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	001-15885	34-1919973
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

17876 St. Clair Avenue, Cleveland, Ohio	44110
(Address of principal executive offices)	(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))

Item 7.01 Regulation FD Disclosure

On October 31, 2005, 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, among other things, shows the Company's corporate strategy and the financial results through the third quarter of 2005.

Item 9.01 Financial Statements and Exhibits

Exhibits:

Exhibit Number	Description of Exhibit
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.

October 31, 2005

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

Exhibit 99.1

Brush Engineered Materials Inc. Profile

- Publicly traded since 1956: NYSE-listed since 1972.
- Founded 1931 as Brush Beryllium Company.
  - 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

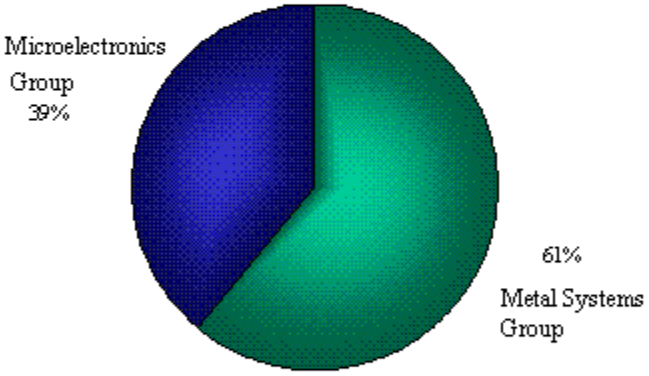
Brush Engineered Materials Inc. Profile

- 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

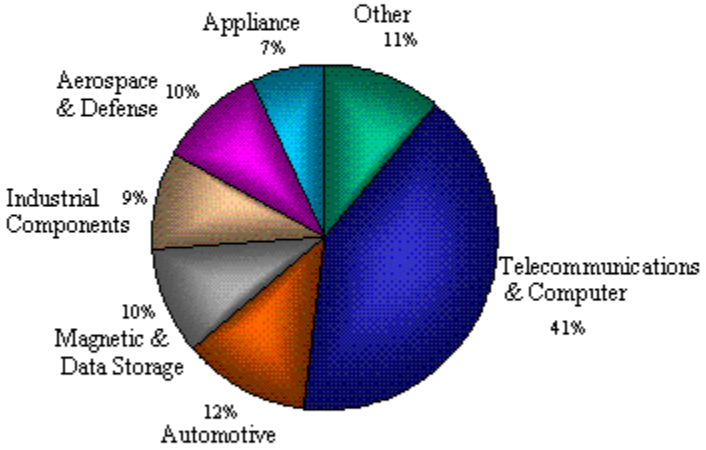
BRUSH ENGINEERED MATERIALS

Global Leader in High Performance Engineered Materials

2004 Revenue by Segment



2004 Revenue by Market



Applications

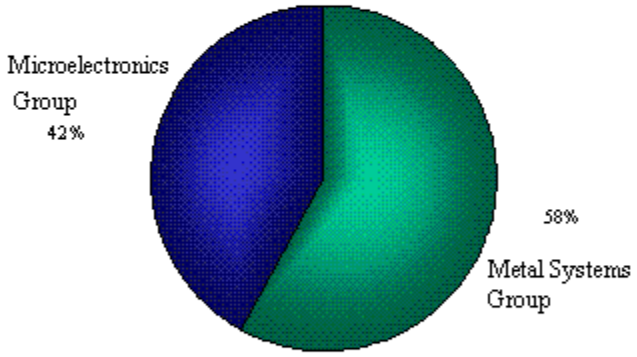
- Handsets
- PDAs
- DVDs
- Routers
- Servers
- Connectors
- Plastic Molds
- X-Ray Windows
- Shielding
- Bushings
- Bearings
- Notebook Computers
- Lasers
- Switches
- Fine Wire
- Relays
- Thin Film Circuits

Note: Total 2004 revenues were $496.3 million

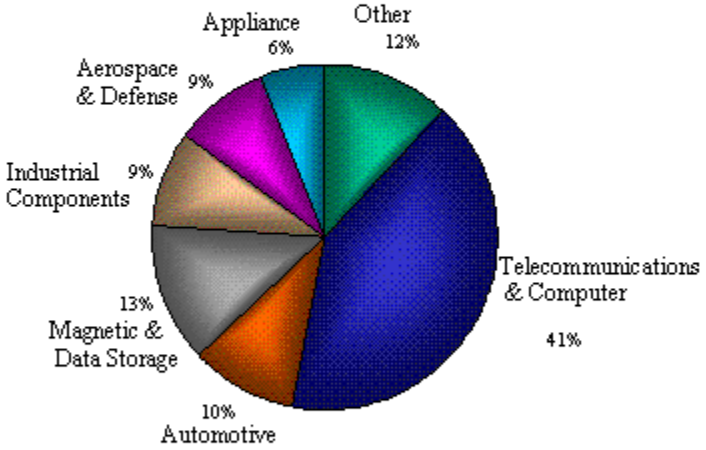
BRUSH ENGINEERED MATERIALS

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
- Semiconductor
- 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

BRUSH ENGINEERED MATERIALS

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	

BRUSH ENGINEERED MATERIALS

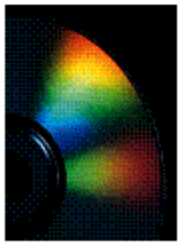
Brush Engineered Materials Inc.
End Uses

Cellular phones and other wireless communications

Notebook and network computers

Electronic components in cars and trucks

Life enhancing devices



Magnetic & Optical
Data Storage

Industrial products

BRUSH ENGINEERED MATERIALS

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

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

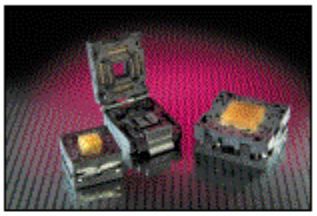
Williams Advanced Materials Inc.

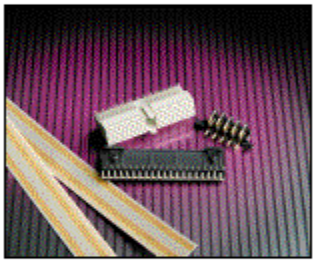
Metal Systems Group - 2005 YTD Third Quarter Sales: $232 million

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

BRUSH ENGINEERED MATERIALS

Metal Systems Group - 2005 YTD Third Quarter Sales: $232 million

Continued

Beryllium Products

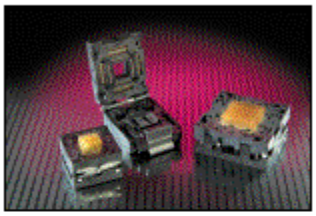
$33.8 million; 8%

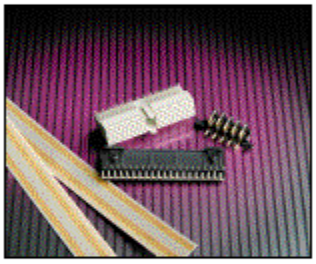
- Pure beryllium and aluminum-beryllium composites for high-performance applications, principally for aerospace and defense applications where stiffness, strength, lightweight, dimensional stability and reflectivity are critical

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.





BRUSH ENGINEERED MATERIALS

Microelectronics Group - 2005 YTD Third Quarter 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

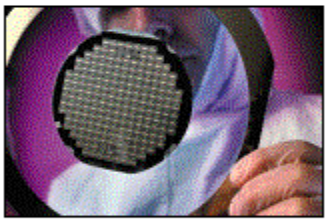
Electronic Products

$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

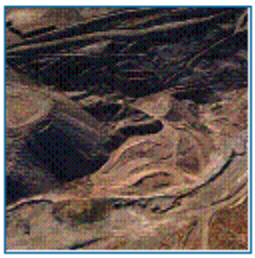


BRUSH ENGINEERED MATERIALS

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

Bertrandite Ore Mining & Extraction



Delta, UT

Casting, Rolling & Finishing

Elmore, OH

Thin Gauge Rolling & Finishing

Reading, PA

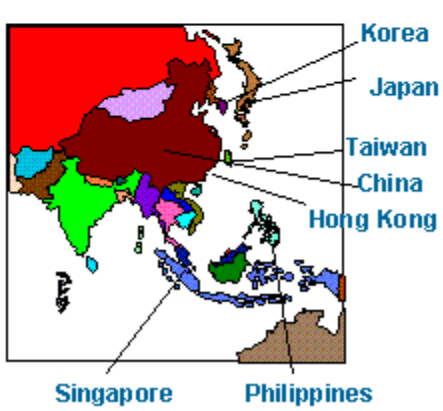
Service & Distribution Centers

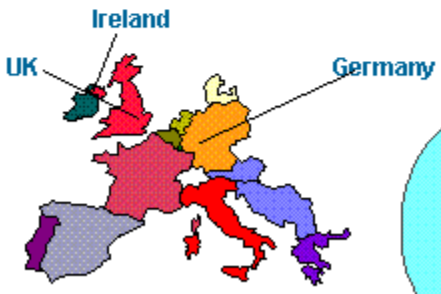
Global Network

Global Sales and Distribution Network

- Operations in the U.S. and ten foreign locations
- Recent expansion to Taiwan, China and Korea
- International sales through Q3 2005 were 33%

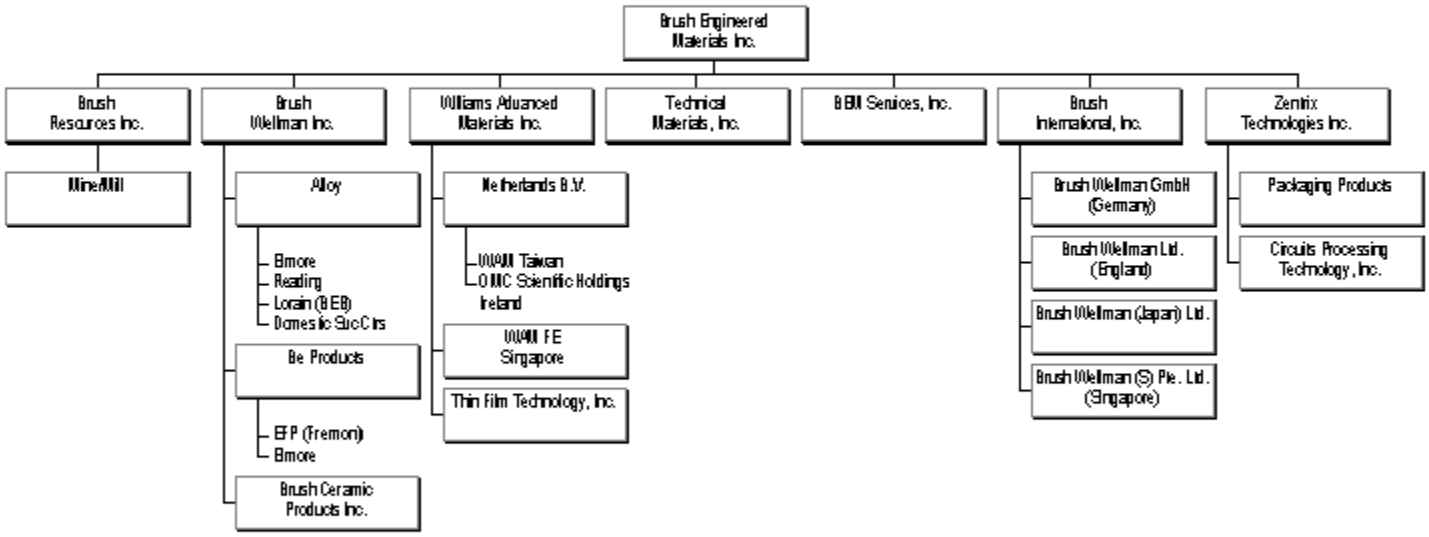
◂ --------- Asia / Pacific -------- ▸ ◂ ---------- Europe ---------- ▸ ◂ - Exports from USA - ▸





BRUSH ENGINEERED MATERIALS

Corporate Structure

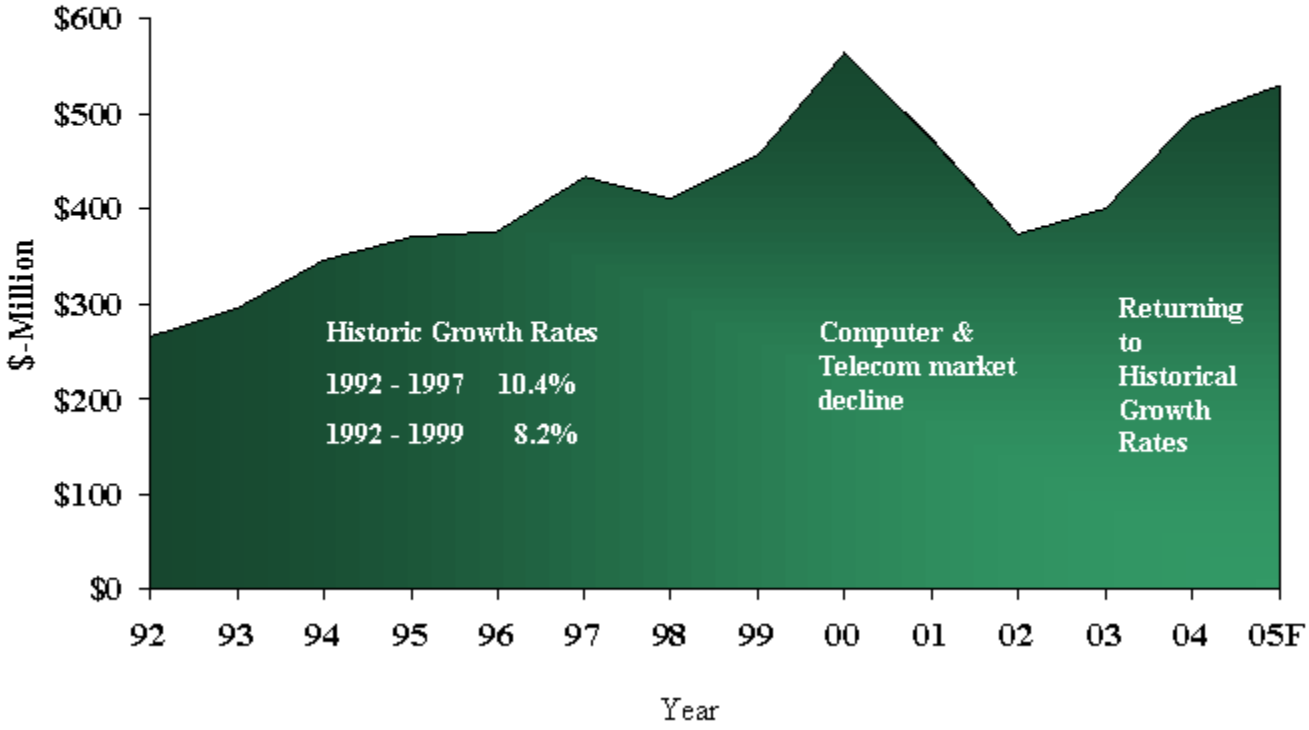


Significant Recent Progress in Key Financial Statistics

$in millions	2002	2003	2004	YTD 3Q 2005
Sales	$372.8	$401.1	$496.3	$400.6
EBIT	(22.6)	(8.9)	25.0	19.7
EPS	(2.15)	(.80)	.86	.71
G.P.%	12.9%	18.2%	22.4%	20.9%
O.P.%	(6.1%)	(2.2%)	5.0%	4.9%
Depreciation & Amort.	20.6	20.7	22.2	16.0
Capital Spending	5.4	6.3	10.1	9.1
Debt [1]	118.7	99.2	72.5	58.3
Cash	4.4	5.1	49.6	23.2
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, growth accelerated

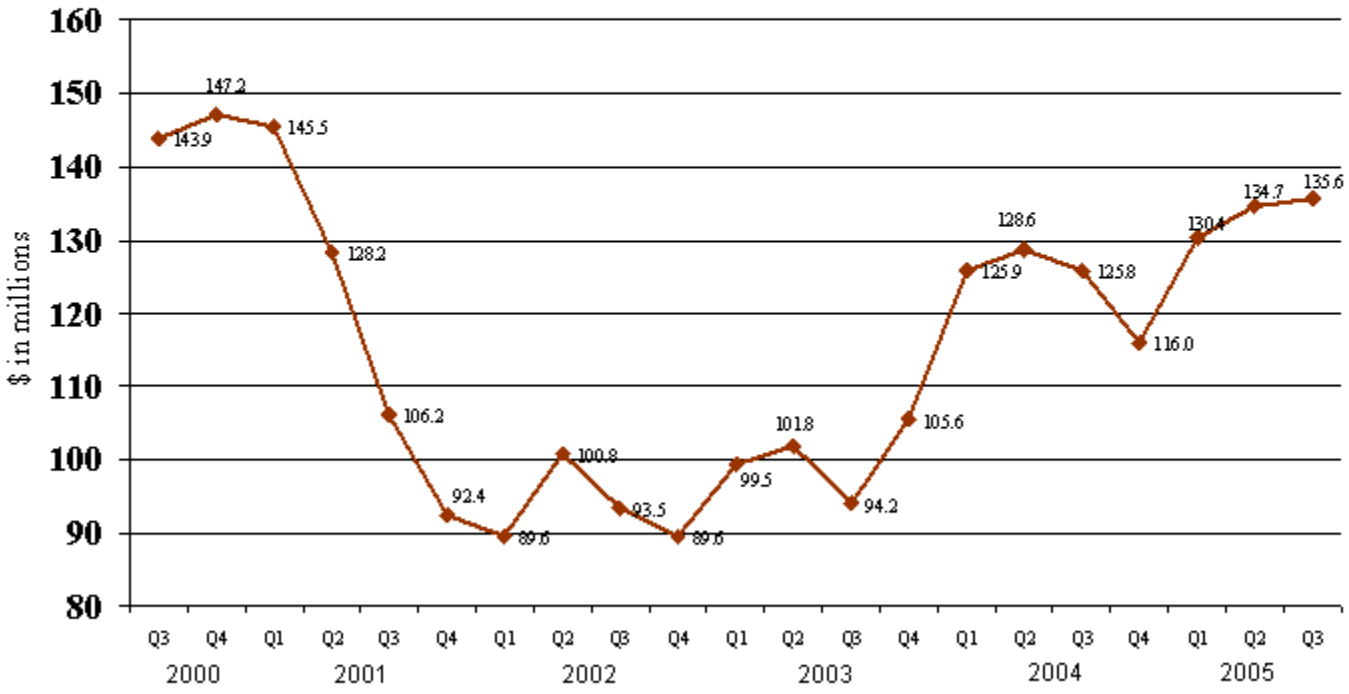


The decline in the telecom/computer market resulted in a 50% drop in the market segment's revenue comparing 2003 to 2000, in 2004, this segment started to grow

$ in millions

	2000	2003	2004	Change 03-04
Telecom/Computer	$277	$139	$206	$67
Automotive	62	53	59	6
Industrial	62	42	43	1
Magnetic and Optical Data Storage	56	53	52	(1)
Defense/Aerospace	34	37	49	12
Appliance	19	27	33	6
All Other	54	50	55	5
	$564	$401	$497	$96

The 3rd quarter 2005 was the eleventh 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 are improving in the oil and gas, undersea, aerospace and heavy equipment markets.

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

Capacity to Support Profitable Market Growth

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

- $140 million invested between 1996 and 2000
- Operating with significant available excess capacity
- Significant productivity gains in recent years
- Capital spending in 2002, 2003 and 2004 averaged $7 million per year and through the third quarter of 2005 was $9.1 million

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 applications
  - New markets
  - 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

Since 2000, 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
  - 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 in 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

A significant reduction in debt obligations has occurred.

($ in millions)

	2000	2004	Q3 2005
Balance Sheet Debt & AEP Lease	$128.4	$ 72.5	$58.3
Off-balance Sheet Leases	17.9	13.1	12.1
Total	$146.3	$85.6	$70.4
Debt to Debt Plus Equity	36%	26%	21%

Improving Margins

Our efforts to improve margins have succeeded, despite the fall in revenue

Year	Gross Margin %	Sales ($M)
2000	21.0%	$564
2001	14.4%	473
2002	12.9%	373
2003	18.2%	401
2004	22.4%	496
YTD Q3 2005	20.9%	401

Improved Margins

Margins have improved through cost reduction and productivity improvement initiatives

Programs to improve profitability had a significant impact in 2003 and in 2004

$ Millions

	2001	2002	2003	2004	YTD Q3 2005
Net Sales	$472.6	$372.8	$401.0	$496.3	$400.6
Oper. Profit	(14.1)	(22.6)	(8.9)	25.0	19.7
Oper. %	(3.0)	(6.1)	(2.2)	5.0	4.9

2003 includes the impact of the $6.0 million refinancing charge. Excluding the charge operating profit would have been $2.9 million.

Segment Sales Review

$ in millions	2001		2002		2003	
	$	%	$	%	$	%
▪ Metal Systems	$303.0	64%	$233.6	63%	$243.7	61%
– Alloy	217.5	46%	151.9	41%	162.3	40%
– TMI	50.5	11%	44.4	12%	41.9	11%
– Beryllium Products	27.7	6%	31.6	8%	35.2	9%
– Brush Resources*	7.2	1%	5.7	2%	4.3	1%
▪ Microelectronics	$169.6	36%	$139.2	37%	$157.3	39%
– WAM	135.3	29%	109.1	29%	127.8	32%
– Electronic Products	34.3	7%	30.1	8%	29.5	7%
▪ TOTAL	$472.6	100%	$372.8	100%	$401.0	100%

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

BRUSH ENGINEERED MATERIALS

Segment Sales Review

$ in millions	2004		YTD Q3 2005	
	$	%	$	%
▪ **Metal Systems**	**$300.7**	**61%**	**$231.7**	**58%**
– Alloy	202.9	41%	155.1	39%
– TMI	53.6	11%	37.1	9%
– Beryllium Products	39.5	8%	33.8	8%
– Brush Resources*	4.7	1%	5.7	2%
▪ **Microelectronics**	**195.6**	**39%**	**168.9**	**42%**
- WAM	165.7	33%	149.6	37%
– Electronic Products	29.9	6%	19.3	5%
▪ **TOTAL**	**$496.3**	**100%**	**$400.6**	**100%**

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

BRUSH ENGINEERED MATERIALS

2004 new product and market share growth was 36% of 2004 sales growth

$ in millions

	Sales			New Product & Market Share Gain
	2003	2004	Growth	
▪ **Metal Systems**	**$239.4**	**$296.0**	**$56.6**	**$21.2**
– Alloy	162.3	202.9	40.6	**10.5**
– Beryllium Products	35.2	39.5	4.3	**7.7**
– TMI	41.9	53.6	11.7	**3.0**
– Brush Resources	4.3	4.7	0.4	**0.0**
▪ **Microelectronics**	**$157.3**	**$195.6**	**$38.3**	**$13.0**
- WAM	127.8	165.7	37.9	**12.0**
– Electronic Products	29.5	29.9	0.4	**1.0**
▪ TOTAL	$401.0	$496.3	$95.3	**$34.2**

BRUSH ENGINEERED MATERIALS

Segment Earnings 2001 - 2005

$ in millions	2001	2002	2003	2004	YTD Q3 2005
Metal Systems	$(16.9)	$(34.8)	$(16.0)	$4.2	$6.3
Microelectronics	4.6	3.8	12.6	18.5	14.1
Other	(1.8)	8.2	(5.5)	2.3	(0.7)
Total Operating Profit	$(14.1)	$(22.8)	$(8.9)	$25.0	$19.7

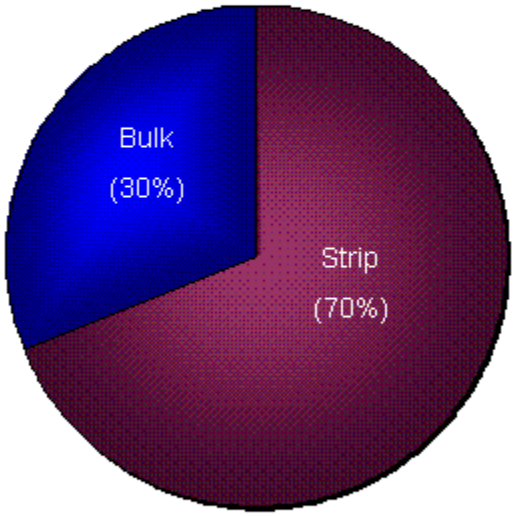
BRUSH ENGINEERED MATERIALS

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

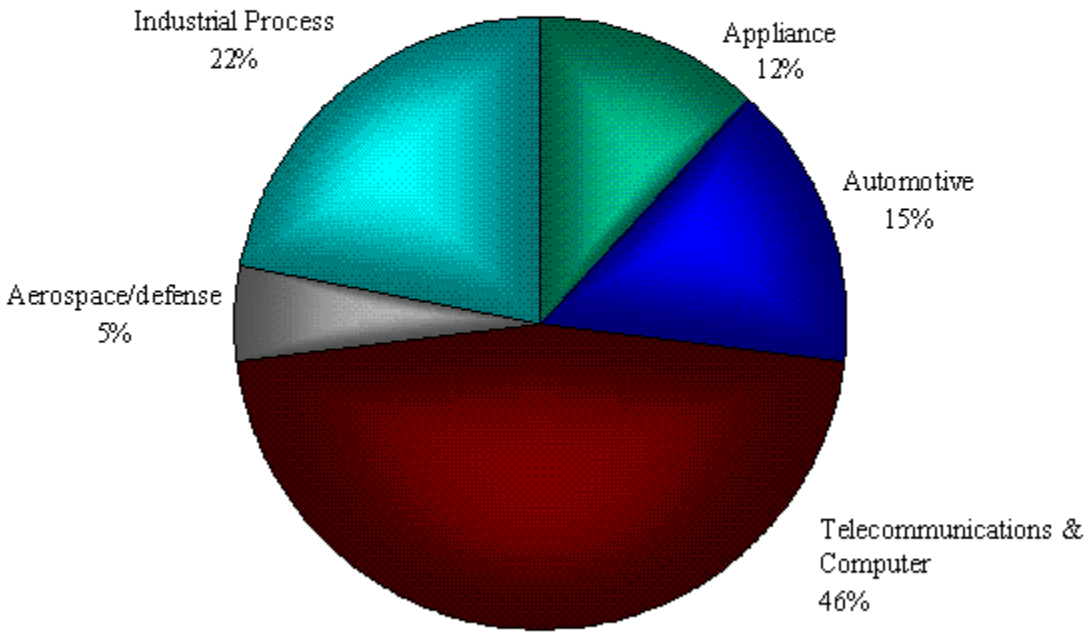
Alloy Products Markets



- *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

BRUSHWELLMAN
ENGINEERED MATERIALS

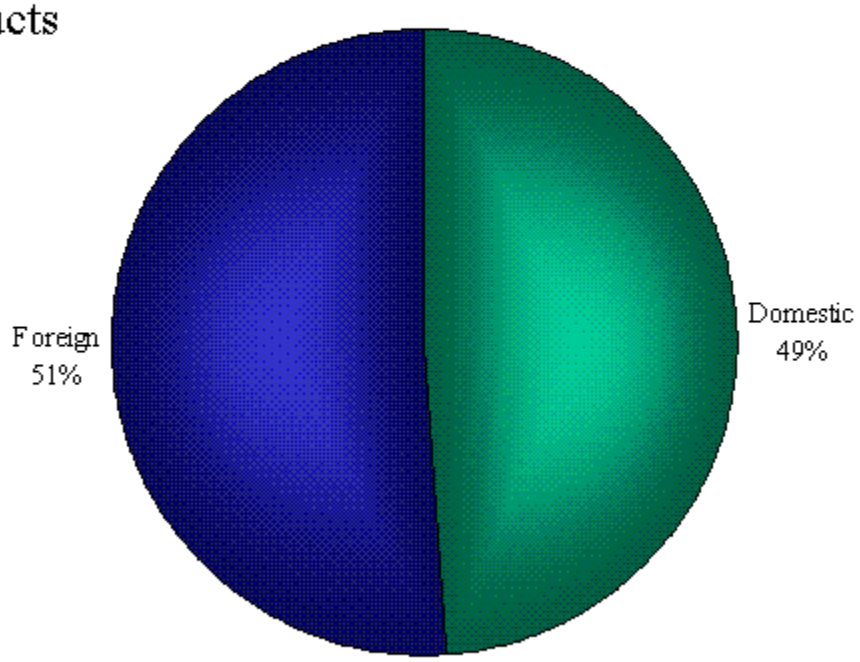
Alloy Products
Revenue by Market
YTD Q3 2005



BRUSHWELLMAN
ENGINEERED MATERIALS

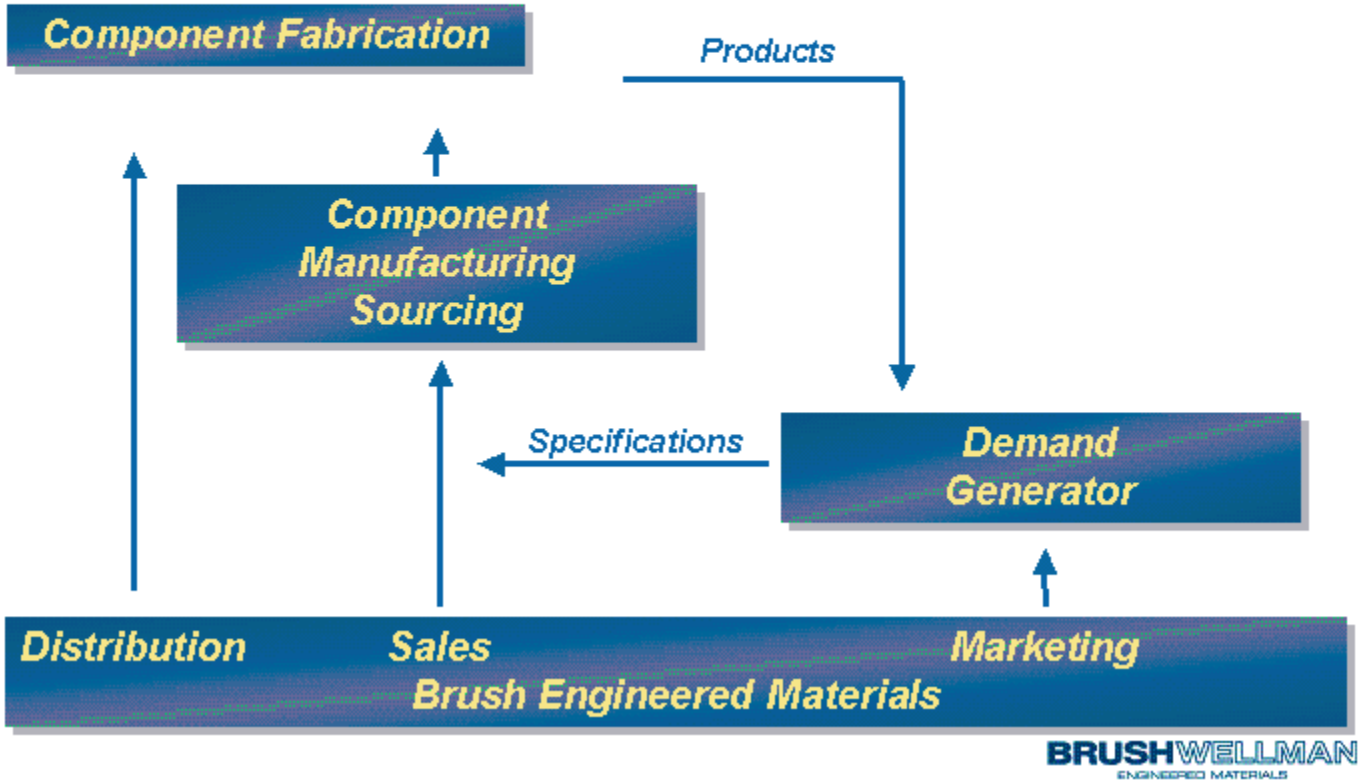
International/Domestic Revenue
YTD Q3 2005

Alloy Products



BRUSHWELLMAN
ENGINEERED MATERIALS

Sales Based on End User Specifications

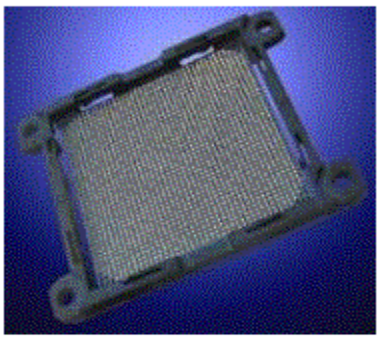


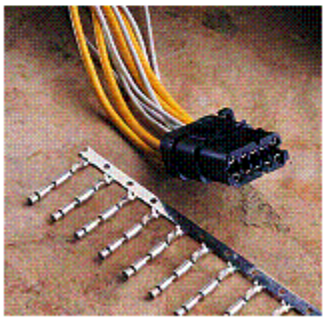
BRUSHWELLMAN
ENGINEERED MATERIALS

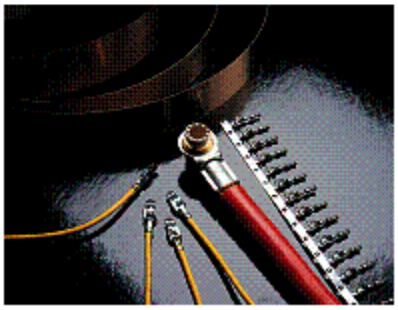
Strip Alloy Applications

(strength, conductivity, spring characteristics)

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







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ENGINEERED MATERIALS

Alloy Products
Strip Products - Strategy

- **Maintain focus on 4 major end-use markets**
  - Computer Telecommunications (mobile & Infrastructure) Automotive Appliance
- **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

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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)
- Developed/Targeted for Q3/Q4 2005 Launch
  - Alloy 395 strip - Electronics… numerous personal portable devices (i.e. cell phones), burn-in-test sockets, servers (further expanding property set, i.e. higher conductivity)

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Strip Capacity Expansion
Elmore and Reading Facilities

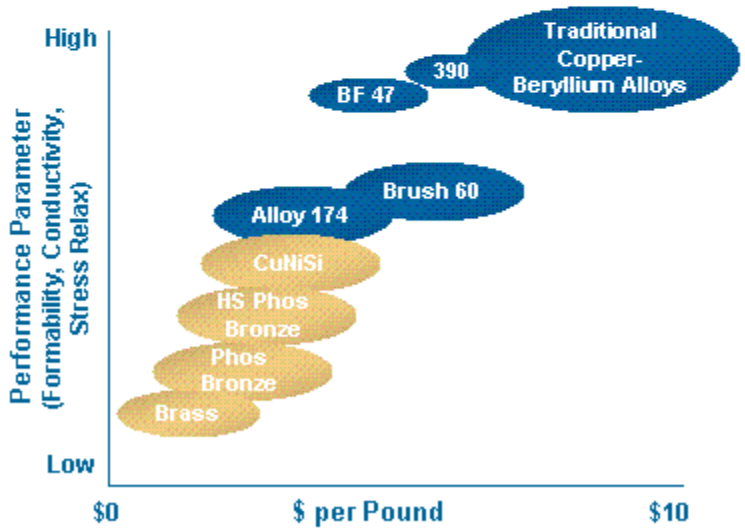
- $140 Million (1996 - 1998)
- Added casting, hot rolling, annealing and cold rolling capacity at Elmore
- Added light gauge strip and mill hardening capacity at Reading
- 50% to 100% capacity increase depending upon product

BRUSHWELLMAN
ENGINEERED MATERIALS

Strong Value Proposition in Served Markets

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

Competitive Alloy Comparison



Brush Value Proposition

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

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

BRUSHWELLMAN
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Automotive Electronics

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

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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

BRUSHWELLMAN
ENGINEERED MATERIALS

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.

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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.

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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

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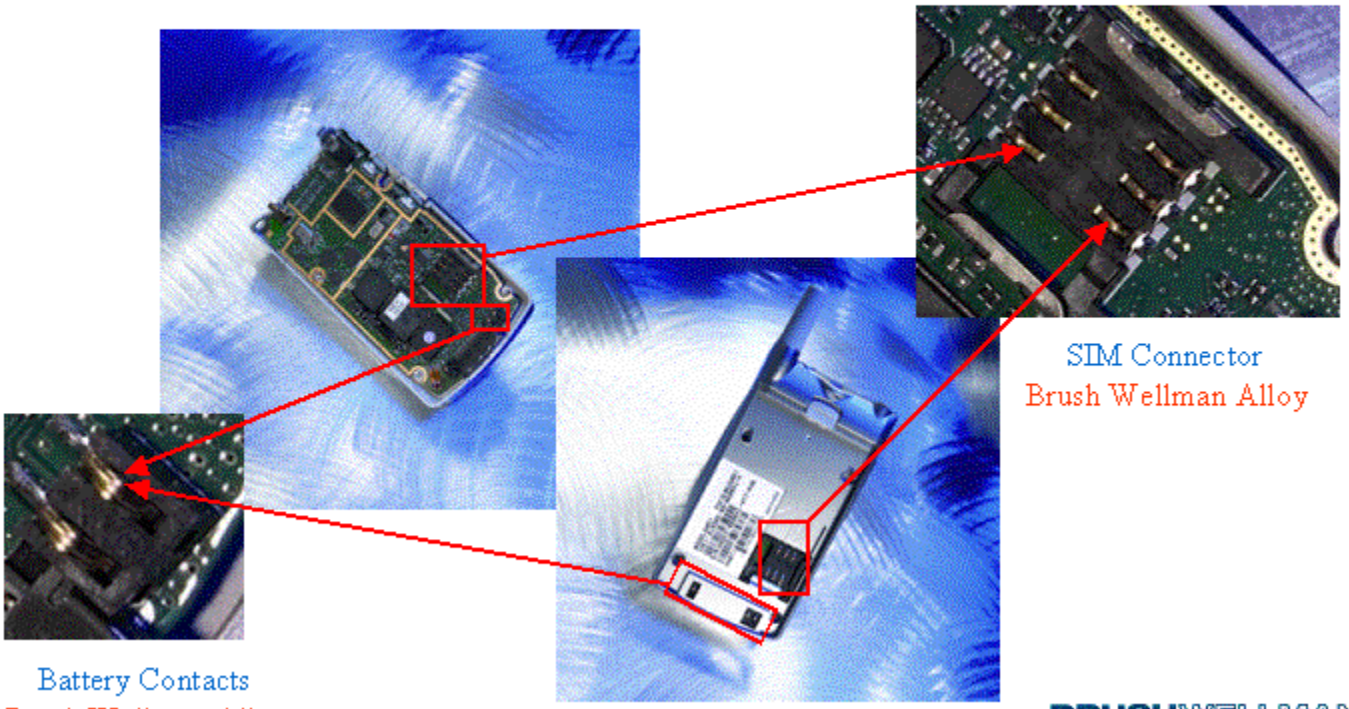
Cell Phone Connector Applications
Rear of Circuit Board



SIM Connector
Brush Wellman Alloy

Battery Contacts
Brush Wellman Alloy

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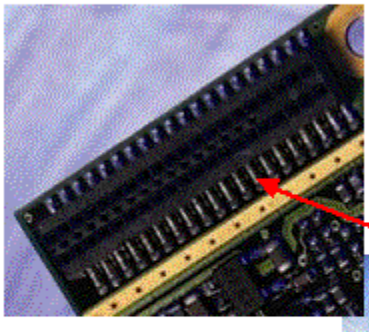
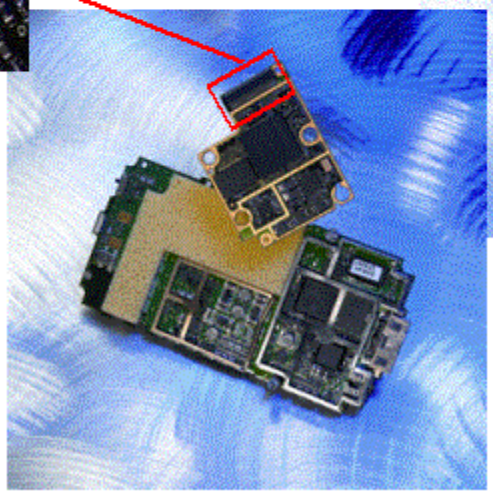
Cell Phone Connector Applications
Front of Circuit Board



Board-to-Board Contact
Brush Wellman Alloy



Phone Charger
Connector
Brush Wellman
Alloy

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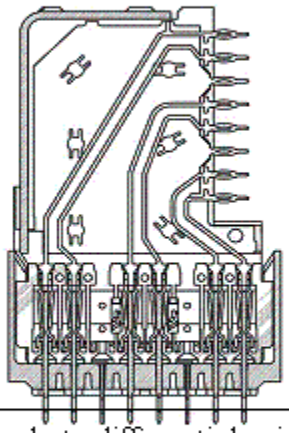
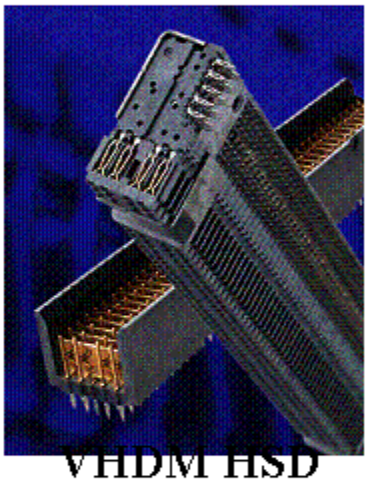
Level 3 (PCB to PCB) Enabling Technologies

Compliant Grounds





VHDM HSD

+ 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

High Conductivity

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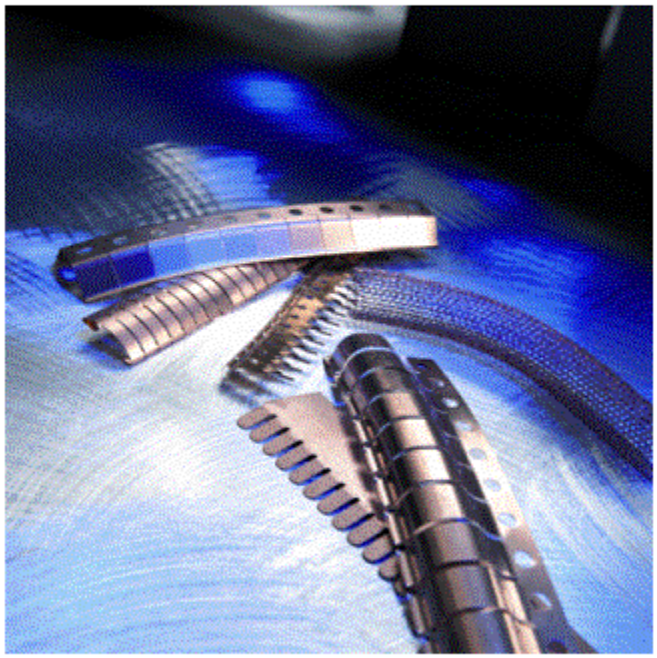
EMI Shielding



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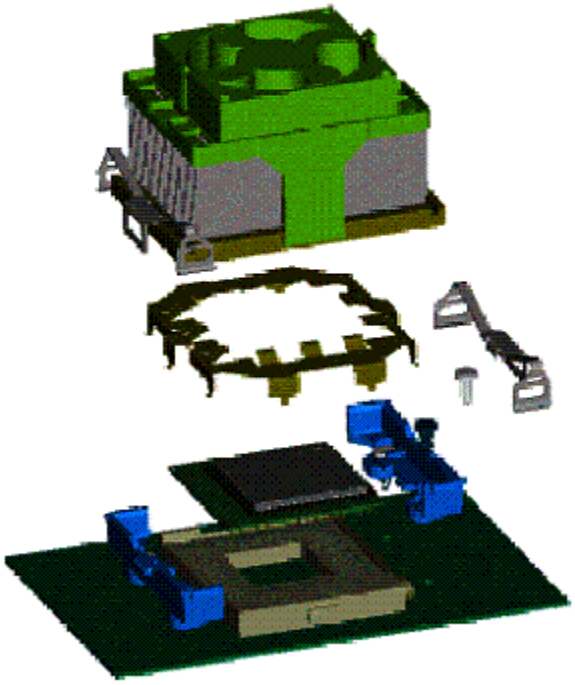
EMI Shielding



- 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

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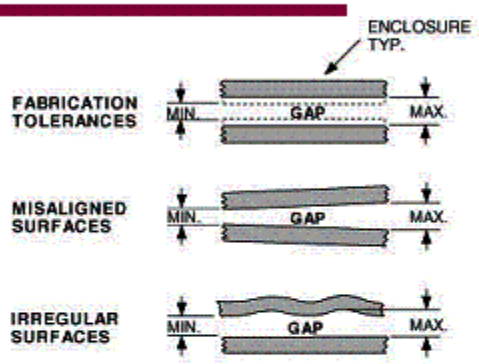
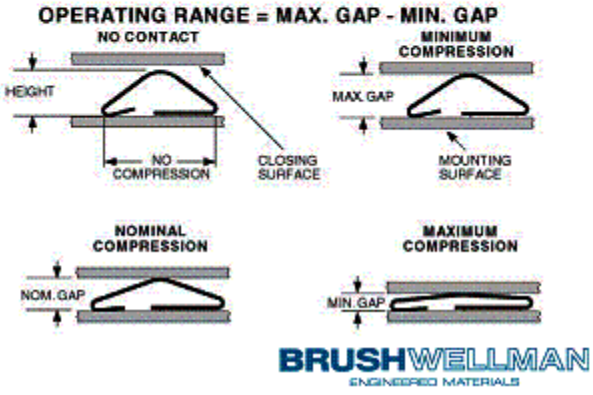
EMI Shielding

SFF Compliant Spring Material Ideal

RFI/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

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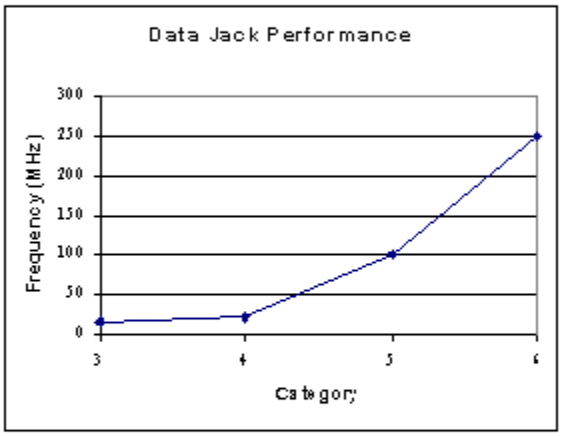
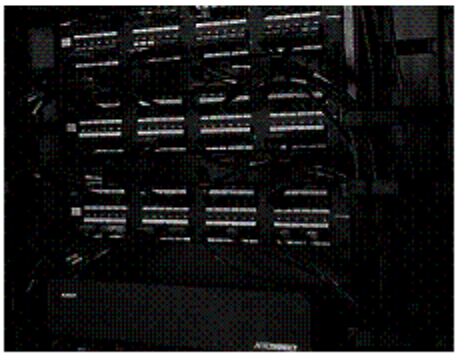
Modular Jacks

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

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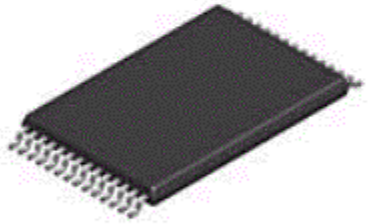
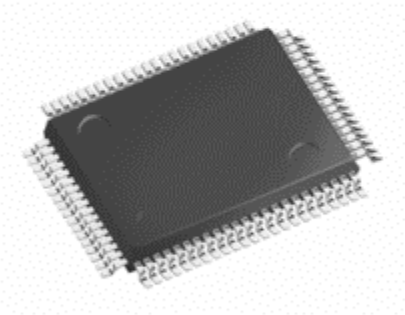
Level 2 Interconnects

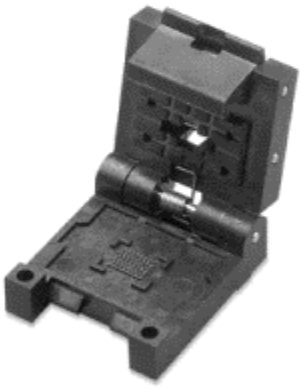
Clamshell Sockets - typically used for TSOP (thin small outline package) and QFP (quad flat package).



TSOP



QFP



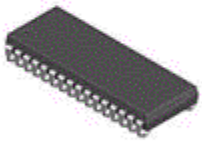
Clamshell Burn-in Socket

BRUSHWELLMAN
ENGINEERED MATERIALS

Level 2 Interconnects

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

DIP



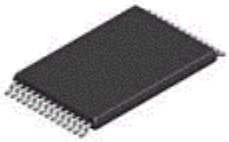
SOJ

SOJ Burn-in Socket

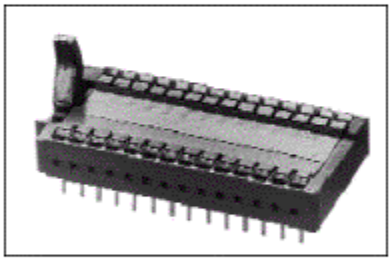
BRUSHWELLMAN
ENGINEERED MATERIALS

Level 2 Interconnects

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



TSOP



ZIF Burn-in Socket

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Level 2 Interconnects

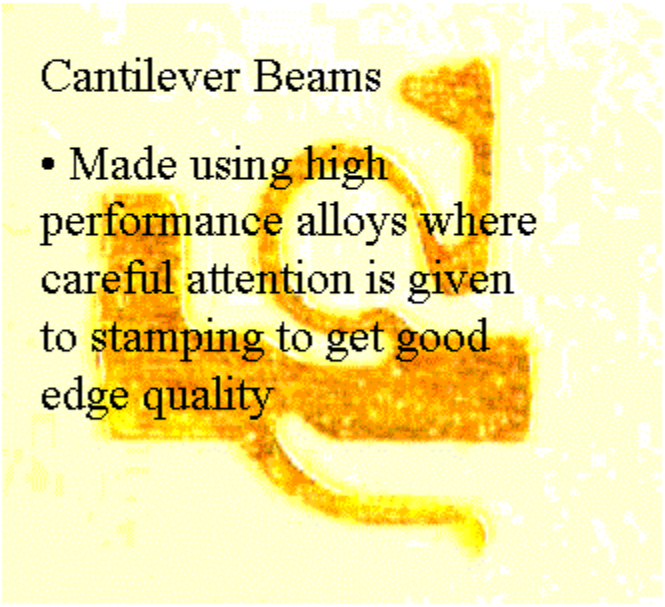
Contact Design Types:

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



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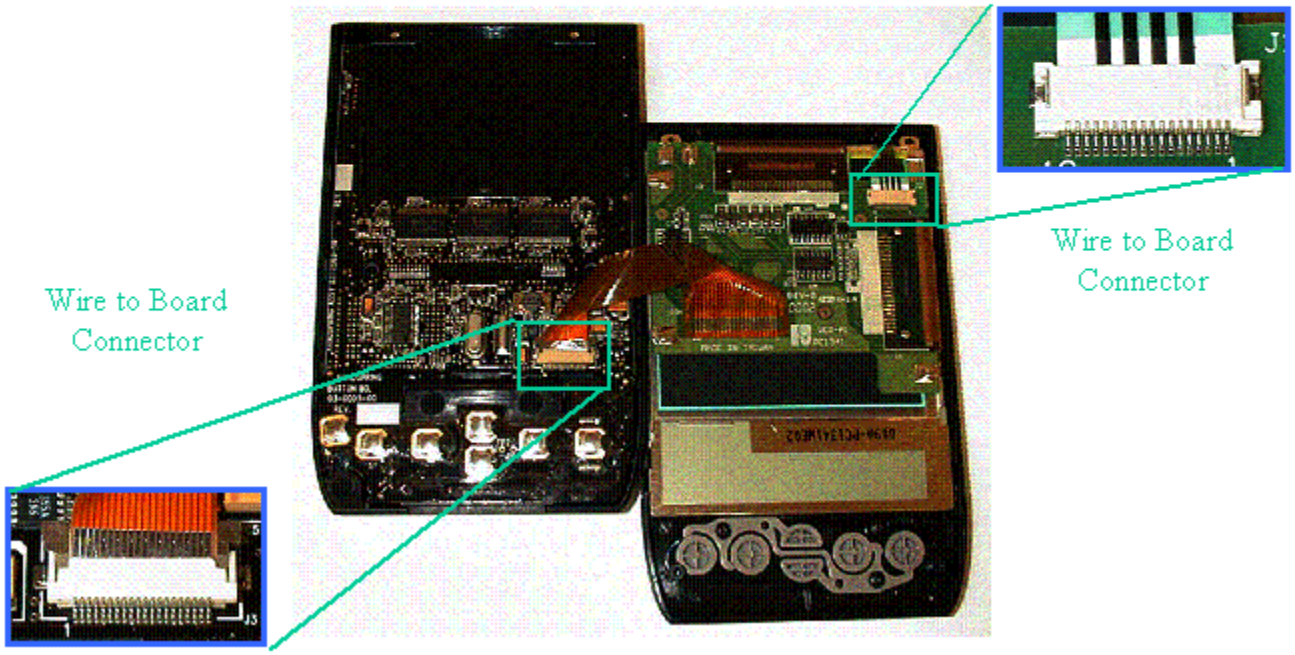
Connectors in PDAs



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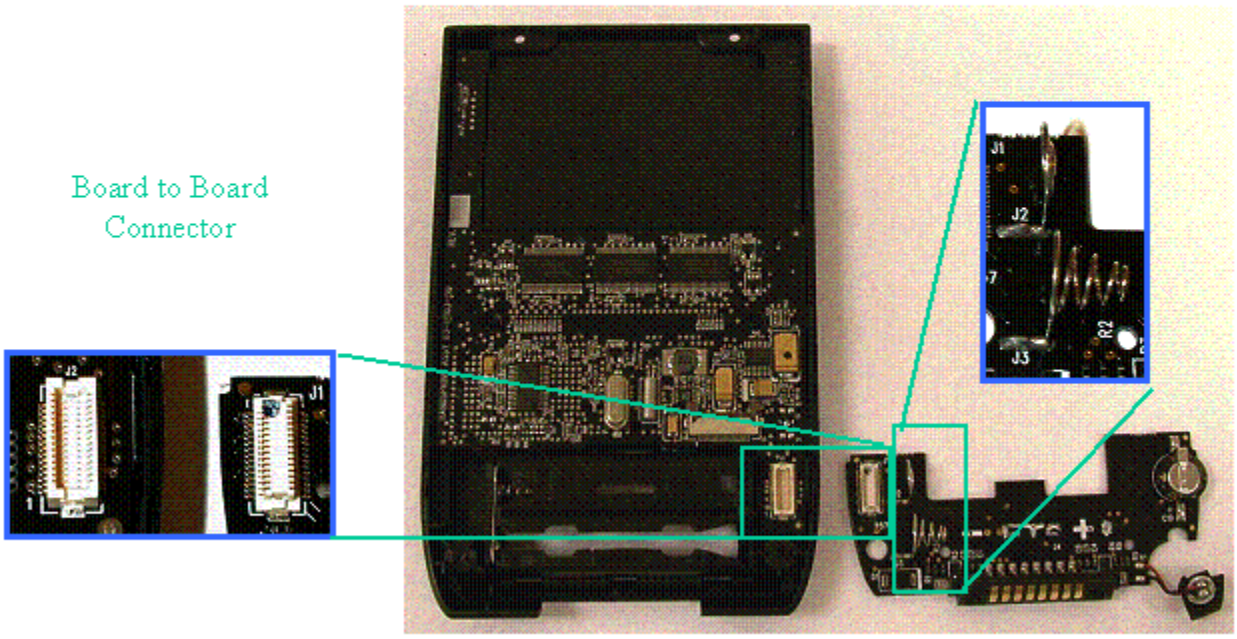
Main PCB from Back

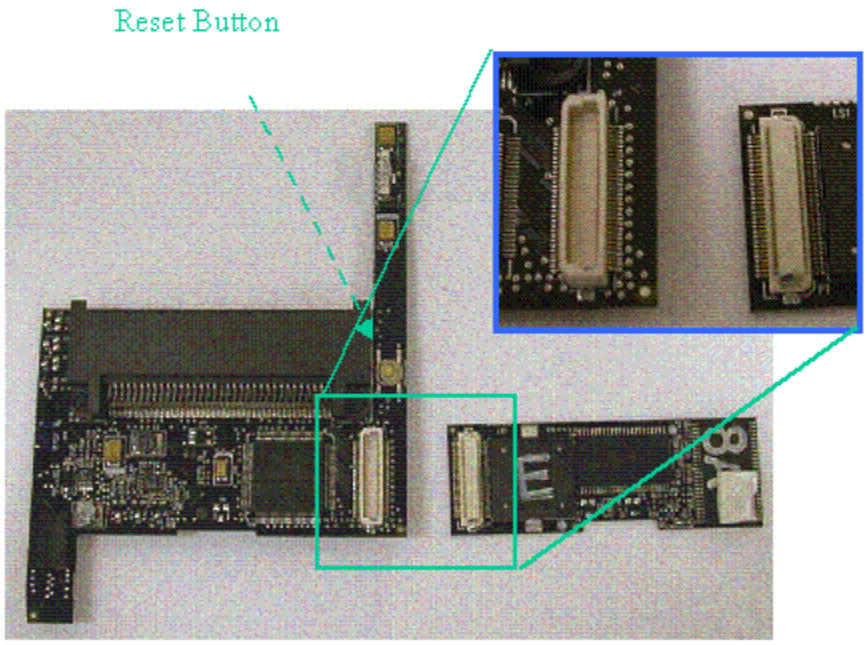
Battery Contacts

Board to Board
Connector



BRUSHWELLMAN
ENGINEERED MATERIALS

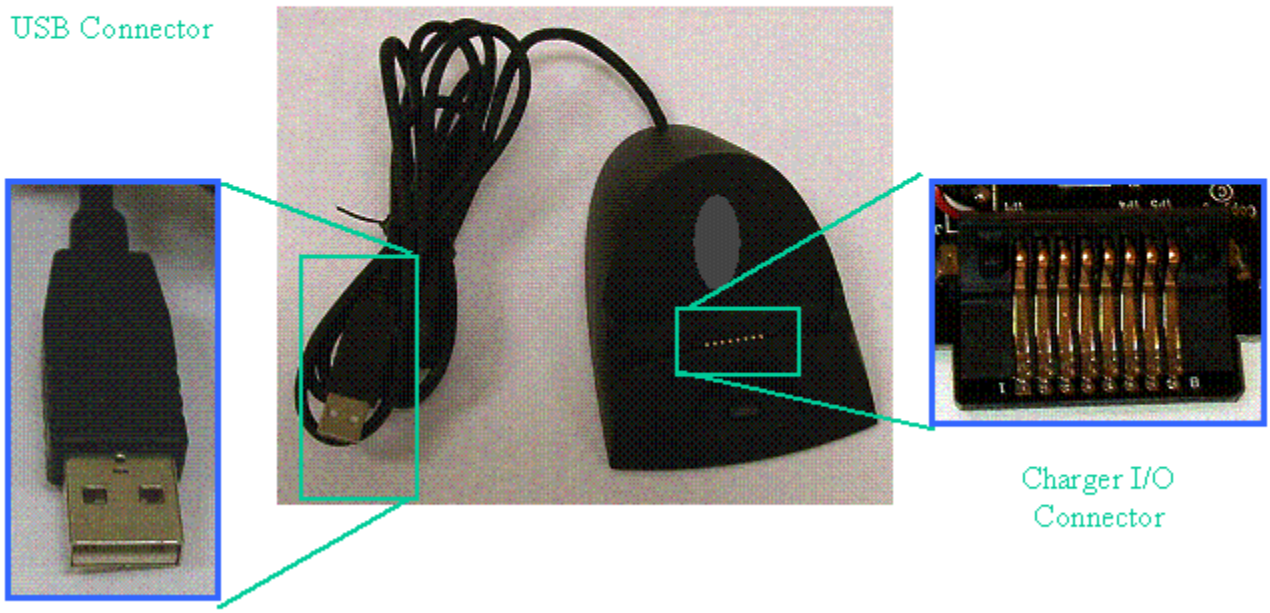
Main PCB from Front



BRUSHWELLMAN
ENGINEERED MATERIALS

Desktop Charger

USB Connector



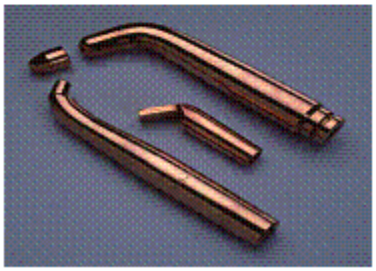
Charger I/O Connector

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
- 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.**
  - MoldMAX® XL
  - ToughMet® and improved ToughMet® products (CF ToughMet®)
  - Alloy 310 RWMA class 3
- **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 and Launched Q1 2005**
  - Alloy 25 CuBe rod, tube and forged rings with improved properties for subsea oil & gas well-head equipment
- **Developed and 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 & Targeted for Q4 2005 Launch**
  - ToughMet®3 TS 110 Rod with high toughness for high pressure oil & gas well drilling, completion and production equipment
  - TS 160U Tube for modern aircraft bushings and bearings
  - Q-Max® Welded Tube for process heat exchangers and power plant condensers

BRUSHWELLMAN
ENGINEERED MATERIALS

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:

- No EH&S issues
- 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

Developing applications in markets where we are strong:

Mold Tooling, Aircraft Parts, Drilling Equipment

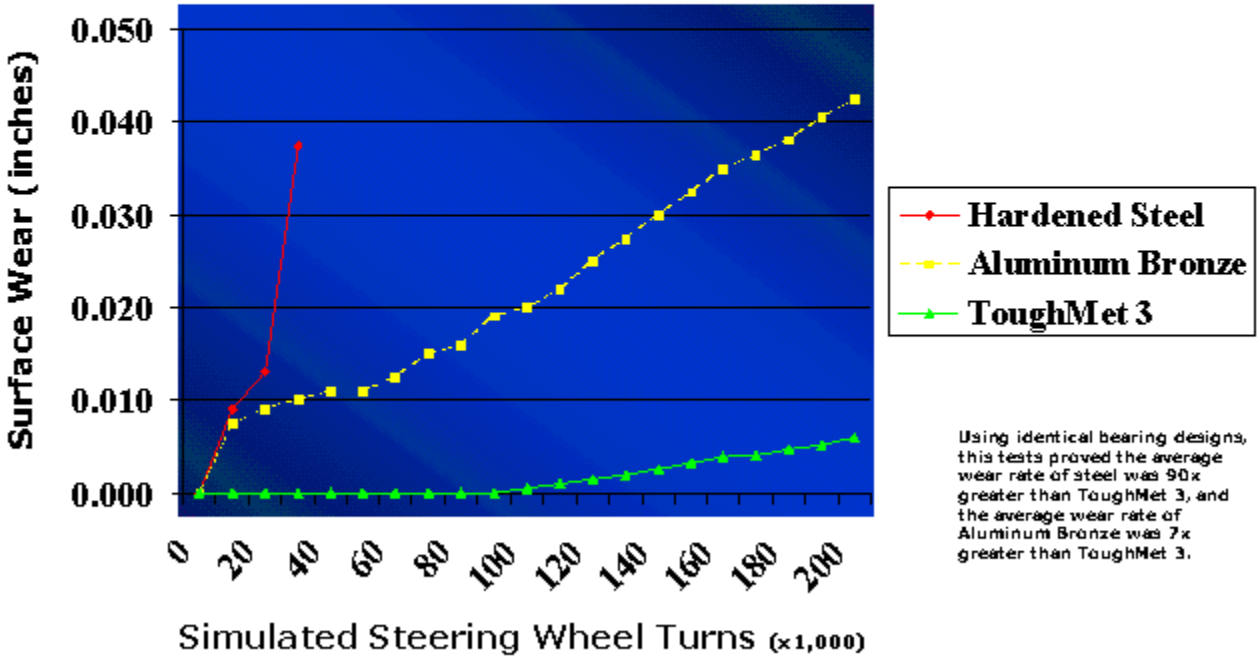
Developing markets/applications where technology is strong:

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

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



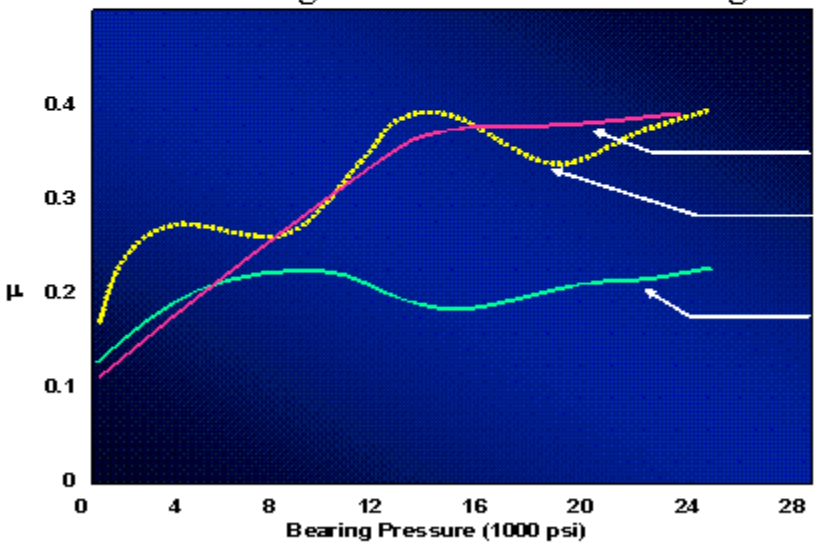
Using identical bearing designs, this tests proved the average wear rate of steel was 90x greater than ToughMet 3, and the average wear rate of Aluminum Bronze was 7x greater than ToughMet 3.

BRUSHWELLMAN
ENGINEERED MATERIALS

ToughMet® Industrial Components Results:

ToughMet® Alloy Bushings Provide Superior PowerEfficiency 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
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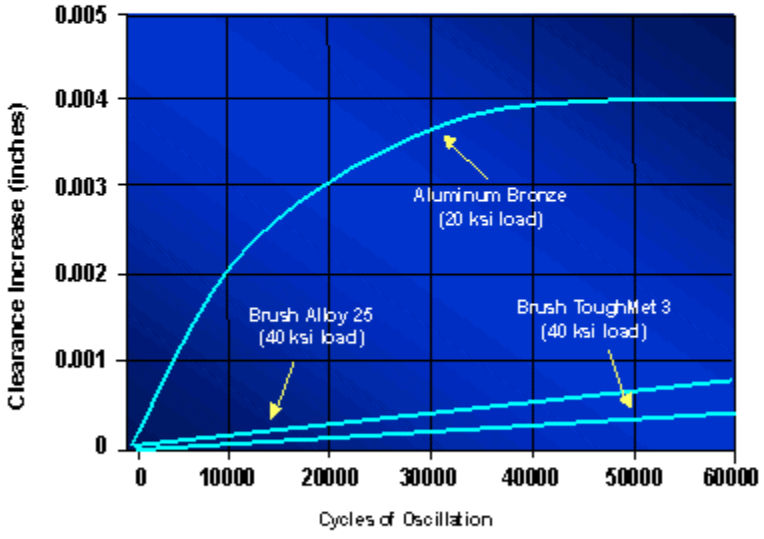
Significantly Higher Durability has been Confirmed for ToughMet®

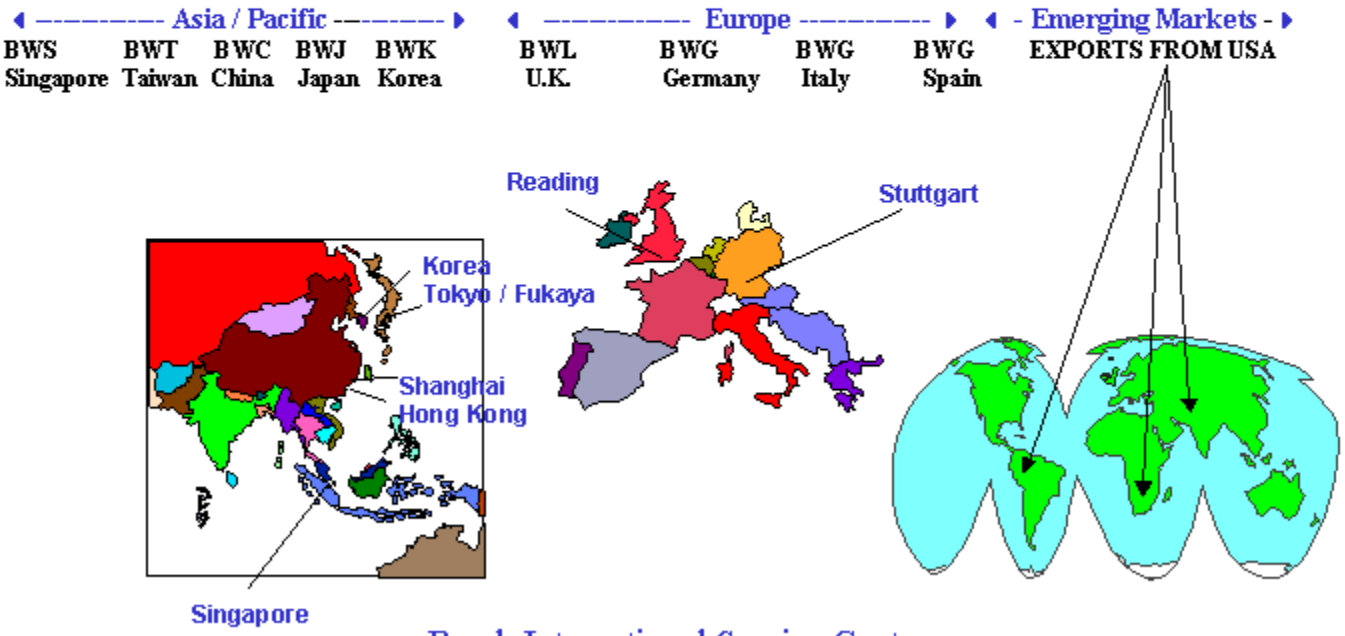
Comparative Sleeve Bearing Wear Tests.



Battelle

BRUSHWELLMAN
ENGINEERED MATERIALS

Brush International Inc.
Global Sales, Marketing, Distribution & Tech Service



Brush International 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

BRUSHWELLMAN
ENGINEERED MATERIALS

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

BRUSHWELLMAN
ENGINEERED MATERIALS

Brush Wellman Beryllium Products

Facilities

Elmore, Ohio

Fremont, California

BRUSHWELLMAN
ENGINEERED MATERIALS

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

BRUSHWELLMAN
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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)

BRUSHWELLMAN
ENGINEERED MATERIALS

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

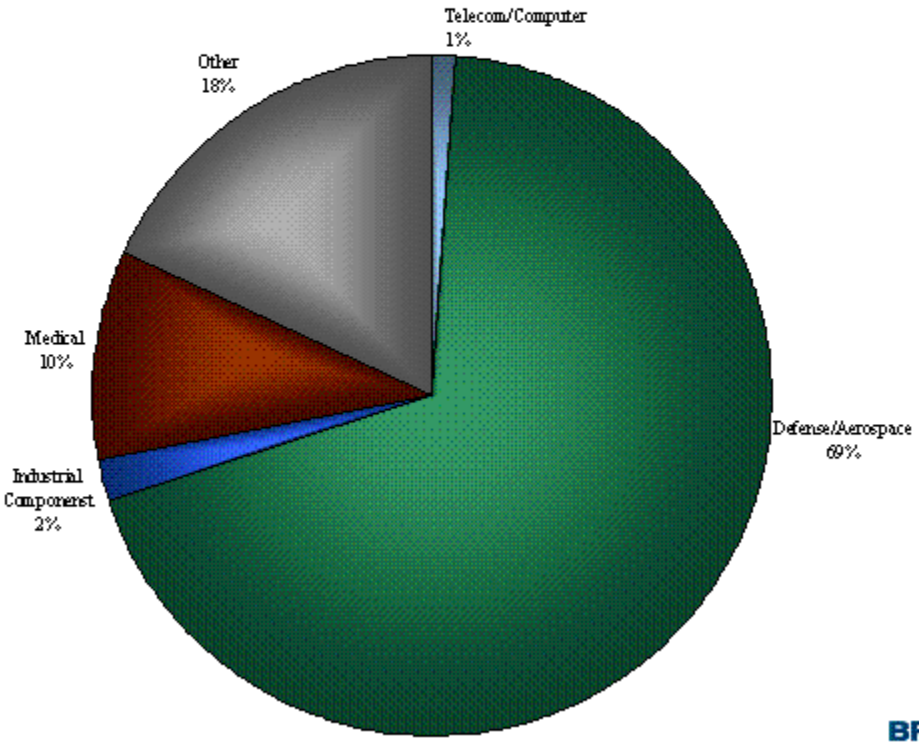
Structural components for high-precision semiconductor processing and industrial robotic equipment

Acoustics

High performance speaker components

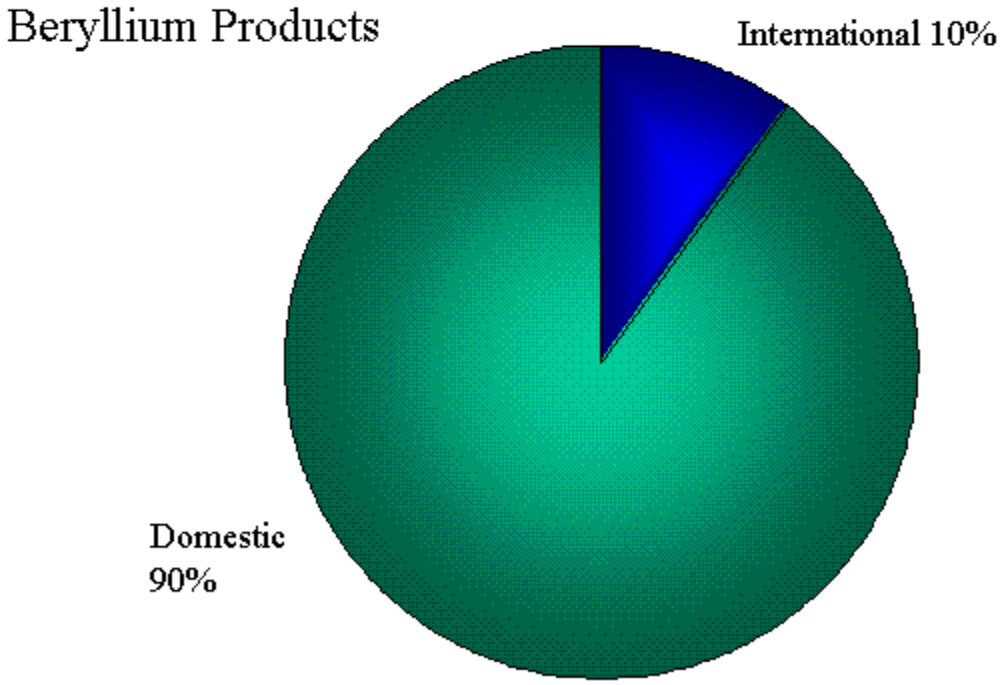
BRUSHWELLMAN
ENGINEERED MATERIALS

Beryllium Products
Revenue by Market
YTD Q-3 2005



BRUSHWELLMAN
ENGINEERED MATERIALS

International/Domestic Revenue YTD Q3 2005



BRUSHWELLMAN
ENGINEERED MATERIALS

Major Applications, New Products and Platforms

Beryllium Products

Product	Market
New AlBeMet Products	Defense
Fabricated Products	Defense
Acoustics	Speakers

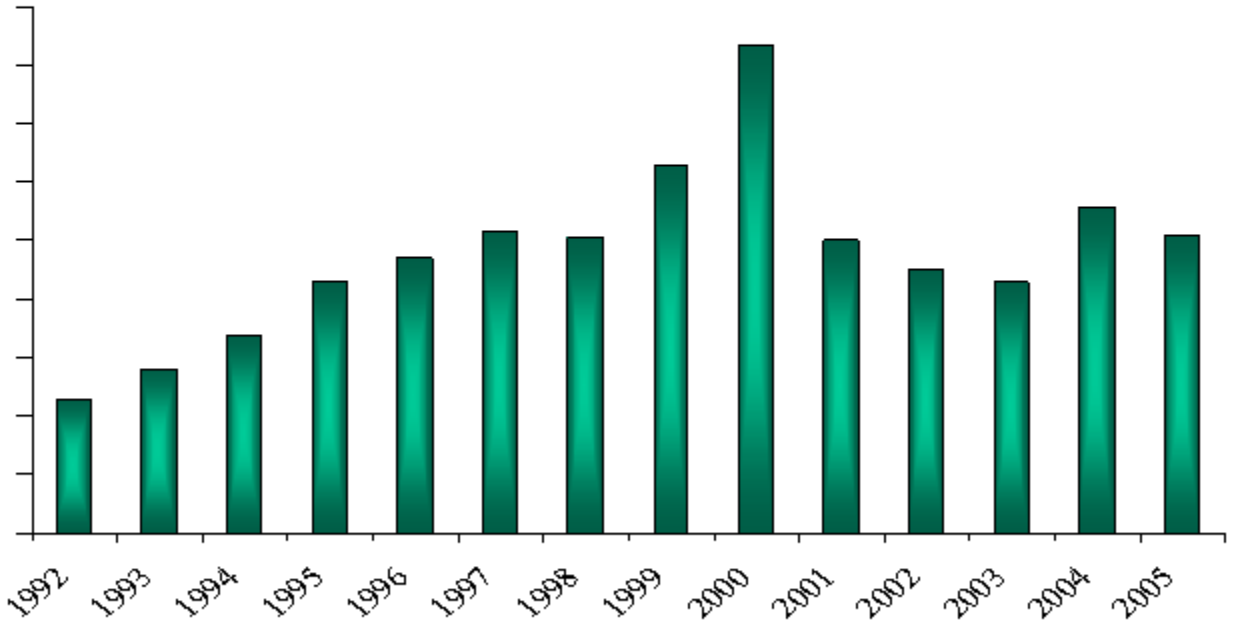
BRUSHWELLMAN
ENGINEERED MATERIALS

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.

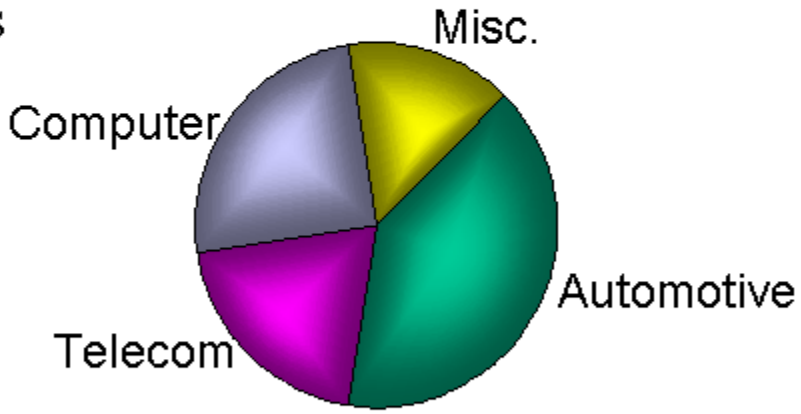
Sales Growth

$ Millions



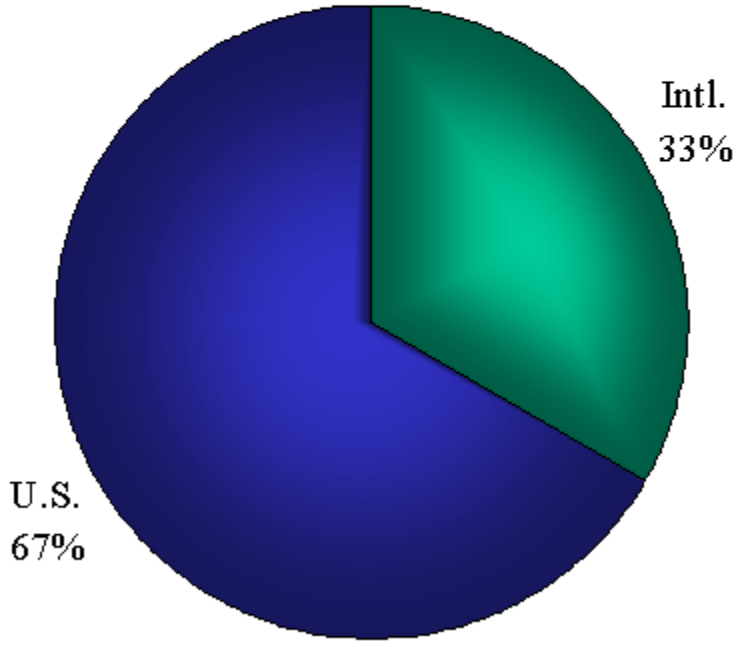
Our Major Markets

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

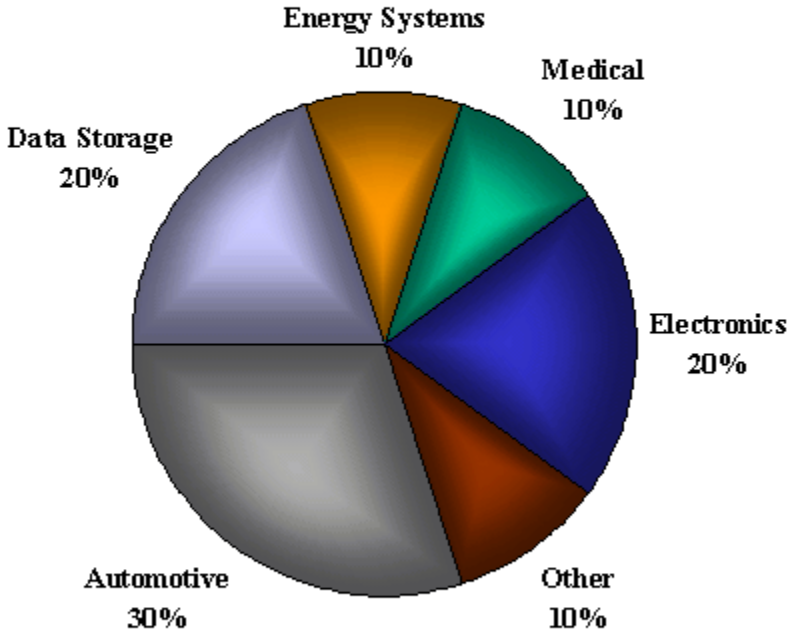


International/Domestic Revenue YTD Q3 2005

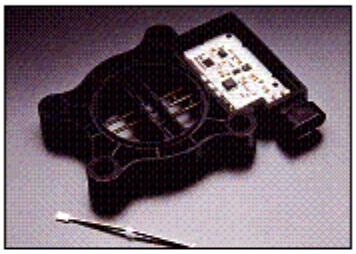
Technical Materials Inc.



Major Applications, New Products and Platforms



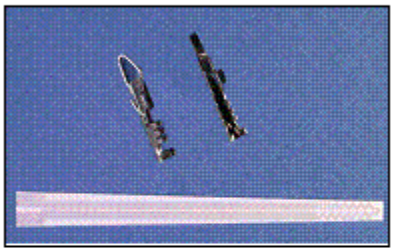
Our Major Applications



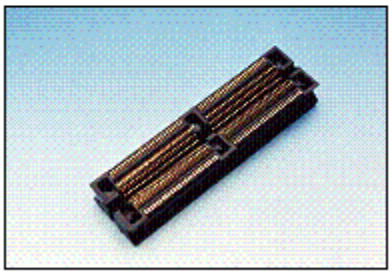
Leadframe

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
  - QS 9000 / ISO 9002 / 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

New Products & Platforms by Market

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 and QS 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.

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.

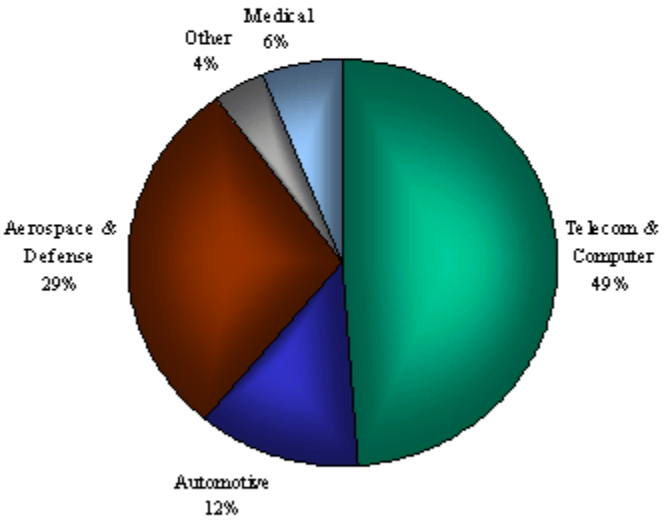
- Signal amplifiers are critical active components located in base stations for wireless (cellular) and in regenerator stations along fiber-optic (Internet) links.

Our Overall Strategy

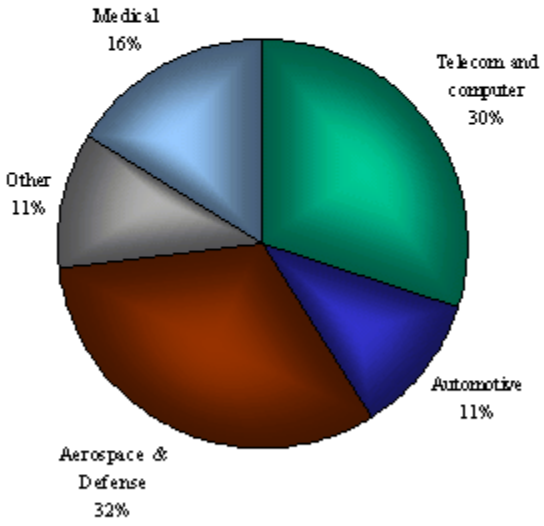
- Vertically integrate materials to subsystem assembly, providing customized solutions
- Meet the Customer's needs
  - Materials or subassemblies
- Fast Flexible Manufacturing Systems
  - Responsive to market needs

Revenue by Market

2004

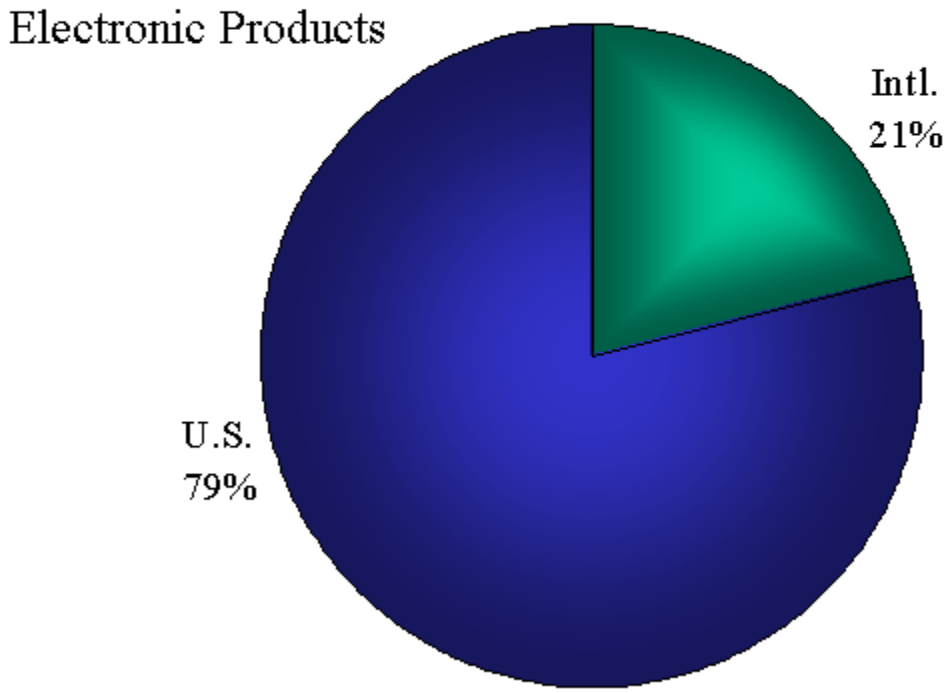


YTD Q3 2005



Electronic Products

International/Domestic Revenue YTD Q3 2005



Electronic Products

Business Groups

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

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

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

New Products & Platforms by Market

Electronic Products

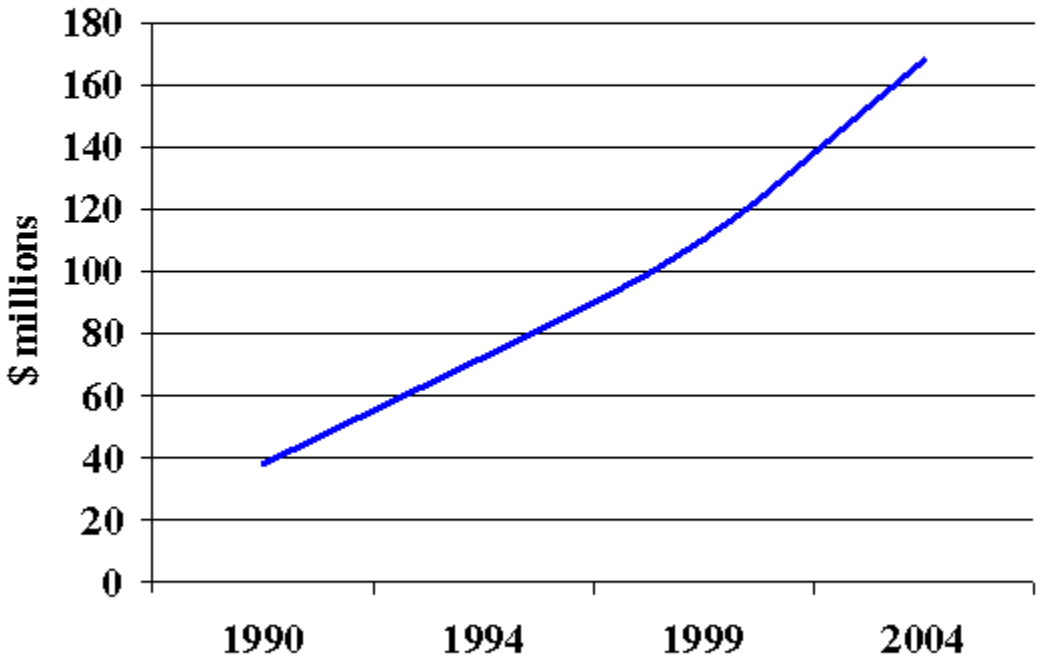
- BW 1000 Substrate sales started this year
- E-materials Packaging applications
- 325W BeO material ready for next year
- Luxtel reflectors – development program in final stages.

What We Do

Williams Advanced Materials develops, manufactures and markets materials and services of unique value for the Data Storage, Wireless/Photonics, Semiconductor, 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.

Williams
ADVANCED MATERIALS

Sales History



YTD 3rd Quarter 2005 sales are $150 million

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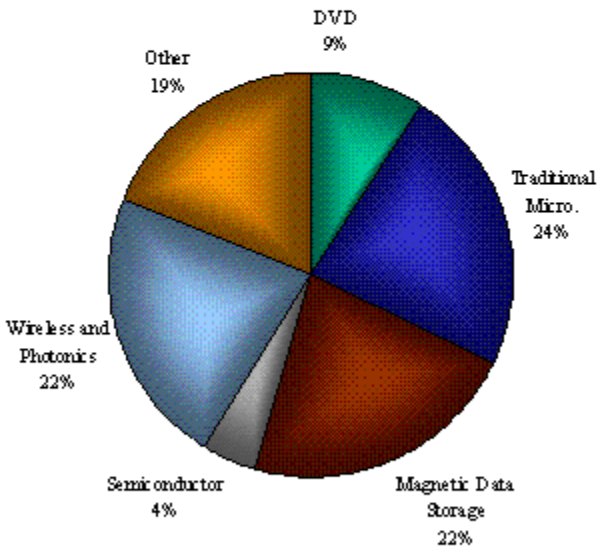
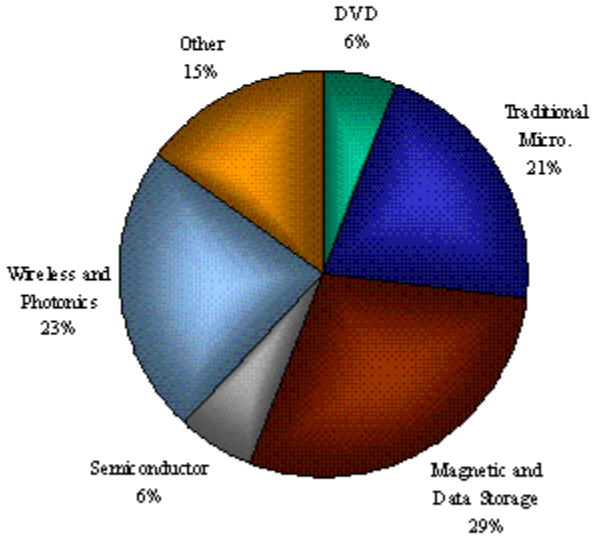
Revenue by Market

2004



YTD Q3 2005



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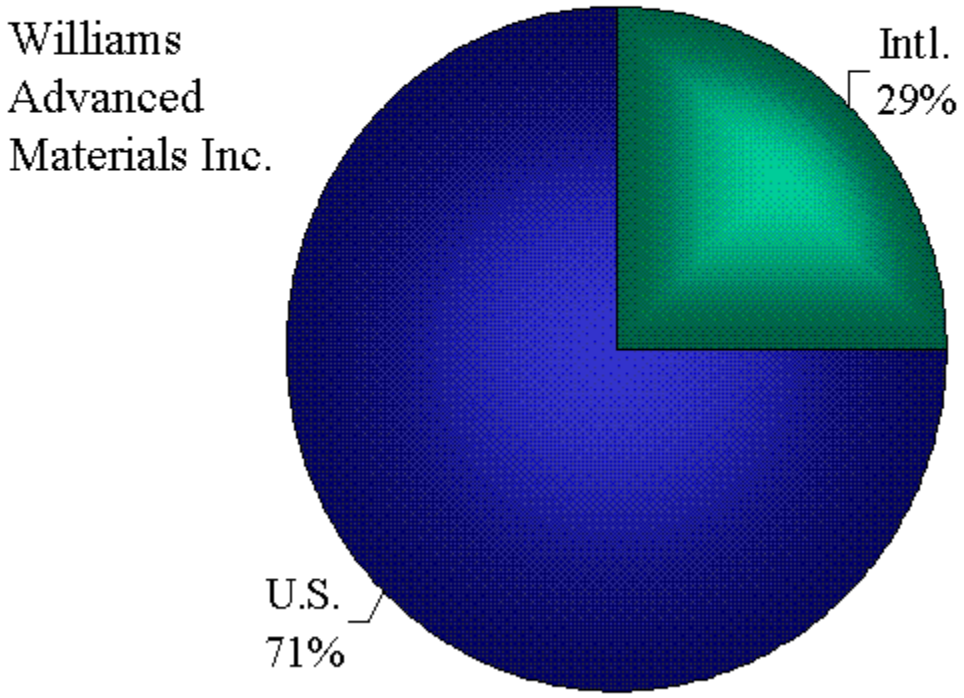
International/Domestic Revenue
YTD Q3 2005



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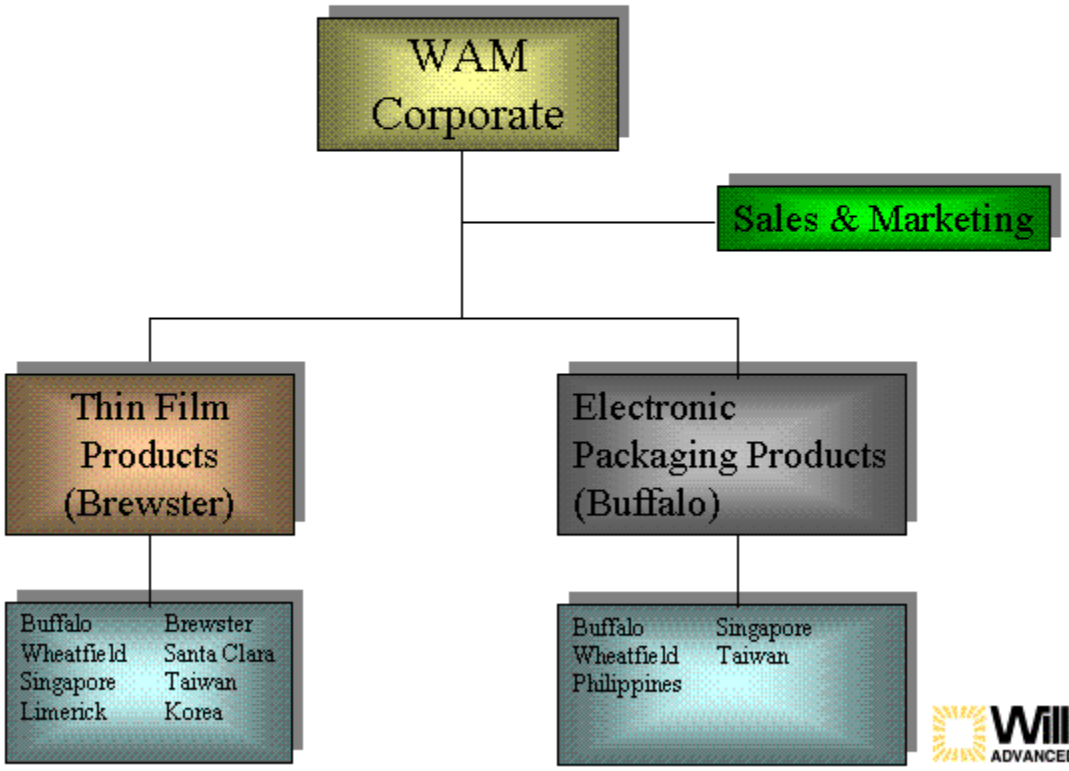
WAM Business Structure



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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.

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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.

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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.

Williams ADVANCED MATERIALS

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.

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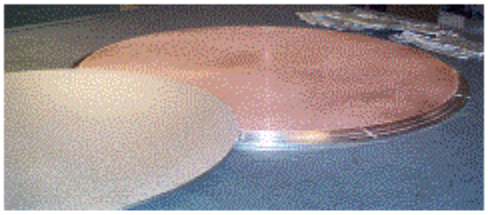
European Operation

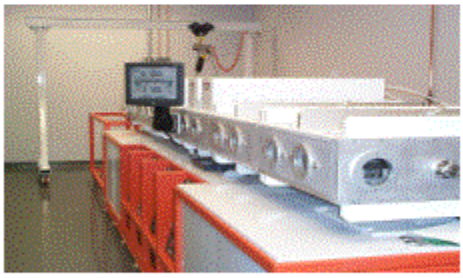
- Limerick, Ireland – OMC Scientific, Ltd.
  - Subsidiary of WAM
  - Provides precision parts cleaning and reconditioning services for film Physical Vapor Deposition (PVD) customers in Europe.
  - Unique technology applied to opportunities in North America and Asia.
  - Efforts focused in the semiconductor,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

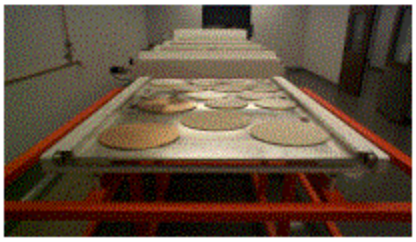
Williams ADVANCED MATERIALS

Target Bonding Centers

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







Williams ADVANCED MATERIALS

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
	Seoul, Korea
	Limerick, Ireland

- Worldwide Representatives

Florida	Italy	France
India	China	Germany
Sweden	Israel	

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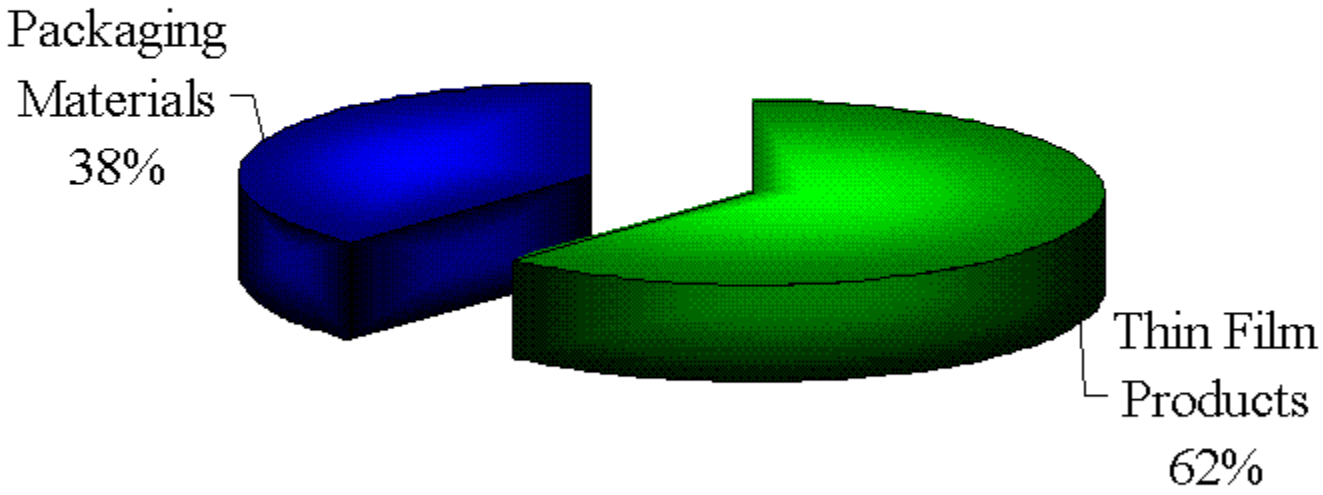
Product Mix



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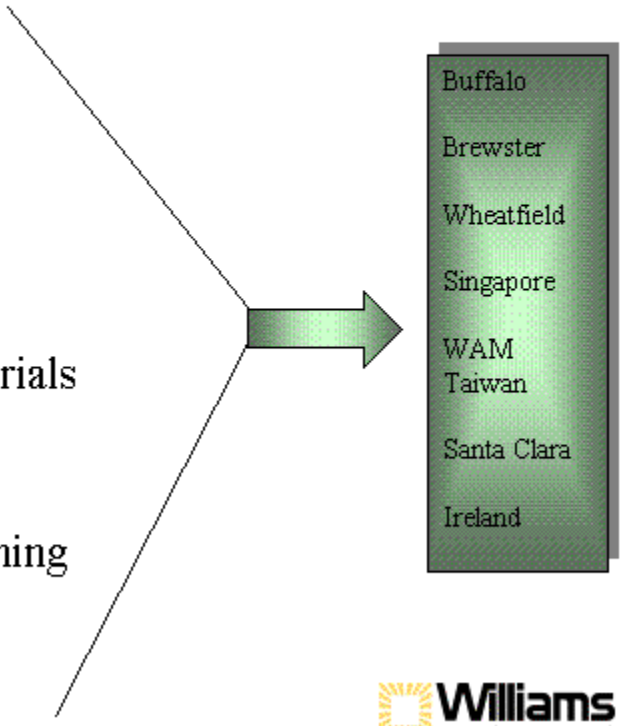
Thin Film Products

- **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



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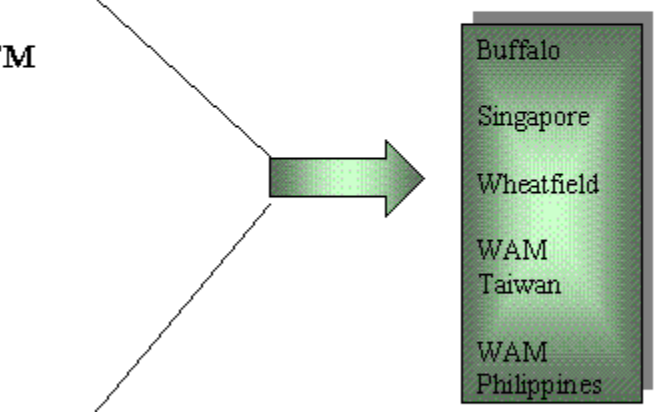
Packaging Materials

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



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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

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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)

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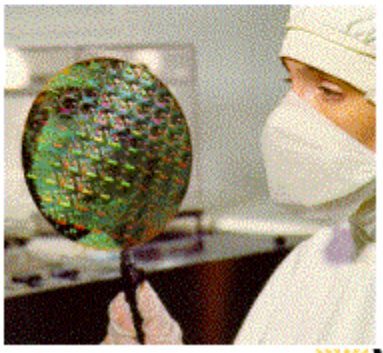
Key Markets – Semiconductor Wafer Fabrication

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



Williams
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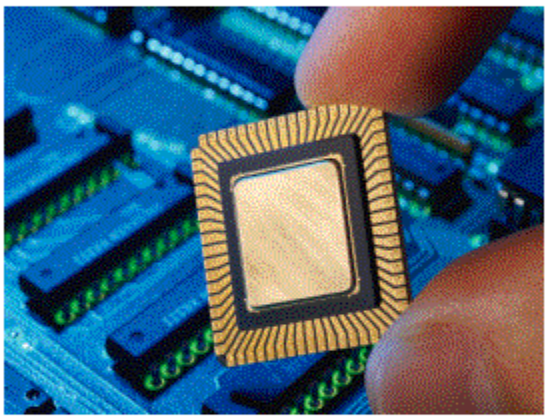
Key Markets – Semiconductor Packaging

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



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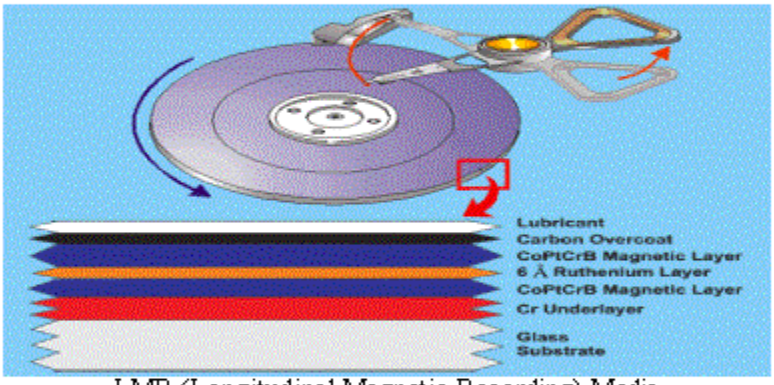
Key Markets – Magnetic Head and Media

- 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

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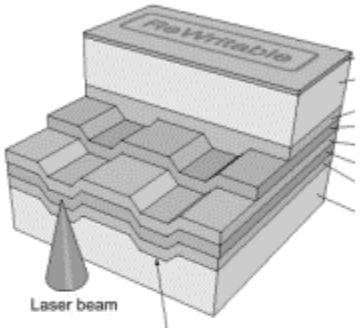
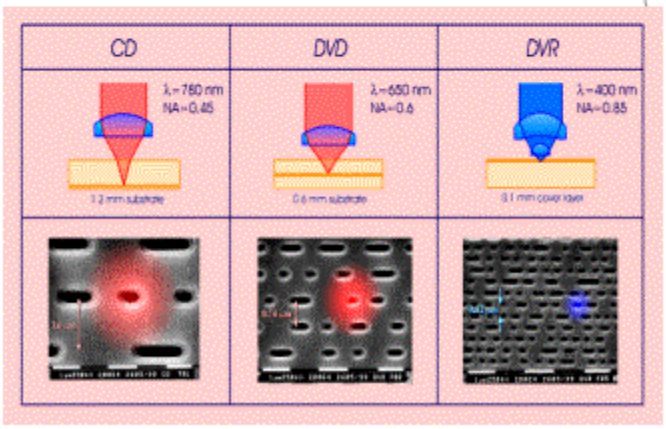
Optical Media

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





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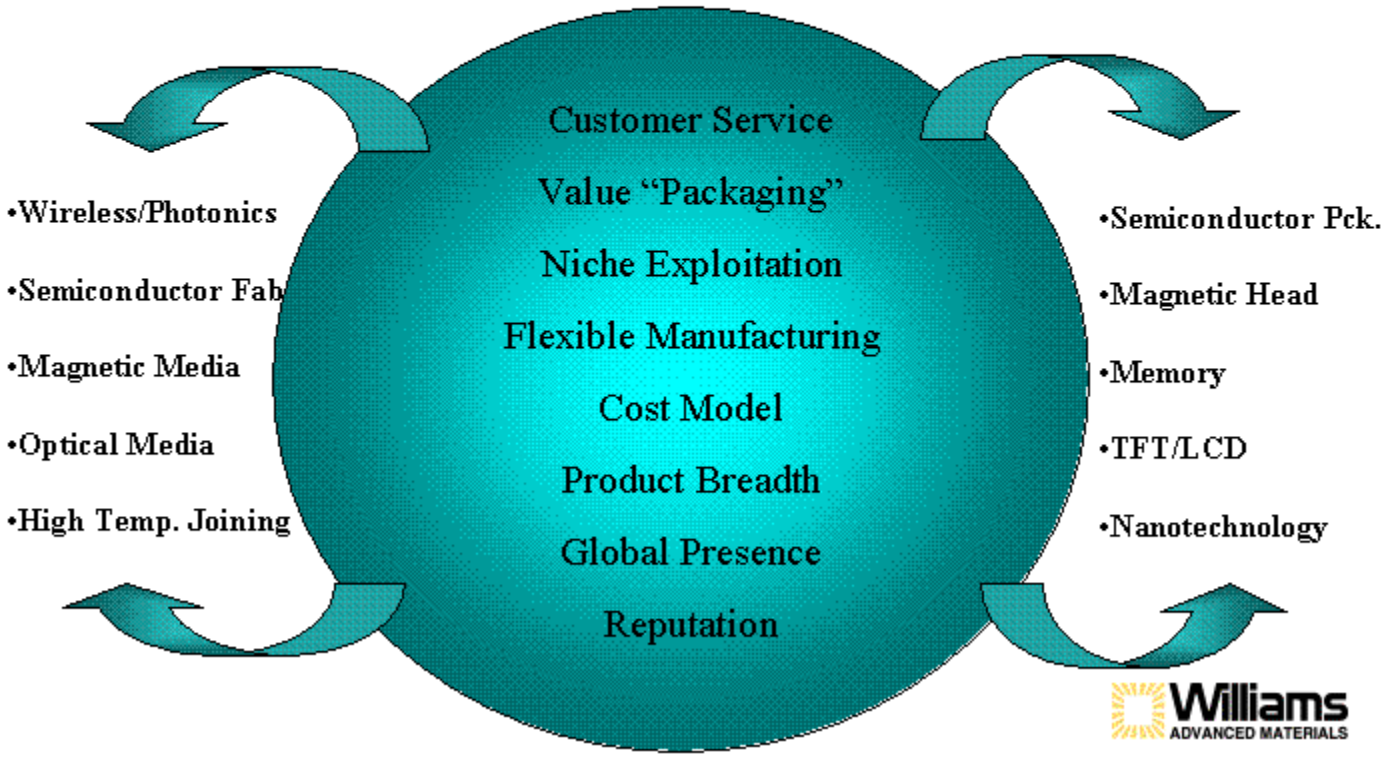
Distinctive Competencies



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New Platforms by Market

Williams Advanced Materials Inc.

New Thin Film Materials and Designs for:

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

Williams ADVANCED MATERIALS

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

	Total Cases Pending	Total Plaintiffs (including spouses)
12/31/02	33	70
12/31/03	15	33
10/01/04	13	60
12/31/04	12	56
09/30/05	15	60

Litigation

- In Q-3 2005, one case was settled and 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