q1 2005
 - BrushForm™ 47 - Electronics... numerous personal portable devices (i.e. cell phones), burn-in-test sockets, servers (further expanding property set, i.e. formability, conductivity and strength)

Strip Capacity Expansion

Elmore and Reading Facilities



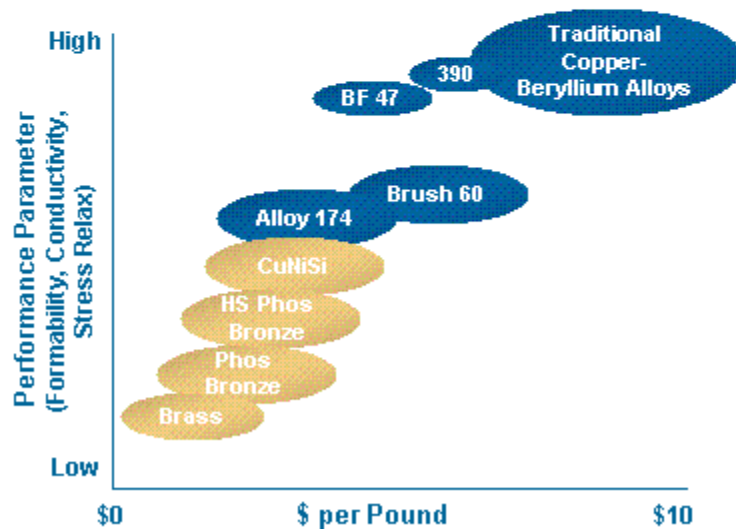
- \$140 Million (1996 - 1998)
- Added casting, hot rolling, annealing and cold rolling capacity at Elmore
- Added light gauge strip and mill hardening capacity at Reading
- 50% to 100% capacity increase depending upon product

BRUSHWELLMAN
ENGINEERED MATERIALS

Strong Value Proposition in Served Markets

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

Competitive Alloy Comparison



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

Brush Value Proposition

- Unique, high-performance materials
- Technical design capabilities
- Outstanding service center network
- Global marketing, sales and distribution

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ENGINEERED MATERIALS

Automotive Electronics

Definition: power and signal distribution in passenger cars and light trucks - connectors, switches and relays.

Automotive Applications

Potential New Applications:

- Infotronics/telematics - in car multimedia systems and mobile communication systems, navigational, global positioning, internet based services
- Powertrain electronics - in vehicle networks, drive-by-wire systems, continuously variable transmission, intelligent braking
- Safety systems - intelligent air bag systems, driver alertness monitoring, adaptive cruise control, frontal collision warning, intelligent highway vehicle systems, automatic emergency notification

Computer

Definition: Brush Wellman's high performance alloys are sold to the computer industry in strip and wire forms for connectors, contacts, and shielding. End use applications include servers, workstations, notebook and desktop computers, personal digital assistants (PDAs), data storage devices, and semiconductor testing sockets.

Computer Applications

Examples of specific end-use product applications

- Fingerstock shielding used in servers and data storage
- Power connectors used in server power supplies manufactured by Sun, HP, Compaq, and Intel
- Microprocessor socket connectors
- PDA ID connector and battery contacts
- High speed backplane connector system for data storage and server systems

Examples of future target product applications

- Microprocessor Burn-in and Test Sockets (BiTS)
- Power connectors for multi-chip module interfaces as well as backpanel power applications in high end servers
- High pin count and high density flex circuit interface connectors for high resolution flat panel displays

BRUSHWELLMAN
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Telecommunications

Definition: Brush Wellman's high performance alloys are sold to the telecommunications industry in strip and wire forms for connectors, contacts, shielding, switches and relays. End use applications include wireless base stations, cell phones, pagers, telecom switching equipment, transmission equipment, communication networks, and personal communication devices.

Telecommunication Applications

Examples of specific end-use product applications

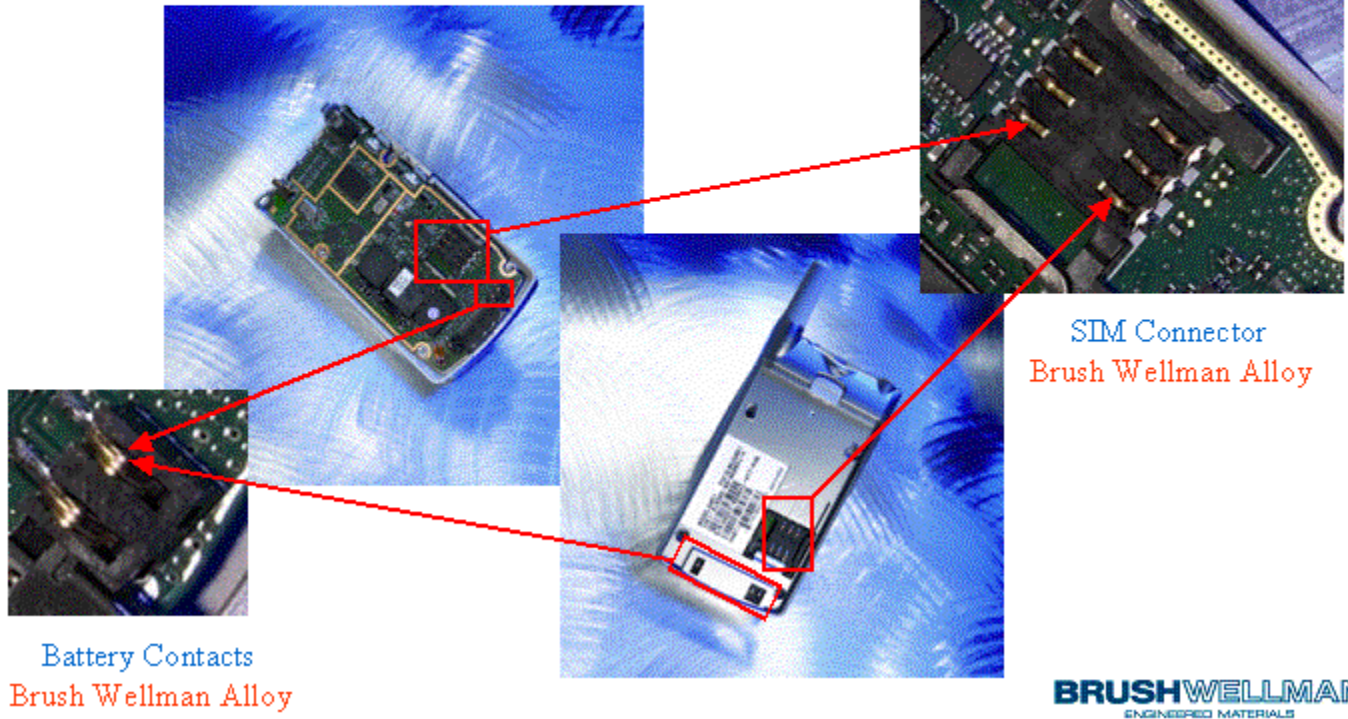
- Handheld and portable device battery contacts, antenna clips, I.O. connectors, board to board connectors, SIM card connectors & display connectors
- Category 6 modular jacks for connecting data networks
- Shielding gaskets and clips for EMI protection
- Coaxial connectors for base stations and other telecommunications infrastructure applications
- VHDM connector system used in backpanel connector systems for Gigabit Ethernet switches and routers
- Circular connectors for military, industrial, and commercial applications

Examples of future target product applications

- Category 6A modular jacks for data networks
- Low profile board to board connectors for wireless handsets and high speed mezzanine connectors for network switches and routers

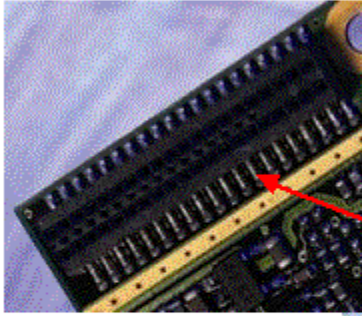
Cell Phone Connector Applications

Rear of Circuit Board

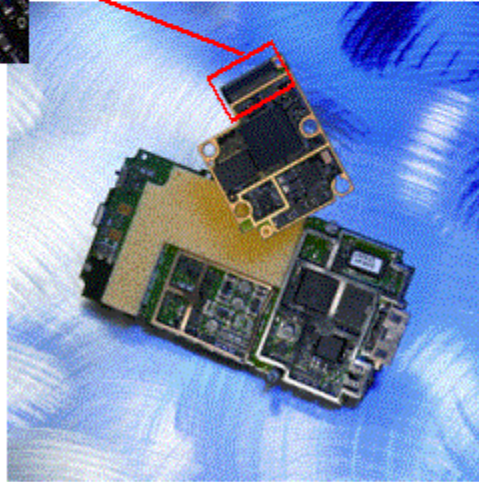


Cell Phone Connector Applications

Front of Circuit Board



Board-to-Board Contact
Brush Wellman Alloy

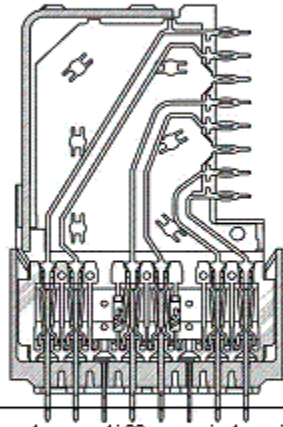


Phone Charger
Connector
Brush Wellman
Alloy

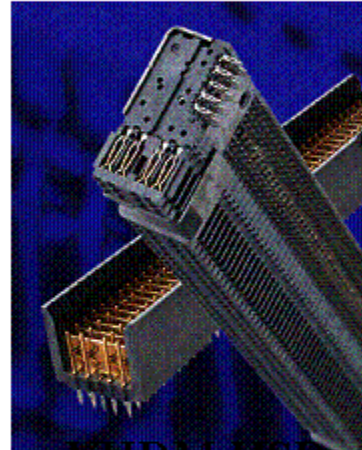
BRUSHWELLMAN
ENGINEERED MATERIALS

Level 3 (PCB to PCB) Enabling Technologies

Compliant
Grounds



- + Move from single to differential pairs
- + Increased signal speeds
- + High pin count
- + Ground strips can be added between rows
- Weight
- Trace layout problems due to high density

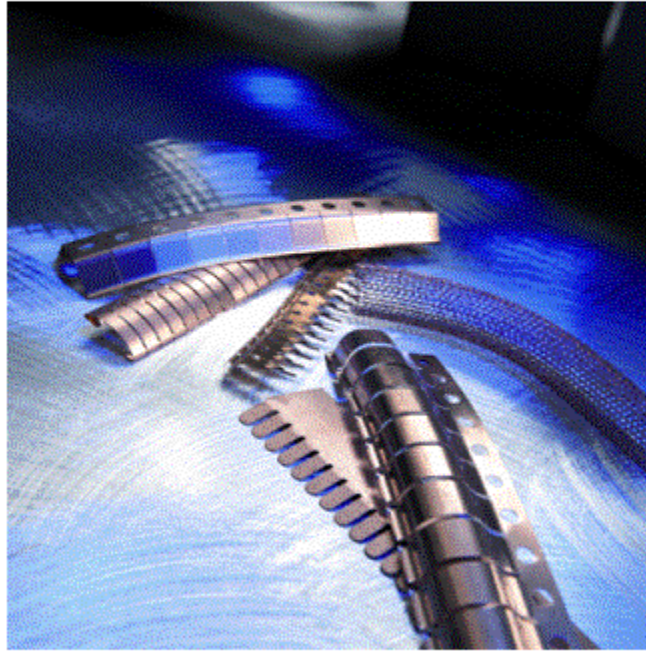


VHDM HSD

High
Conductivity

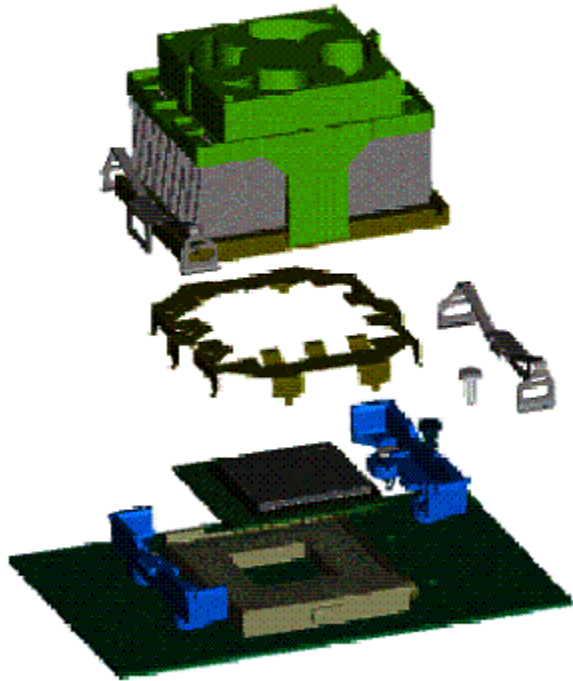
BRUSHWELLMAN
ENGINEERED MATERIALS

EMI Shielding



BRUSHWELLMAN
ENGINEERED MATERIALS

EMI Shielding



- P4 processor uses an EMI shield for hi-end applications
- Shield is located between the processor and the heat sink exposing it to elevated temperatures

Hi
Temperature
Exposure

BRUSHWELLMAN
ENGINEERED MATERIALS

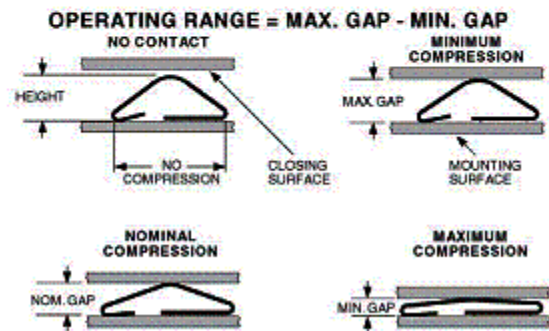
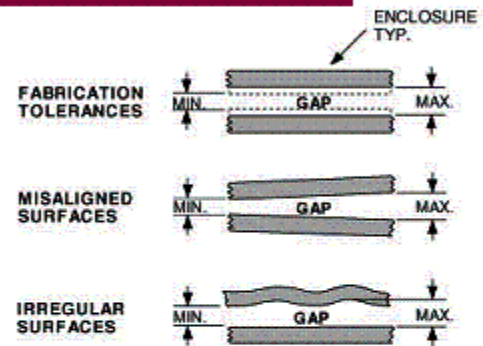
EMI Shielding



SFF
Compliant
Spring
Material
Ideal

RF/EMI Shields

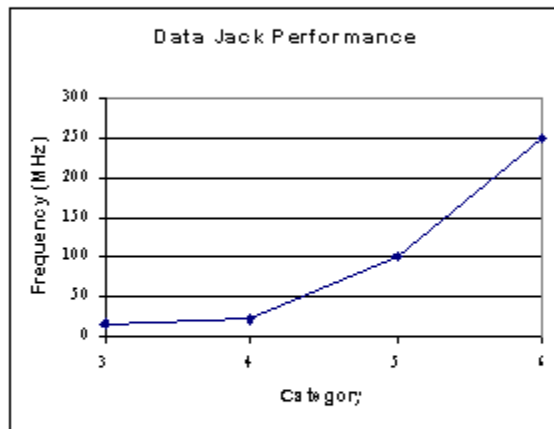
- The higher the operating frequency is driving the need for smaller form factor shielding
- Large operating ranges and smaller form factors drive the need for stronger alloys



BRUSHWELLMAN
ENGINEERED MATERIALS

Modular Jacks

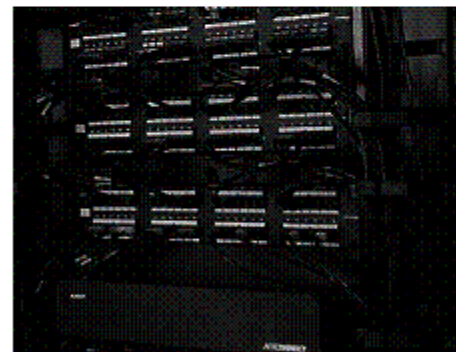
Level 6 (system to System) Enabling Technologies



Hi
Reliability
Jacks Use
HPAs



Cat 6 data jacks



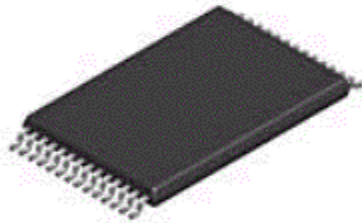
96 Port Cat 5 patch panel (SRP \$396)

- Normal force
- IDC height
- Cross talk
- Attenuation
- Impedance
- Return loss
- Round vs. rectangular
- Reliability

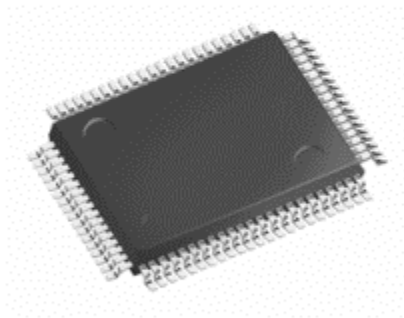
BRUSHWELLMAN
ENGINEERED MATERIALS

Level 2 Interconnects

Clamshell Sockets - typically used for TSOP (thin small outline package) and QFP (quad flat package).



TSOP



QFP



Clamshell Burn-in
Socket

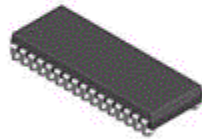
BRUSHWELLMAN
ENGINEERED MATERIALS

Level 2 Interconnects

LIF Sockets - typically used for DIP (dual in-line package) and SOJ (small outline J-Lead).



DIP



SOJ



SOJ Burn-in Socket

Level 2 Interconnects

Contact Design Types:

Pogo Pin

- Made using high performance alloys materials for the spring and contact body



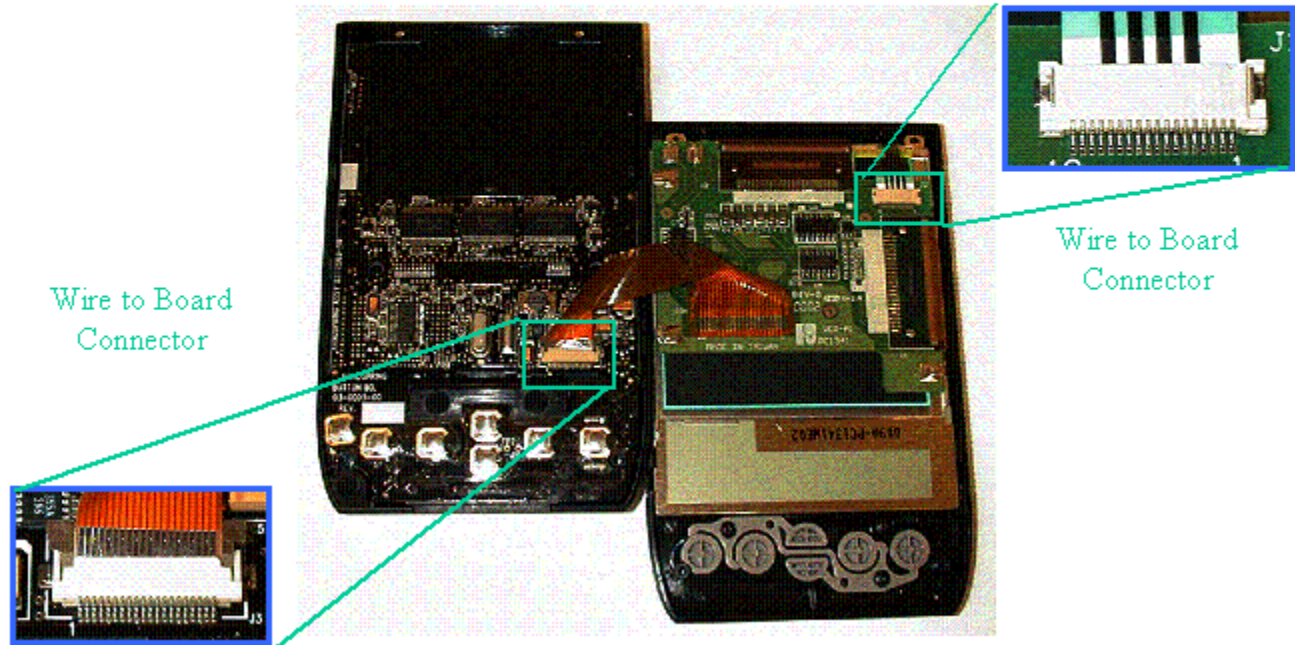
Cantilever Beams

- Made using high performance alloys where careful attention is given to stamping to get good edge quality



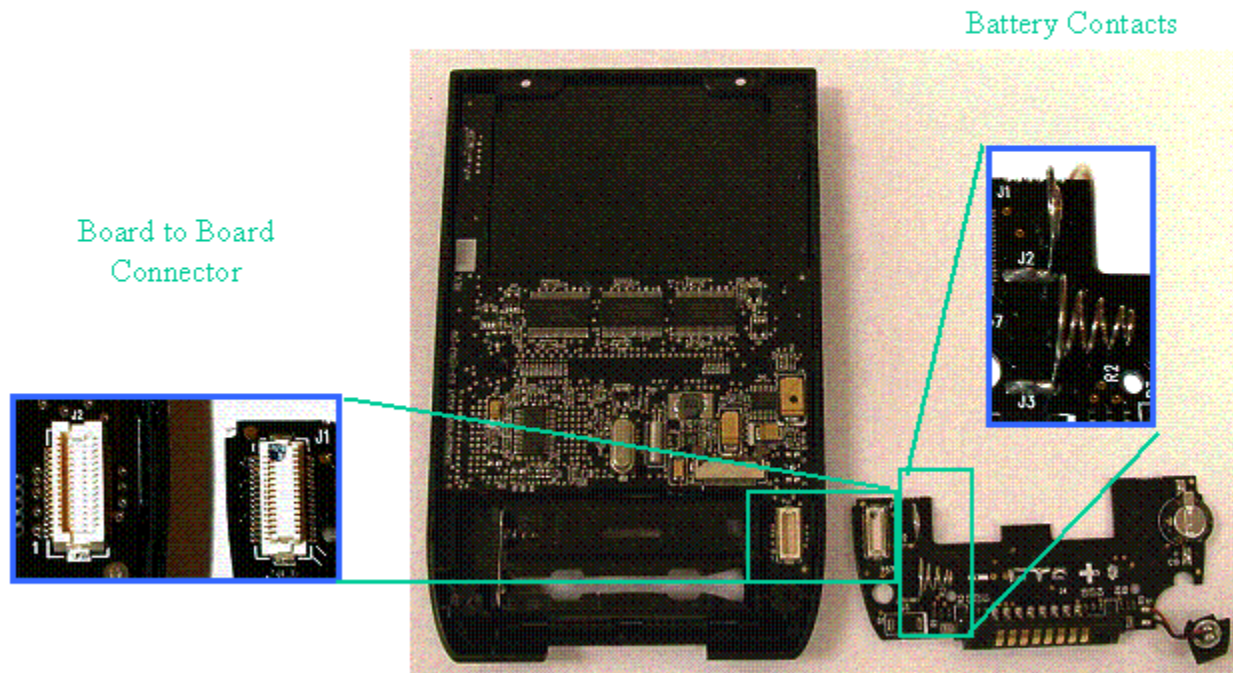
BRUSHWELLMAN
ENGINEERED MATERIALS

Connectors in PDAs



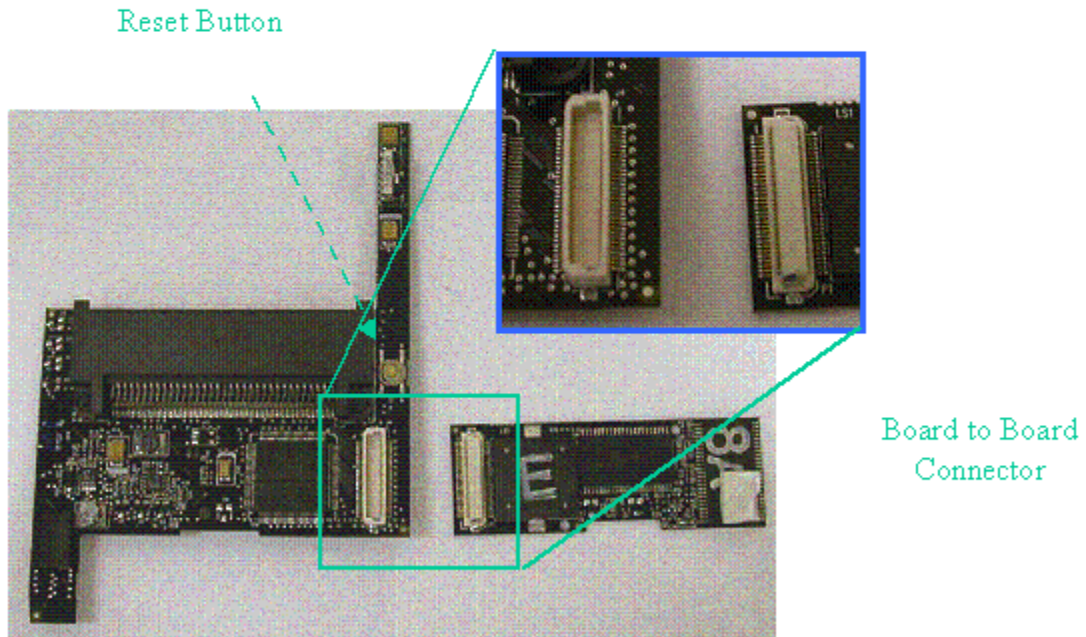
BRUSHWELLMAN
ENGINEERED MATERIALS

Main PCB from Back



BRUSHWELLMAN
ENGINEERED MATERIALS

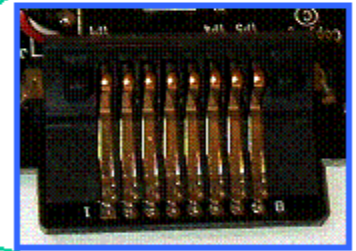
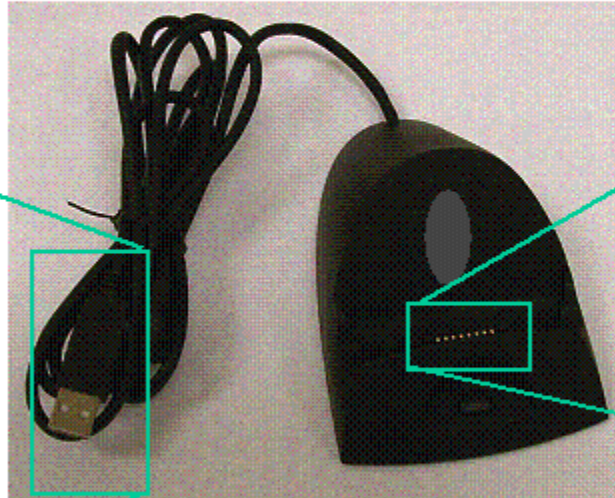
Main PCB from Front



BRUSHWELLMAN
ENGINEERED MATERIALS

Desktop Charger

USB Connector



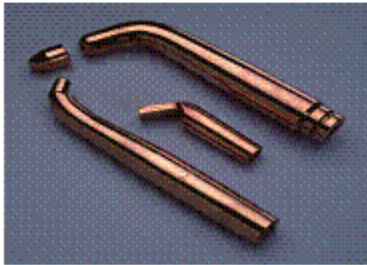
Charger I/O
Connector

BRUSHWELLMAN
ENGINEERED MATERIALS

Bulk Alloy Applications

(strength, corrosion resistance, non-galling, conductivity)

- Aircraft Bushings
- Heavy Equipment Bearing and Wear Applications
- Oilfield well drilling, completion and production equipment
- Plastic Injection & Blow Molds
- Power Generation
- Tooling for Metalworking
- Undersea/Marine Housings for Telecom & Instrumentation
- Welding Electrodes & Dies



BRUSHWELLMAN
ENGINEERED MATERIALS

Alloy Products

Bulk Products - Strategy

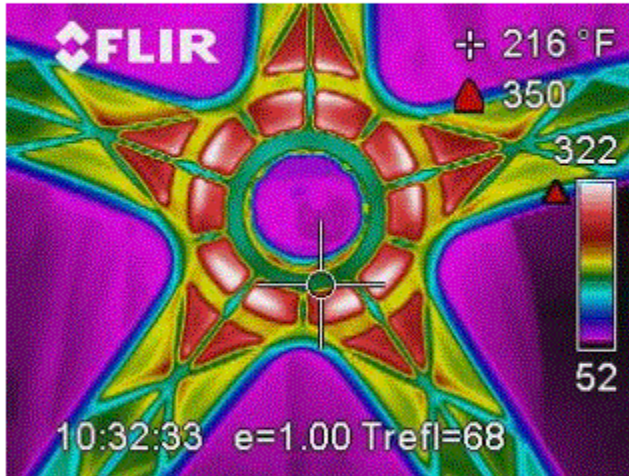
- **Maintain focus on traditional end-use markets**
 - Aerospace Oil & Gas Plastics
 - Power Generation Resistance Welding Undersea
- **Introduce new alloys or product forms to meet needs of targeted market opportunities.**
 - New Plastic Mold Alloy Systems
 - ToughMet® and improved ToughMet® products (TS Tempers, ring-rolled)
 - Alloy 310 RWMA class 3
 - Niche market bronzes with unfilled demand
- **Focus on new non-traditional growth markets**
 - Bearings, Condensers, Heat Exchangers, Heavy Equipment & Mining, Marine, Offshore & Downhole power cables, Oil & Gas well completions, and Pumps
- **Geographic Growth**
 - Expand commercial operations in Asia Pacific, improve customer awareness and distribution

BRUSHWELLMAN
ENGINEERED MATERIALS

New Bulk Products - 2005

- **Developed in 2004 Launched Q1 2005**
 - ToughMet® AT110 Ring Rolled Forging - Heavy Equipment Applications...larger bushing applications in heavy mining equipment & well-head control equipment
- **Developed & Launched Q1 2005**
 - Alloy 25 CuBe rod, tube and forged rings with improved properties for subsea oil & gas well-head equipment
- **Developed & Launched Q2 2005**
 - ToughMet 3 TS 160U Rod for bearings and bushings on modern jet aircraft and for oil & gas subsea drilling, completion and production equipment
- **Developed & Launched Q4 2005 Launch**
 - TS 160U Tube for modern aircraft bushings and bearings
- **Developed & Targeted for Q1 2006**
 - ToughMet 3 AT flat plates/sheets for thrust washer/bearing applications

MoldMAX® Alloys for the Plastics Industry



Brush Wellman engineers use infrared imaging at the customers facility to pinpoint where MoldMAX® will provide the maximum benefit.

Value Proposition

- Provides molders with 20-40% increase in productivity
- Capital avoidance due to increased productivity
- Enables improved quality of molded parts
- ROI < 3 months

Technical advantages

- Hardness of steel with the thermal conductivity of copper
- Fast machining rates
- High polishability

BRUSHWELLMAN
ENGINEERED MATERIALS

Lorain Casting Facility

Spinodal and Equacast™ Technology-Winning!

High performance copper based engineered materials:

- Strength and hardness found in CuBe products
- Thermal conductivity

The value proposition differentiates:

- Corrosion resistance
- Superb tribological properties (low friction coefficient, excellent wear resistance) adding value in reliability, uptime, and maintenance savings
- Machinability and design simplicity adding cost benefits to offset increased material costs
- Casting capability including size, shapes, tubes and quality
- No EH&S issues

Developing applications in markets where we are strong:

Mold Tooling, Aircraft Parts, Drilling Equipment

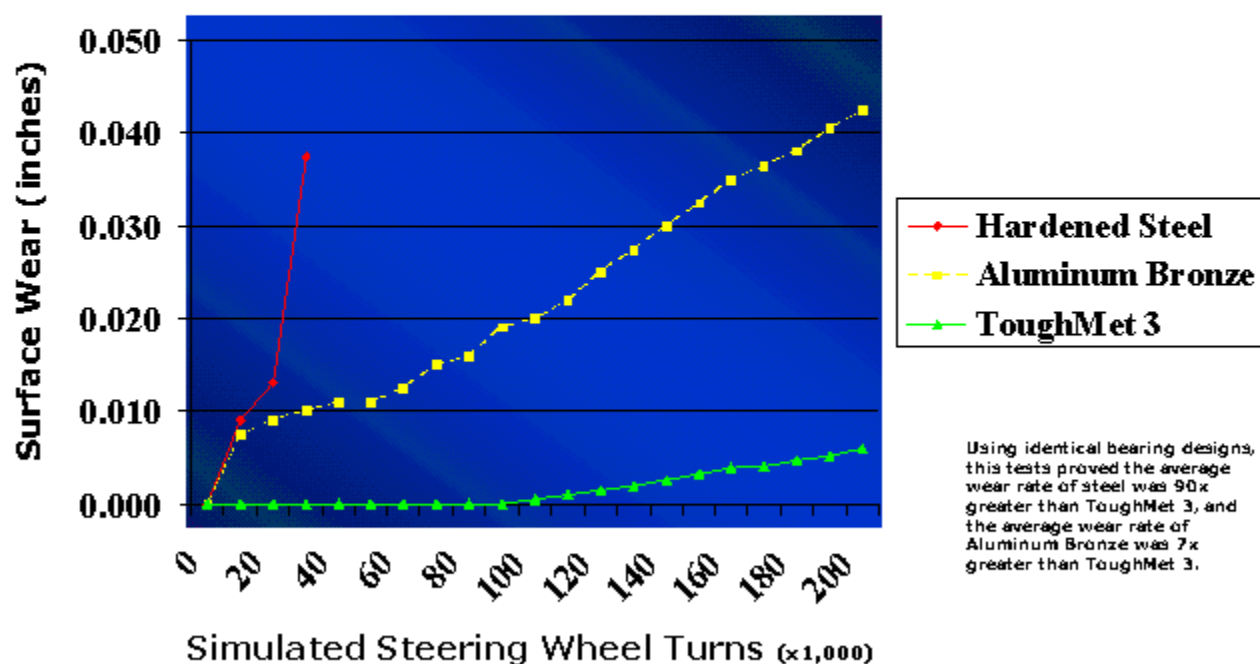
Developing markets/applications where technology is strong:

Oil Well Completion Equipment, Mining, Heavy Equipment, Hydraulic Systems, Marine Hardware, Engine Bearings, Semiconductor Fabrication

Lorain Technology: Expanding Brush Wellman's market and application reach

BRUSHWELLMAN
ENGINEERED MATERIALS

ToughMet® Outlasts Conventional Bearing Materials in 300-ton Mining Truck Steering Test

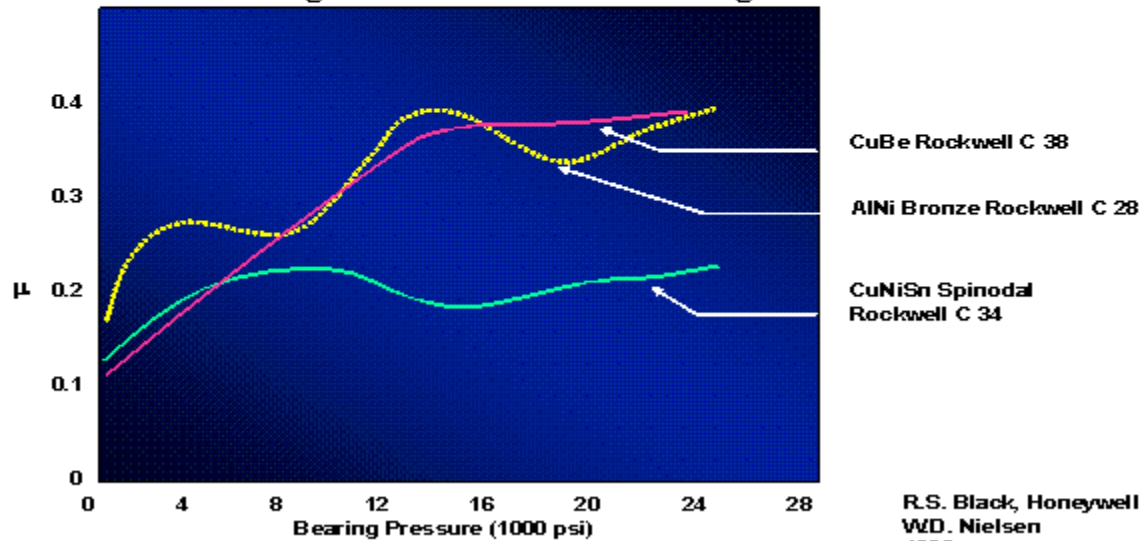


BRUSHWELLMAN
ENGINEERED MATERIALS

ToughMet® Industrial Components Results:

ToughMet® Alloy Bushings Provide Superior Power Efficiency Performance

in a Comparison of Dynamic Coefficient of Friction μ vs
Bearing Pressure for Three Bearing Materials

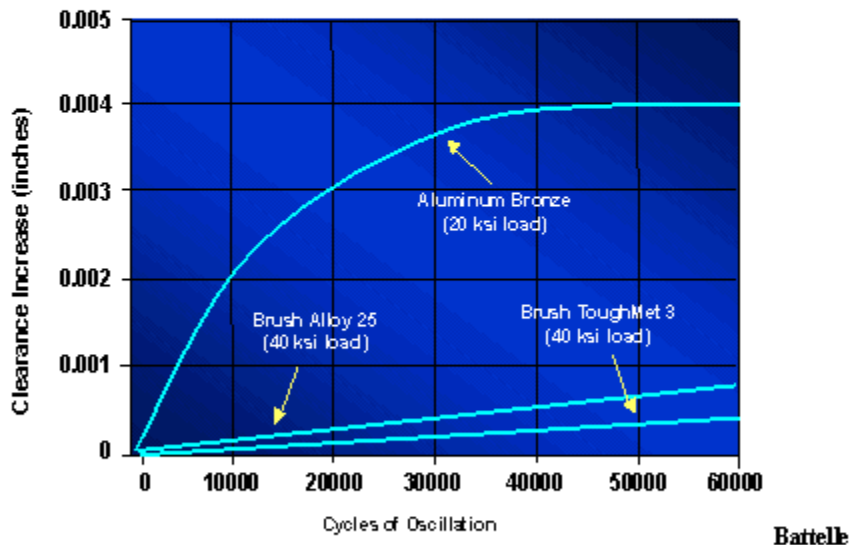


R.S. Black, Honeywell
W.D. Nielsen
1996

BRUSHWELLMAN
ENGINEERED MATERIALS

Significantly Higher Durability has been Confirmed for ToughMet®

Comparative Sleeve Bearing Wear Tests.



BRUSHWELLMAN
ENGINEERED MATERIALS

Brush International Inc.

ASIA

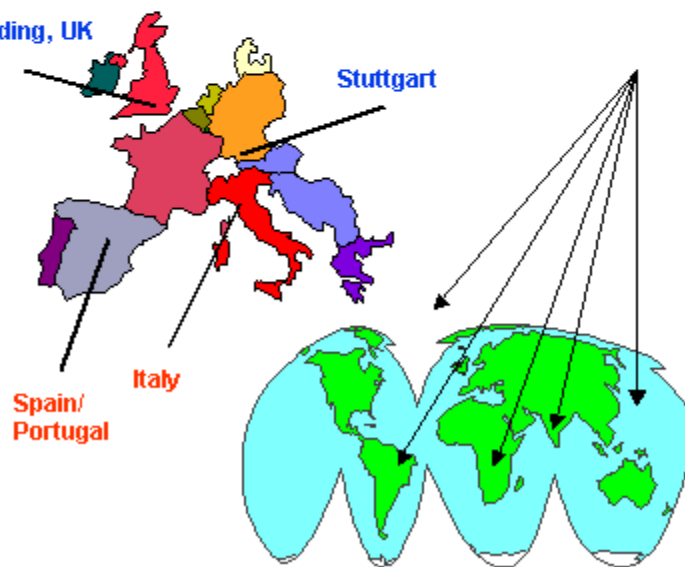
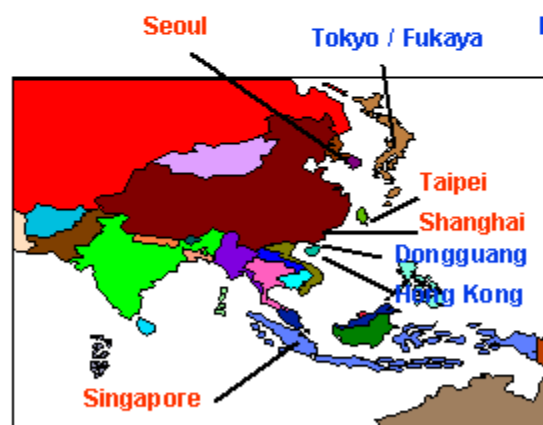
BWS	BWC	BWT	BWJ	BWK
S.E. Asia	China	Taiwan	Japan	Korea

EUROPE

BWL	BWG	BWG	BWG
UK/ Ireland	Germany	Italy	Spain

EXPORT

BWI
Export



**BW Technical / Marketing &
BW Service Centers**

Brush Wellman Beryllium Products

Products

Beryllium Metal - One of the lightest metals known

- Family of vacuum hot and hot/cold isostatically pressed powder-derived metals

AlBeMet™

- Family of lightweight alloy composites
- Extruded, rolled sheet and hot isostatically pressed powder-derived metals

Brush Wellman

Beryllium Products

Products - Cont.

- E-Materials
- Family of low expansion, lightweight electronic packaging materials
 - Composites of beryllium metal and beryllium oxide

Beryllium Oxide/

- Chemicals
- Ceramic-grade beryllium oxide powder
 - Specialty beryllium-containing chemicals

Brush Wellman Beryllium Products

Facilities

Elmore, Ohio

Fremont, California

Key Product Attributes

- Be/AlBeMet™
 - Light Weight (Density)
 - High Stiffness (Elastic Modulus)
 - High Thermal Conductance/Capacity
 - Low Thermal Expansion
- Be
 - Transparent to X-Rays
 - Neutron Reflector

Brush Wellman Beryllium Products

Primary Competition... Alternative Materials

Organic Composites (e.g. Carbon epoxy)

Silicon carbide

Metal Matrix Composites (e.g. Al - silicon carbide)

Pyrolytic graphite

Aluminum (high strength grades)

Major Defense/Aerospace Applications for Brush Wellman Beryllium Products

Optics

Optical substrate and support structure for visual and infrared target acquisition systems (fighter aircraft, helicopters, unmanned aerial vehicles, tanks), surveillance systems and astronomical telescopes.

Satellites

Structures and sensors for defense and commercial telecommunications satellites.

Electronics

Electronic packaging for defense avionics, radar and electronic countermeasures systems for helicopters and fighter aircraft. Applications include circuit boards, covers and packages.

BRUSHWELLMAN
ENGINEERED MATERIALS

Major Commercial Applications for Brush Wellman Beryllium Products

X-ray Windows

Radiographic tube components for ★ medical diagnostic (x-ray, mammography, CAT-scan), ★ industrial and ★ scientific equipment.

Optical Scanners

Mirrors for laser scanners used in reprographic and other high-performance laser applications.

Motion control

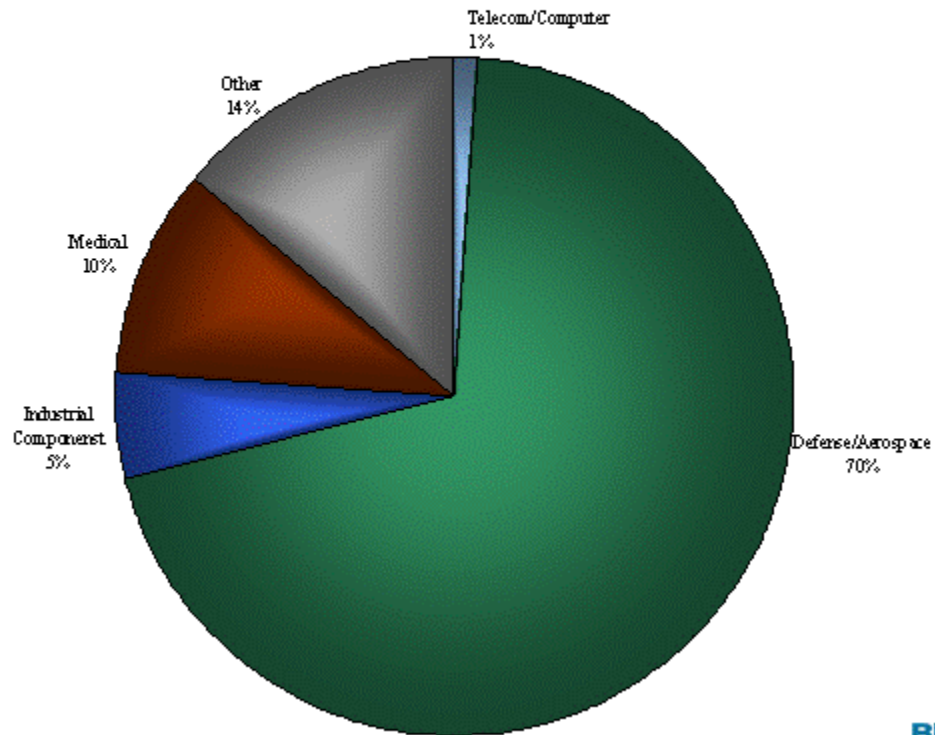
Structural components for high-precision semiconductor processing and industrial robotic equipment

Acoustics

High performance speaker components

Revenue by Market

2005



BRUSHWELLMAN
ENGINEERED MATERIALS

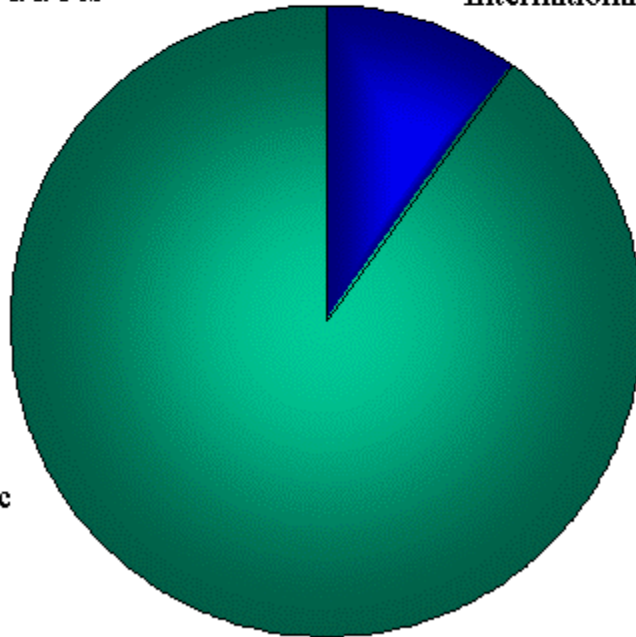
International/Domestic Revenue

2005

Beryllium Products

International 10%

Domestic
90%



BRUSHWELLMAN
ENGINEERED MATERIALS

10/11/2005

Major Applications, New Products and Platforms

Beryllium Products

<u>Product</u>	<u>Market</u>
New AlBeMet Products	Defense
Fabricated Products	Defense
Acoustics	Speakers

TMI - From a Customer Perspective

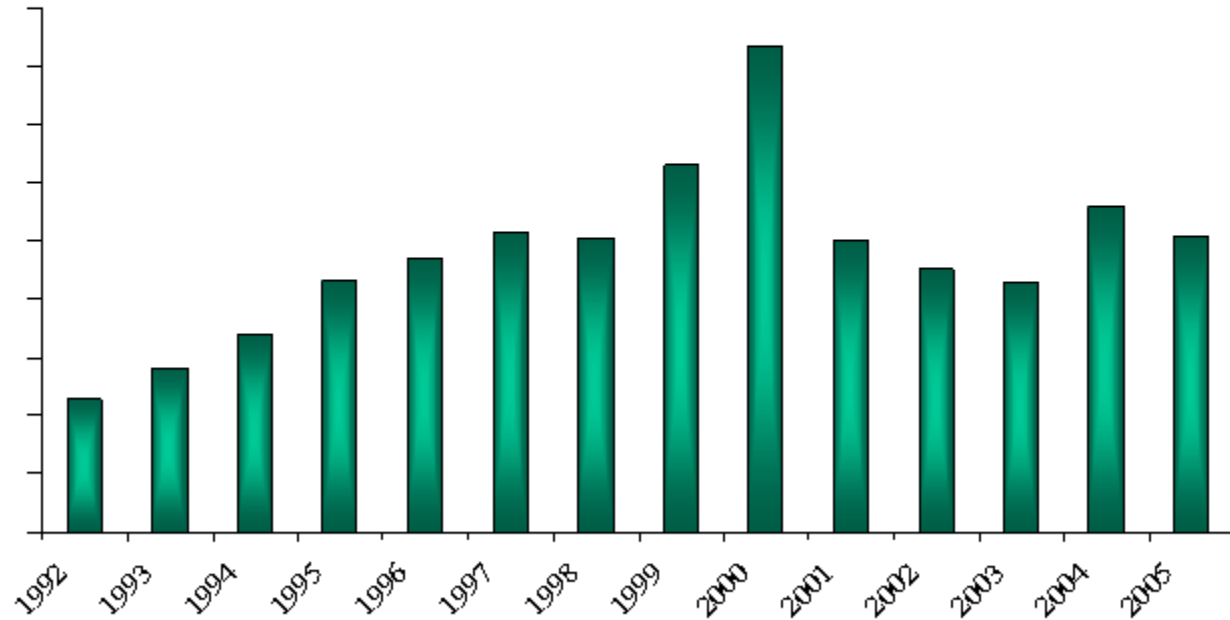


-
- | | |
|------|--|
| WHAT | TMI provides our customers the ability to demand varied performance (electrical, thermal, or mechanical) from a metal surface area or section. |
| WHO | We provide this “service” to the telecommunication, automotive, computer, semiconductor and other industries. |
| HOW | By offering various forms of strip metal products: clad metals, plated metals, electron beam welded, solder plated, reflowed or printed-on, milled and/or skived metal strip or various combinations of the above. |
-

Sales Growth



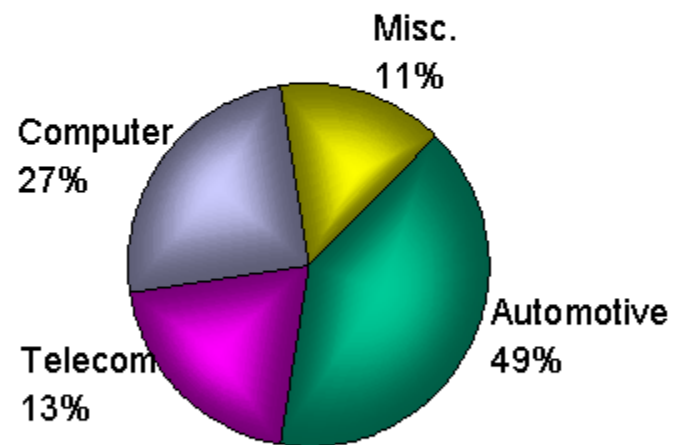
\$ Millions



Our Major Markets



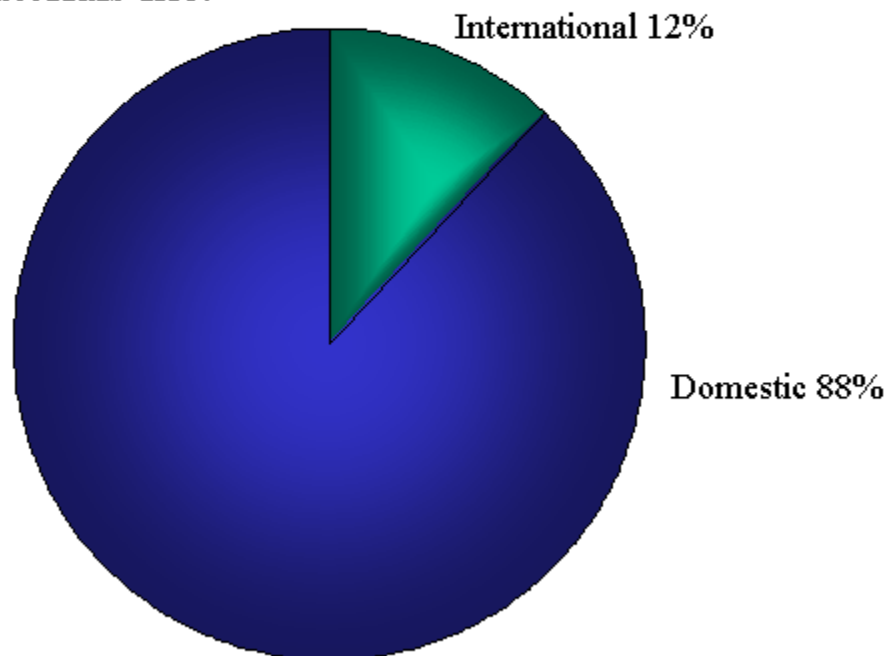
- Automotive
- Telecommunications
- Computer
- Jewelry
- Semiconductor
- Appliances
- Medical
- Aircraft



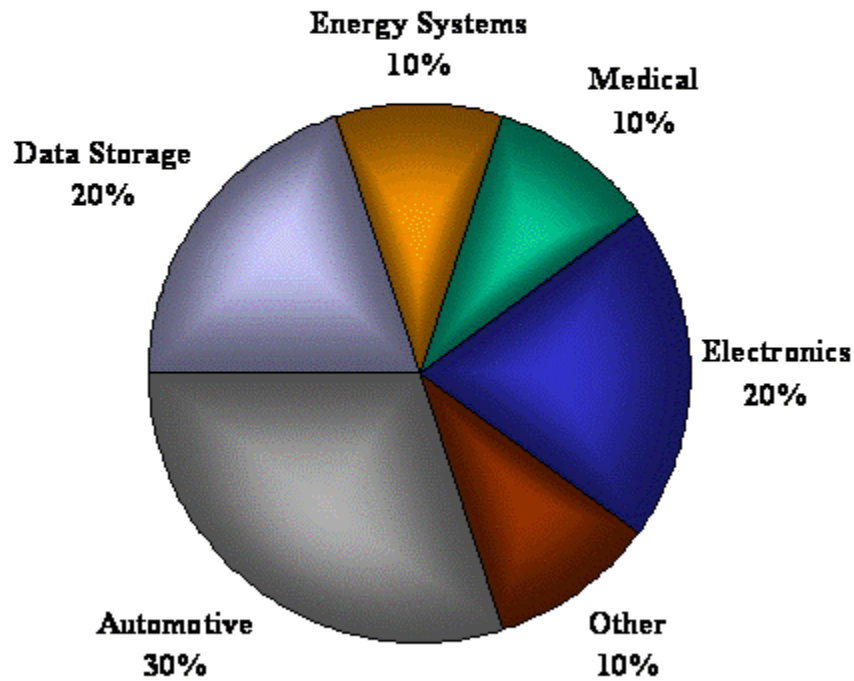
International/Domestic Revenue *2005*



Technical Materials Inc.

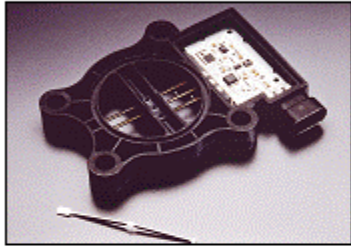


Major Applications, New Products and Platforms





Our Major Applications

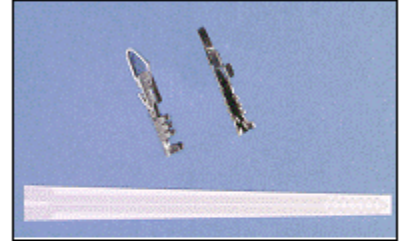


Leadframe



Air Bag Sensor

- Capacitors
- Coins and Tokens
- Connectors
- Contact Probes
- Fuses
- Leadframes
- Micro Motor
- Microwave
- Potentiometers
- Relays
- Sensors
- Solder Clips
- Switches



Connectors



Electroplating



- Precious and non-precious metals
 - Overall and selective stripe capabilities
 - Combination with current TMI technologies
-

Stripe Plating Application

Cellular Phone Battery Contact



Base Material

- Base Material: BeCu
- Overall Ni plating
- Selective Au (one side)
- Selective SnPb (both sides)

Competitive Advantage



- Quality
 - ISO 9001:2000 / ISO 14001
 - State-of-the-art equipment
 - Vision Systems / PLC Systems for consistent quality
 - Design Support
 - Technical knowledge
 - Engineering expertise
 - Overall Capabilities
 - Slitting and leveling
 - Inlay / Electron-Beam Welding / Solder / Milling / Skiving / Plating
 - Any combination of the above processes
 - Large coil handling capability
-

Strategic Concept



- Total capability under one roof
 - Make it easy for our customers to get what they need to satisfy their customers' requirements
 - Make our customers competitive with reliable products
 - Solve problems for our customers with engineered strip metal solutions
 - Explore and develop new markets and geographic regions for manufacturing (*China*).
-

Growth in Electroplating



- Precious and non-precious metals
 - Overall and selective stripe plating capabilities
 - Combination with other TMI technologies
 - Proprietary closed contact plating technology
 - Building additional lines to further increase capacity
-



Technical Materials Inc.

- Surgical devices
 - Digital cameras & hi-res copier leadframes
 - Micromotor components for consumer electronics
 - Resistors and fuses for automotive applications
 - Disk drive suspension materials
 - Coatings for automotive
-

Summary



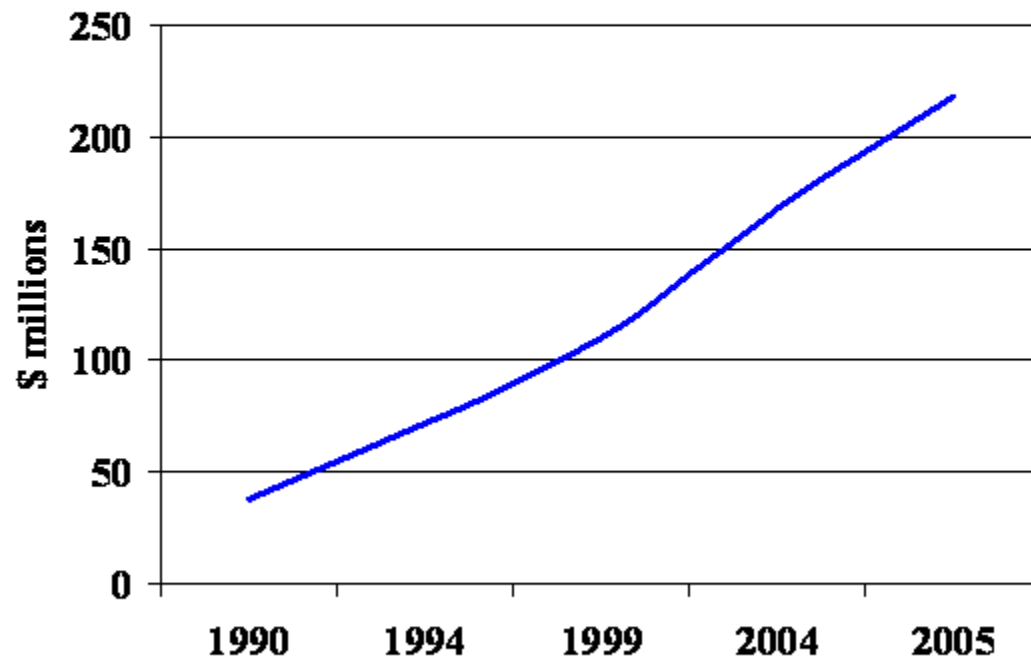
- From 1992-2000 TMI sales more than quadrupled.
- 2001 and 2003 proved to be extremely difficult years due to major served markets being severely depressed; however, TMI remained profitable all three years.
- 2004 sales improved only to be followed by a drop-off in 2005. In both years product mix impacted overall profitability.
- We have added major new technical capabilities using state-of-the-art equipment in precious metal electroplating to better serve worldwide customer demand (*both technical & capacity*).
- We are ISO 9001:2000 and ISO 14001 registered.
- We will add additional Plating technology and capacity to service market demand as required.
- We are making further inroads into new markets (*disc drives*) and other markets (*consumer, medical, appliance, energy*) in order to broaden our served market base and will have a much different served market profile by the year 2007.

What We Do

Williams Advanced Materials develops, manufactures and markets materials and services of unique value for the Data Storage, Wireless/Photonics, Semiconductor, Optics, Hybrid Microelectronics and Performance Coating industries. We also support emerging technologies such as TFT/LCD, MRAM and Nanotechnology. Williams products are primarily based on specialty metal products used in high reliability and performance applications.

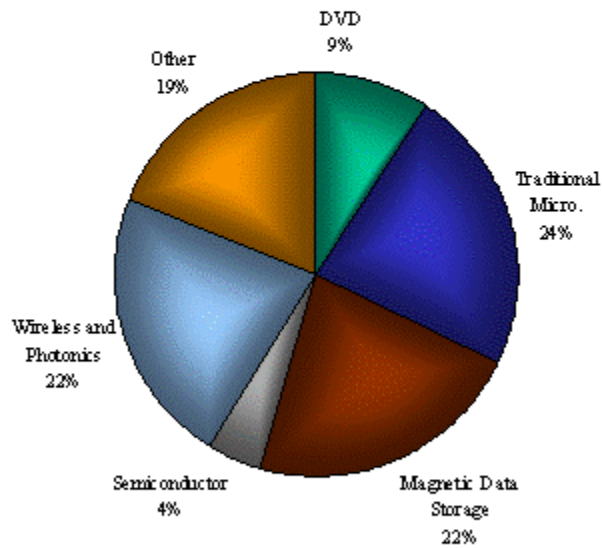


Sales History

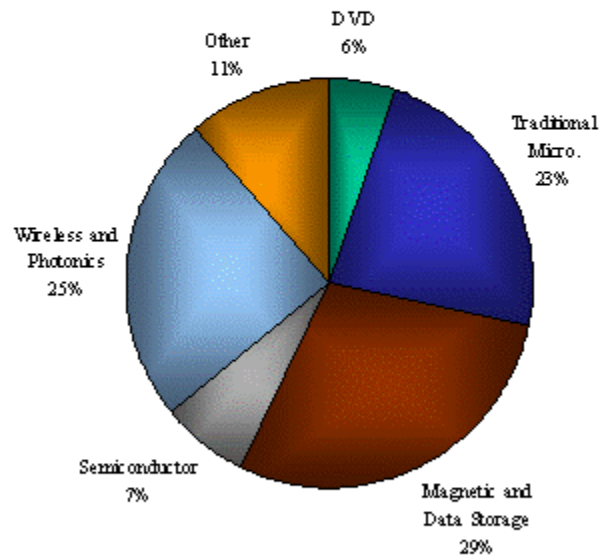


Revenue by Market

2004



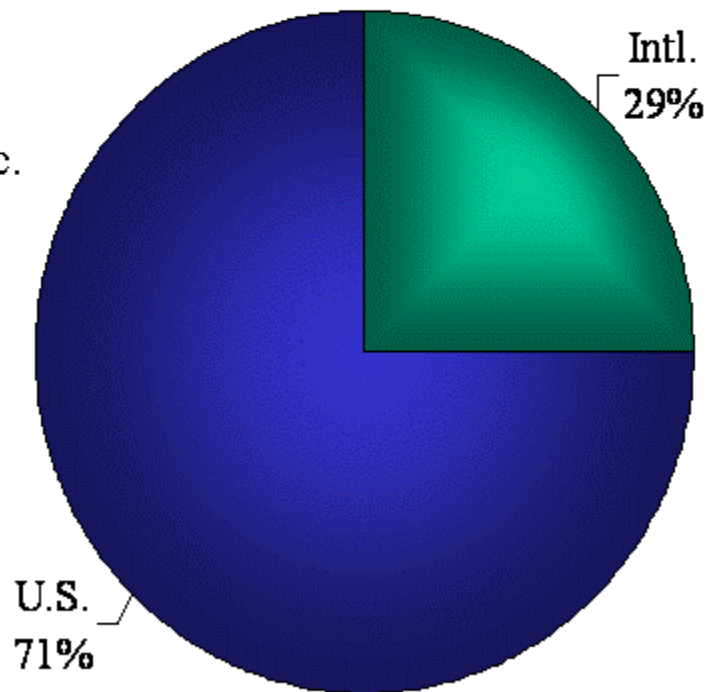
2005



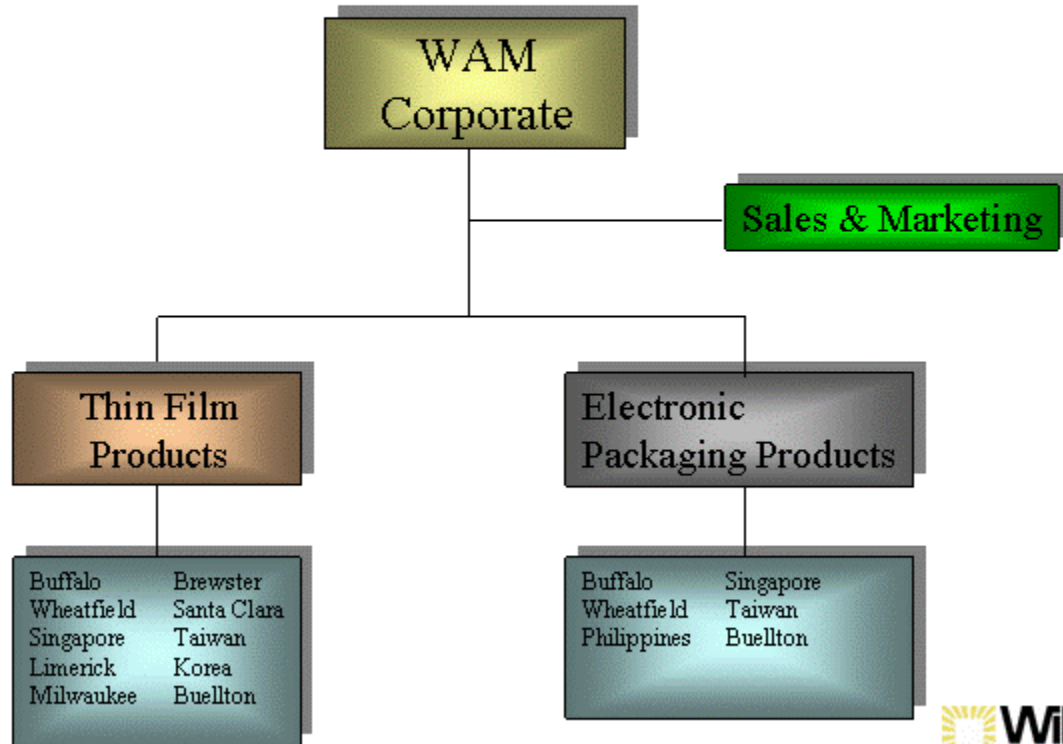
International/Domestic Revenue

2005

Williams
Advanced
Materials Inc.



WAM Business Structure



WAM Headquarters



Buffalo, NY USA - Manufacturing Facility

- 100,000 Sq. Ft. overall, 6,500 Sq. Ft. of cleanroom, state-of-the-art machining/ milling/rolling/stamping/ cladding centers, target bonding, hydrostatic wire extrusion, high purity refining/recycling, metals casting, automated plating, full analytical capabilities, product Research & Development.



Specialty Alloys Operations



- Wheatfield, NY USA- *Williams Specialty Alloys*
 - 30,000 Sq. Ft. with volume vacuum casting, rolling, annealing, powder atomizing and machining. 10 acres for expansion.



Williams Thin Film Products Operations



- Brewster, NY USA –
 - 35,000 Sq. Ft. with vacuum melting, hot-pressing, milling, hot & cold rolling automated machining and target bonding capabilities.
 - Acreage to more than double our facility as needed.

Far East Operations



Singapore - WAM Far East Pte. Ltd.

- Target bonding, bonding wire production, Combo-Lids® assembly



Subic Bay, Philippines

- Combo-Lids®, low-cost lids and preform - assembly, inspection and packaging.



Taoyuan County, Taiwan - WAM Taiwan

- Target bonding, evaporation materials & bonding wire.



European Operation



- Limerick, Ireland – OMC Scientific, Ltd.
 - Subsidiary of WAM
 - Provides precision parts cleaning and reconditioning services for film Physical Vapor Deposition (PVD) customers in Europe.
 - Unique technology applied to opportunities in North America and Asia.
 - Efforts focused in the semiconductor, magnetic media and other technology based markets.



Thin Film Technology (TFT)



- Buellton, CA
 - Subsidiary of WAM
 - Thin film coating and substrate patterning.
 - Visi-Lid™ supply chain management.
 - Capabilities: Electron Beam Evaporation, DC/RF Magnetron Sputtering, Photolithography (Substrate Patterning), Dicing, Tooling design, In House Machine shop



CERAC

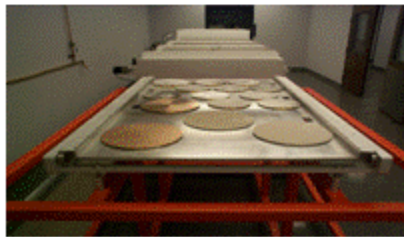
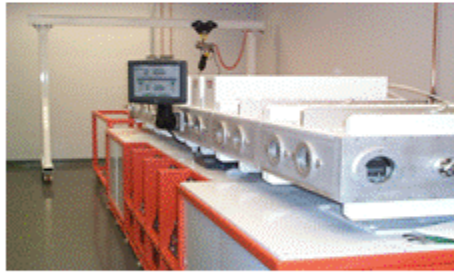
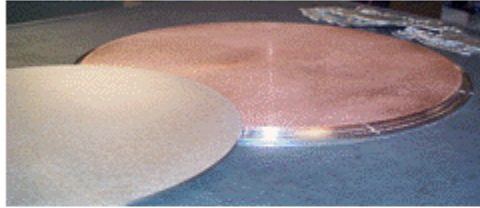


- Milwaukee, WI
 - Subsidiary of WAM
 - Physical Vapor Deposition (PVD) materials for ophthalmic, optic and performance applications.
 - Specialty Inorganic Materials
 - Unique technologies in chemical and powder processing



Target Bonding Centers

- Localized debonding/
bonding of PVD targets to
backing plates:
 - Buffalo, NY
 - Brewster, NY
 - Santa Clara, CA
 - Limerick, Ireland
 - Singapore
 - Taiwan



Global Service and Support

- **Regional Offices (Sales and Applications Engineering support)**

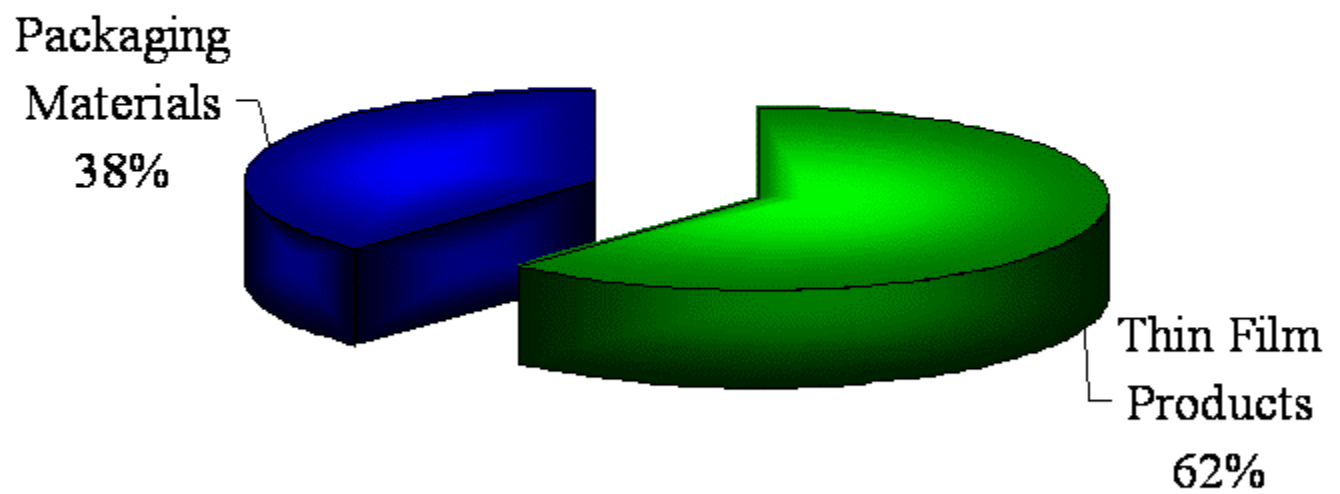
Buffalo, NY	Tokyo, Japan
Brewster, NY	Taoyuan, Taiwan
Boston, MA	Singapore
Tucson, AZ	Manila, Philippines
Santa Clara, CA	London, England
Buellton, CA	Seoul, Korea
Milwaukee, WI	Limerick, Ireland

- **Worldwide Representatives**

Florida	Italy	France
India	China	Germany
Sweden	Israel	



Product Mix



Thin Film Products

- **PVD Materials**
 - Precious Metal (PM) Targets
 - Non-PM Targets
 - Vacuum Cast
 - Hot Press
 - HIP Materials
 - EVAPro™ Evaporation Materials
 - Localized Target Bonding
- **Chamber Services**
 - Shield Cleaning and conditioning
 - PM Refining and Upgrading
 - Logistics Support



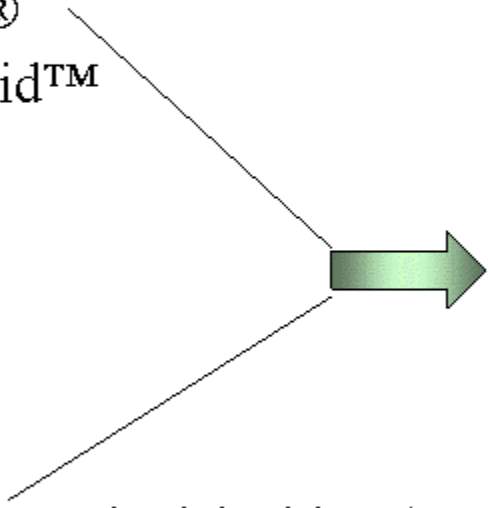
Buffalo
Brewster
Milwaukee
Wheatfield
Singapore
WAM
Taiwan
Santa Clara
Ireland



End Product Examples Utilizing Thin Film Deposition Materials



Packaging Materials

- FLA/Combo-Lid®
 - Seam Seal/Microlid™
 - Preforms
 - Clad Materials
 - Braze Materials
 - Ni Alloys
 - Dental
 - Coating, patterning and Visi-Lid™ (TFT)
 - Packages (Zentrix)
- 

Buffalo
Singapore
Wheatfield
Buellton
WAM
Taiwan
WAM
Philippines

New Product and Technology Development

- Visi-Lid™ - A transparent lid for Photonics applications
- AMAT Target designs and enhancements for semiconductor wafer fabrication
- Silver Alloys for HD-DVD and Blue Ray Disc manufacturing
- UBM Grade™ materials for Flip Chip applications
- Expanded refining/chamber services supporting the thin film materials business
- TFT-LCD materials/services
- Magnetic Media materials
- Nanotechnology Materials



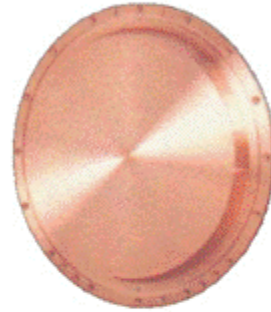
Key Markets – Wireless and Photonics

- Thin Film and Packaging materials for varied wireless and photonic applications including RF Power Amplifiers, HBT's, SAW Devices, Light Emitting Diodes (LEDs), Laser Recorders and Micro Electro Mechanical Systems (MEMS)



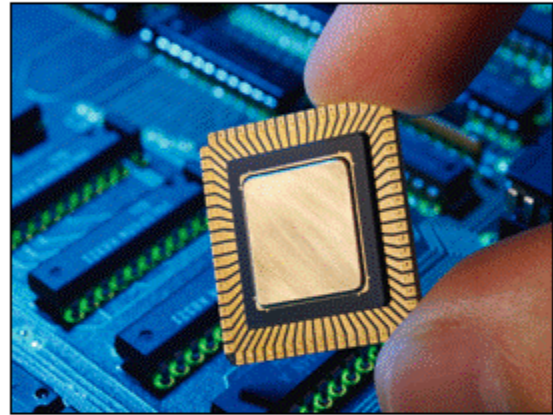
Key Markets – Semiconductor Wafer Fabrication

- Thin film materials and chamber services for silicon wafer and UBM (Under Bump Metallization) technologies.
- Numerous commercial and military microelectronic applications.



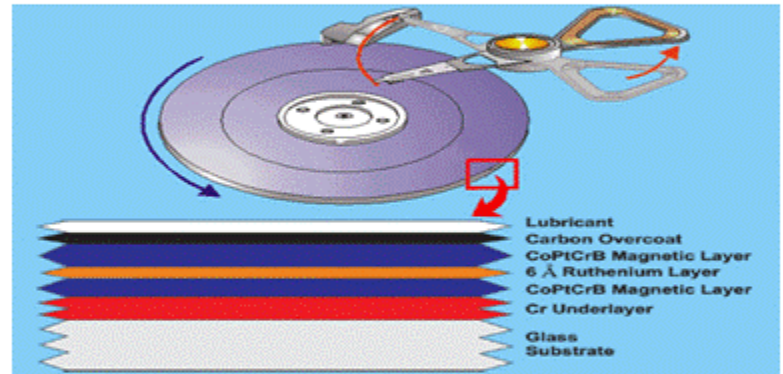
Key Markets – Semiconductor Packaging

- High reliability semiconductor packaging materials.
- Applications focused in space, military and satellite market segments.



Key Markets – Magnetic Head and Media

- Thin film materials for both the read/write head and disc platter.
- Chamber Services complement materials offering.
- Applications growing into many commercial and mobile electronic products.

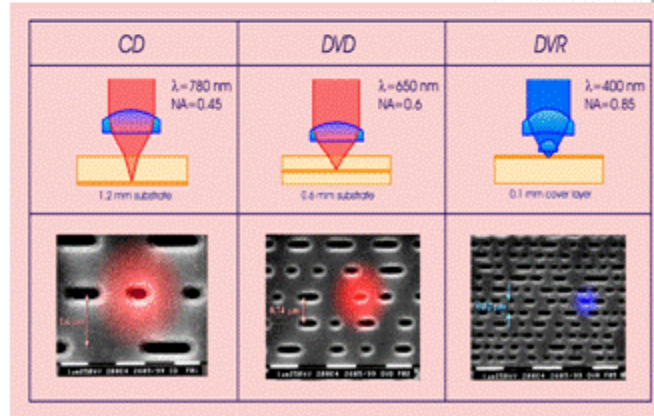
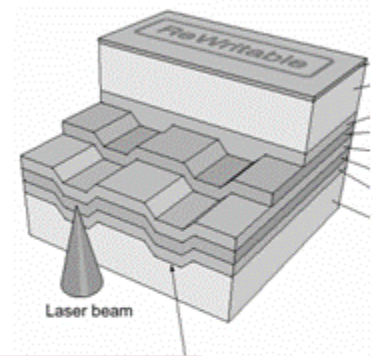


LMR (Longitudinal Magnetic Recording) Media



Optical Media

- DVD - Sil-X™ and Sil-XL™ patent pending alloys
- HD-DVD & BluRay - Al and Ag Alloys



Distinctive Competencies



New Platforms by Market

New Thin Film Materials and Designs for:

- Magnetic Media
- Semiconductor Wafer Fabrication
- Under Bump Metallization (UBM) for Flip Chip
- Wireless and Photonics

Our focus is on materials, circuitry, subassemblies and packaging for the wireless and fiber-optic telecom market, military, medical and automotive applications

- Signal amplifiers transmit signals through air (wireless) or optical fiber media by boosting signal strength while maintaining integrity. Thermal management and reliability properties are of paramount importance.
- Signal amplifiers are critical active components located in base stations for wireless (cellular) and in regenerator stations along fiber-optic (Internet) links.

Electronic Products

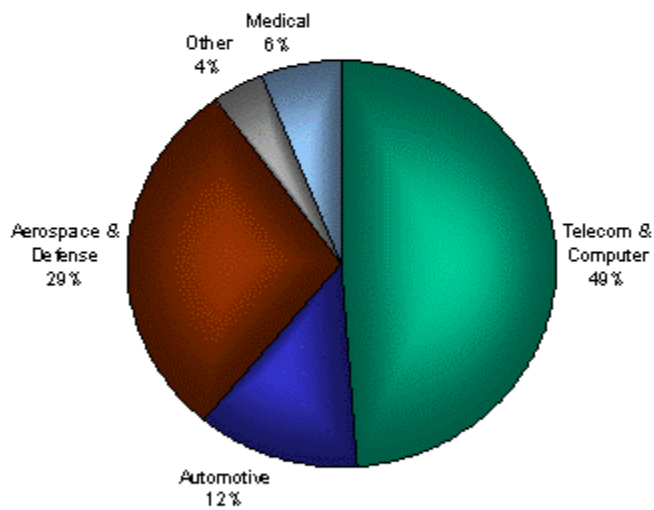
Our Overall Strategy

- Vertically integrate materials to subsystem assembly, providing customized solutions
- Meet the Customer's needs
 - Materials or subassemblies
- Fast Flexible Manufacturing Systems
 - Responsive to market needs

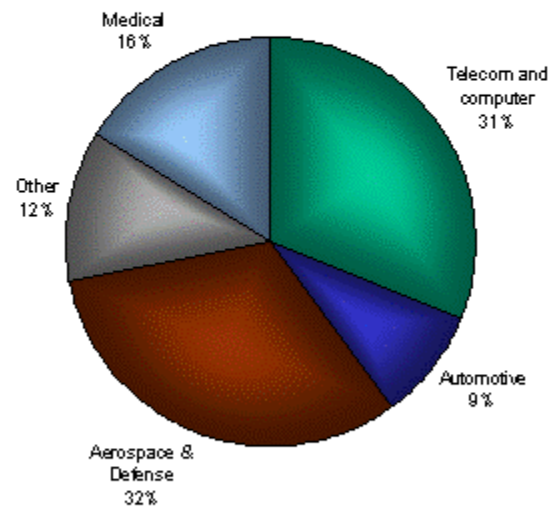
Electronic Products

Revenue by Market

2004



2005

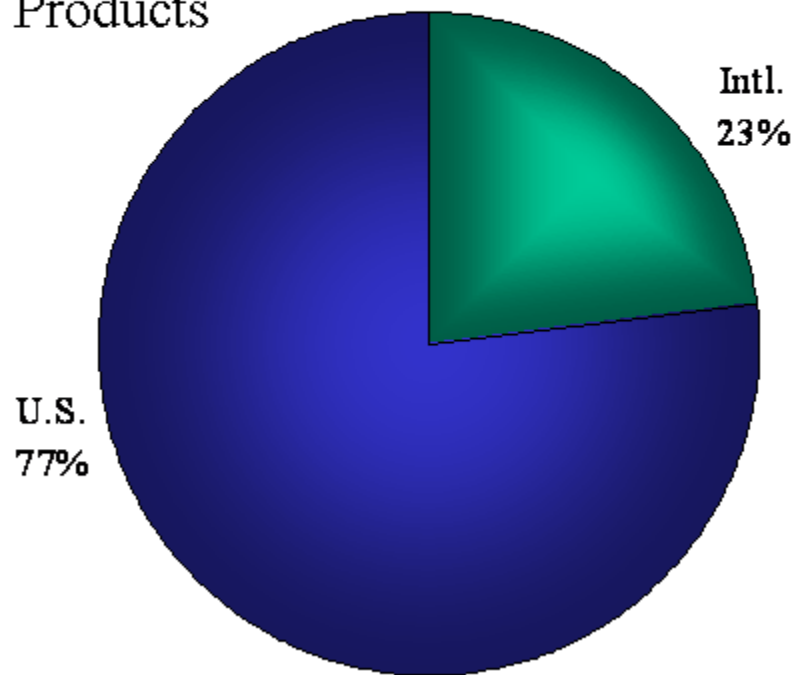


Electronic Products

International/Domestic Revenue

2005

Electronic Products



Electronic Products

Business Groups

- Packaging
 - Electronic Packaging Products
- Circuitry
 - Circuits Processing Technology
- Materials
 - Brush Ceramic Products

Electronic Products

Electronic Packaging Products

- Located in Newburyport, Massachusetts
- Products
 - RF Power Packages for base stations in cellular phone & wireless data networks, for cellular handsets, for military radar applications and for digital TV
 - Automotive Components for ignition systems in cars and trucks
 - Power Circuit Assemblies for DC motor controls

Electronic Products

Circuits Processing Technology (CPT)

- Located in Oceanside, California
- Products
 - High Frequency Military and Aerospace Circuitry used in military radar and missile guidance
 - High Frequency Wireless circuitry for satellite communications, flight hardware and other telecom applications
 - Fiber Optic Package components for amplifiers in fiber optic networks
 - Medical equipment and implant circuitry

Electronic Products

Brush Ceramic Products

- Located in Tucson, Arizona
- Products
 - Ceramic substrates used in commercial and military packaging applications
 - Ceramic laser bores for gas lasers used in medical and industrial applications
 - Machined ceramic components used in military, oil and gas, semiconductor and microwave applications

Electronic Products

New Products & Platforms by Market

Electronic Products

- BW 1000 Substrate sales started this year
- E-materials Packaging applications
- Luxtel reflectors – development program in final stages.
- High Conductivity ceramic packages began shipping
- Thirteen new package outlines

Electronic Products

Beryllium Health and Safety

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
 - Strong focus on regulations related to beryllium exposure
-

Litigation

	<u>Total Cases Pending</u>	<u>Total Plaintiffs (including spouses)</u>
12/31/02	33	70
12/31/03	15	33
12/31/04	12	56
12/31/05	13	54

Litigation

- In Q-4 2005, two cases were voluntarily dismissed. No new cases were filed.
 - Our caseload and number of plaintiffs will vary from quarter to quarter depending on new cases, additional plaintiffs, settlements, dismissals, amendments to complaints, etc.
 - The Company believes it has substantial defenses in pending cases
-