

**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) March 24, 2008

Brush Engineered Materials Inc.
(Exact name of registrant as specified in its charter)

<u>Ohio</u> (State or other jurisdiction of incorporation)	<u>001-15885</u> (Commission File Number)	<u>34-1919973</u> (IRS Employer Identification No.)
<u>17876 St. Clair Avenue, Cleveland, Ohio</u> (Address of principal executive offices)	<u>44110</u> (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 March 24, 2008, 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 2007.

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.

March 24, 2008

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

Forward-Looking Statements

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

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



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 over 90% of revenues



Brush Engineered Materials Inc. Profile

- A leading manufacturer of high performance specialty engineered materials and services ... *an enabling materials technology company*
- Four segments...with operations, service centers and major office locations in North America, Europe and Asia
- Serving long-term growth oriented global markets from consumer electronics to heavy mining equipment



Brush Engineered Materials – Core Competency

A common approach to markets and culture across our operating companies

- Collaborating with customers worldwide to solve material application challenges ... *with a focus on enabling technology and services*
- "Own" a Niche orientation ... non-commodity
- Focus on global growth and service
- Constantly looking ahead to realign product and service portfolios towards favorable trends ... targeted to achieve strong profitable growth
- Employees who are *passionately* focused on exceeding customer expectations



Overview

- Company: Brush Engineered Materials Inc.
founded 1931, publicly traded since 1956
- NYSE Ticker: BW
- Shares Outstanding: Approximately 20.6 million at 12/31/07
- Market Cap: Approximately \$750 million at 12/31/07
- Component of: S&P Super Composite 1500
Russell 2000
S&P Small Cap 600
- Annual Revenue: \$956 million @ 12/31/07
- Diluted EPS: \$2.59 for 2007 which includes litigation settlement,
lower of cost or market changes, loss on sale of a small
business and the gain on the sale of low cost ruthenium
purchased in 2006 or \$1.79 excluding the above items
- Debt to Total Capitalization: 9% at 12/31/07



Fourth Quarter 2007 Recap

- Quarterly Revenue

- Up \$33.1 million or 16% compared to fourth quarter 2006
- The ninth consecutive quarter of double digit sales growth
- Metal prices accounted for approximately 7% of the sales increase and organic growth was 9%
- International sales were 45% of the total

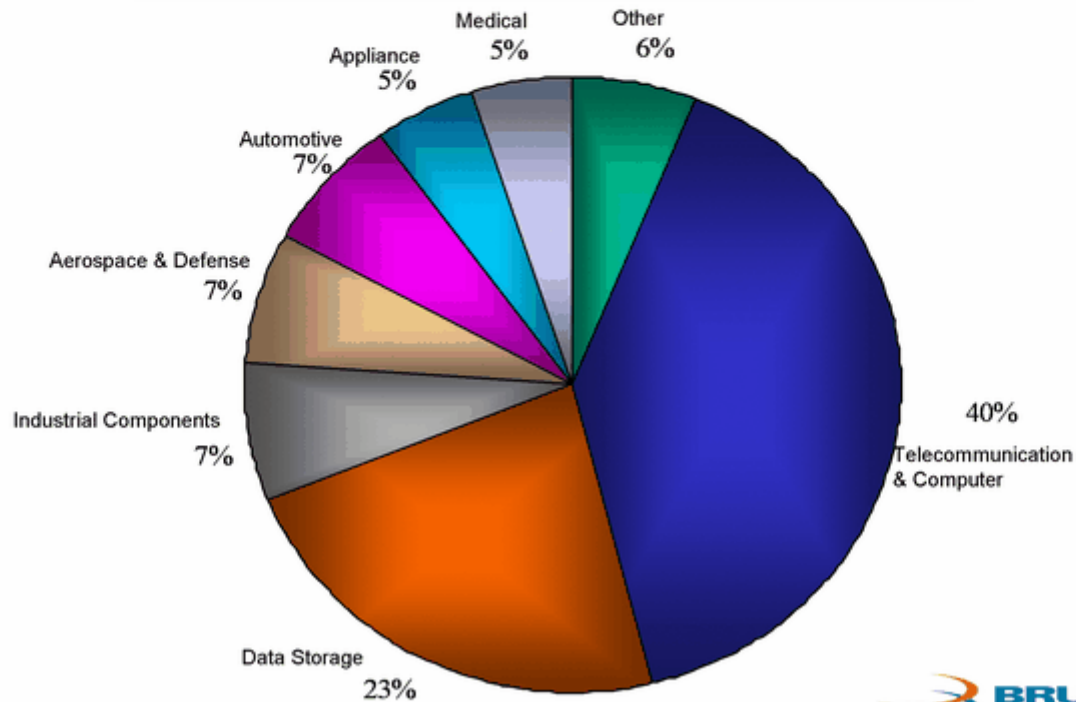
- EPS

- Earnings per share of \$0.60 diluted includes \$0.25 per share for a litigation settlement and a lower of cost or market inventory charge compared to \$1.48 diluted for the fourth quarter of 2006, which included a non-cash benefit of \$1.04 per share related to the reversal of a deferred tax valuation allowance. Absent the above, the Company earned \$0.44 in the fourth quarter 2006 compared to \$0.35 in 2007.



Global Leader in High Performance Engineered Materials

2007 Revenue by Market



Advancing the World's Technologies

- Strong customer collaboration ... providing enabling technology solutions and service
- Materials that meet design challenges requiring
 - Strength
 - Electrical conductivity
 - Weight reduction
 - Reflectivity
 - Reliability
 - Miniaturization
 - Corrosion resistance
 - Thermal conductivity
- Targeting profitable growth applications in growing markets



Typical End Uses

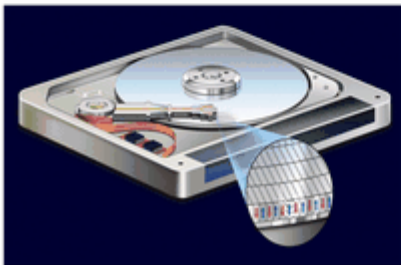


Defense

Notebook computers
& network servers



Commercial
Aerospace



Data Storage

Medical
Devices



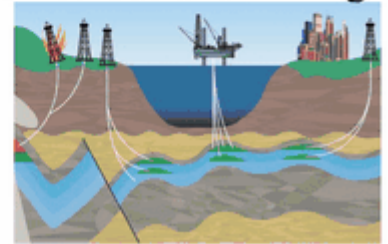
Cellular phones, i-Pods and other
wireless communication devices



Electronic components
in cars and trucks

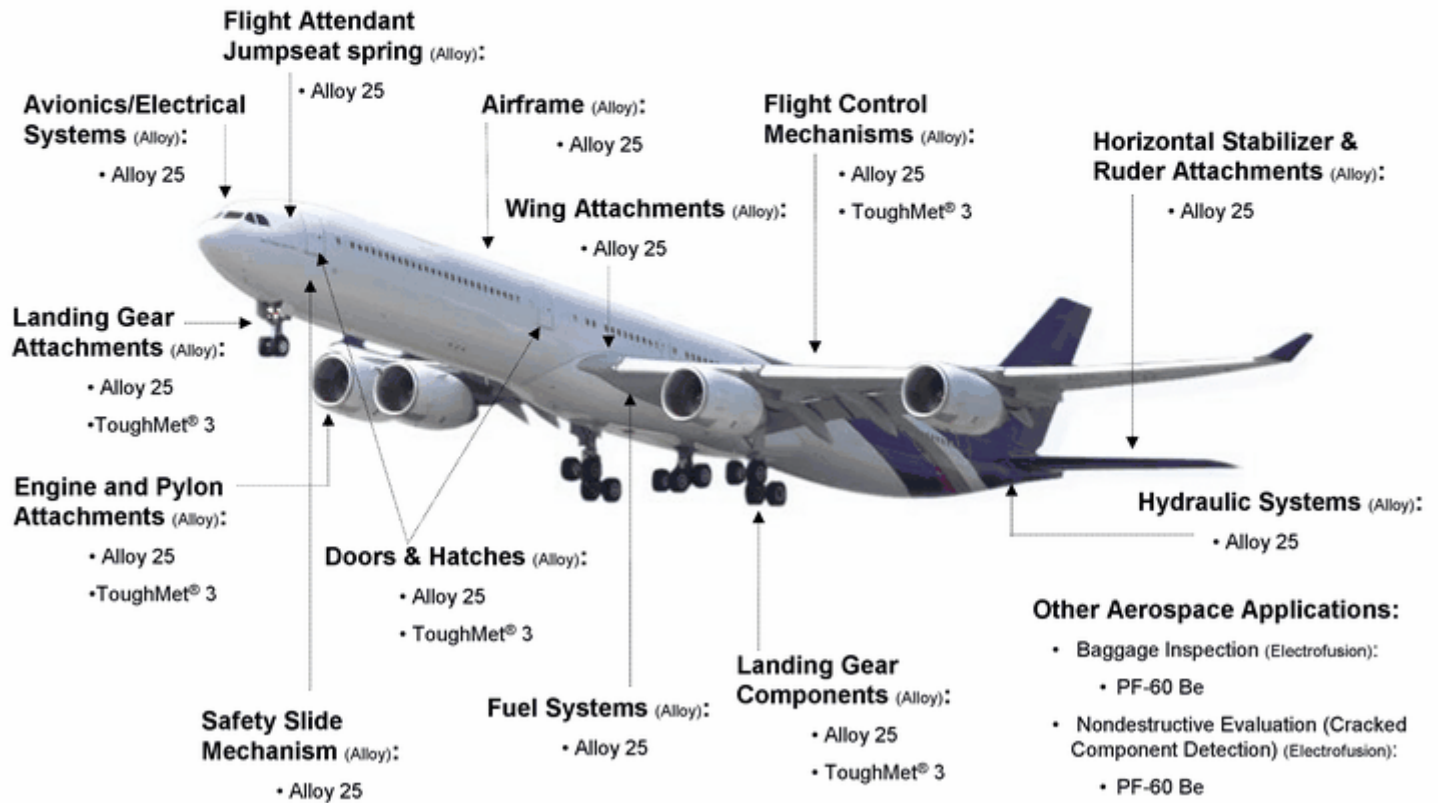


Industrial products for
Oil & Gas and Mining



BRUSH
ENGINEERED MATERIALS

Applications – Aerospace



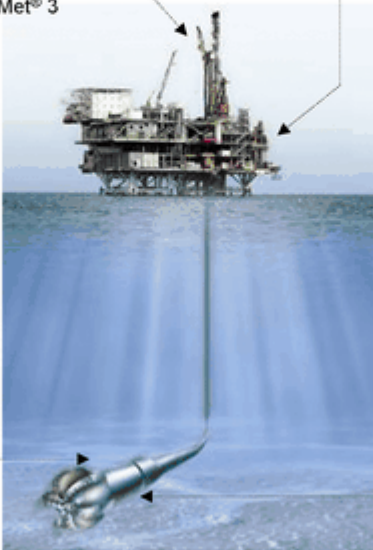
Applications – Oil & Gas

Wellhead Control Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3

Structural Rig Components (Alloy):

- ToughMet® 3



Drill Bits (Alloy):

- Brush Alloy 25
- ToughMet® 3

Directional Drilling Equipment (Alloy):

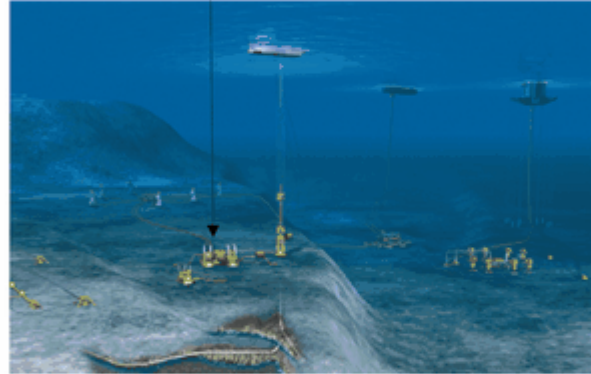
- Brush Alloy 25
- ToughMet® 3

MWD, LWD, MPT systems

Under Water Wellhead Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3

Blow out preventers, hydraulic actuators



Other Oil & Gas Applications:

- In Situ Elemental Analysis (Electrofusion):
 - PF-60 Be; IF-1 Be
- Down Hole X-Ray Inspection (Electrofusion):
 - PS-200 Be

Applications – Cell Phones

Grounding Clips and Audio Jacks (Alloy):

- Brush 60
- Alloy 25
- Alloy 290
- Alloy 190

Internal Antenna Contacts (Alloy):

- Brush 60
- Alloy 25
- Alloy 290
- Alloy 190
- Alloy 17410

Internal Electronics (WAM):

- Thin Film Materials – Power amplifiers, SAW and BAW devices, Filters, and ICs
- Frame Lid Assemblies for SAW
- Thin Film Material for backlight applications using LED technology
- Shield Cleaning

Micro Mezzanine Connectors for LCD Screen (Alloy):

- Brush 60

Battery Contacts (Alloy):

- Brush 60
- Alloy 25
- Alloy 290
- Alloy 190

I/O Connector Contacts (Alloy):

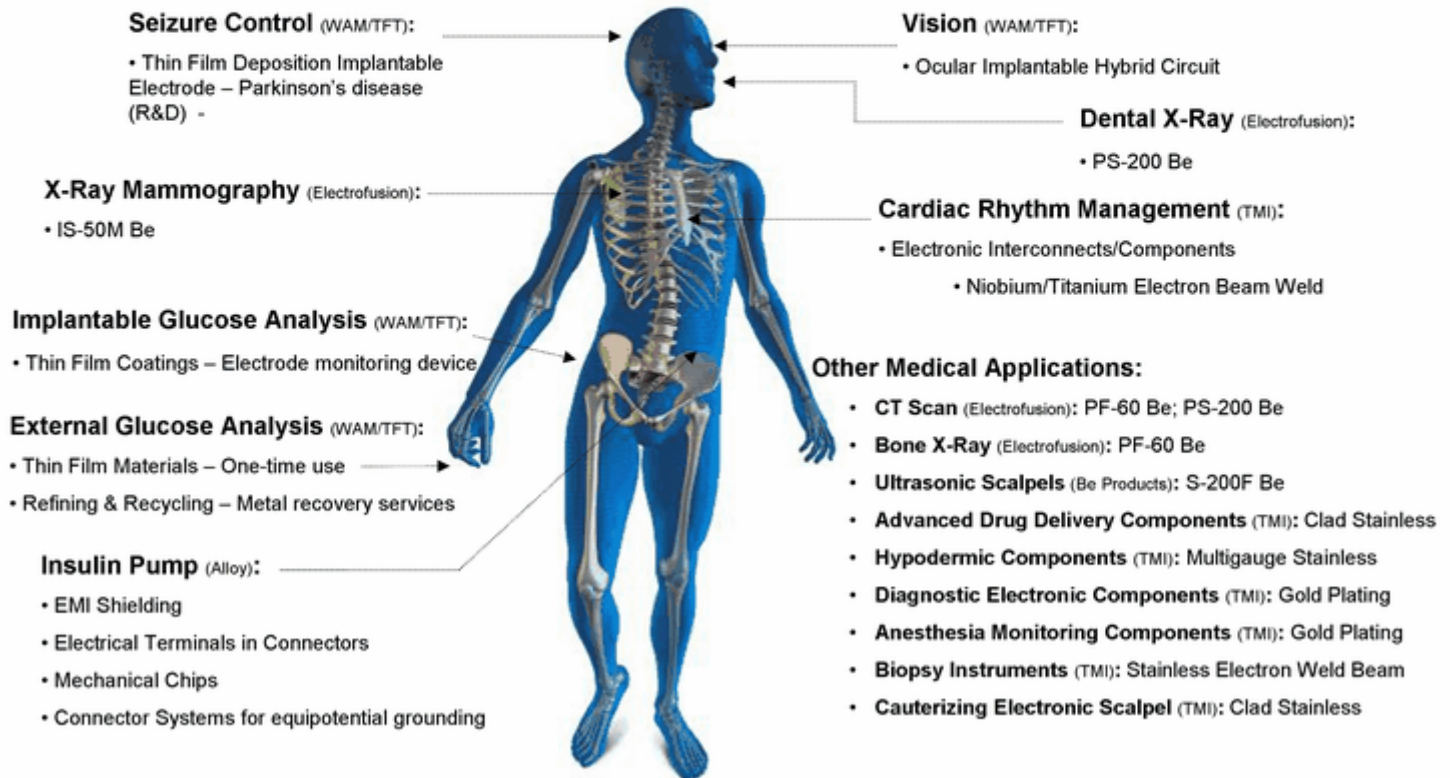
- Brush 60
- Alloy 25
- Alloy 290
- Alloy 190
- Alloy 17410



Other Cell Phone Applications:

- **Circuit Board and IC Inspection** (Electrofusion/Be Products):
 - PF-60 Be; IF-1 Be; AlBeMet 162
- **RoHS Compliance Assurance** (Electrofusion):
 - PF-60 Be; IF-1 Be

Applications – Medical



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
- Niche Oriented Product Offerings
- Strong Value Proposition in Served Markets
- Strategic Customer Relationships
- Significant Technical Capabilities
- Positive Long-term Market Trends
- Strong Growth in New Products, a culture of Innovation
- High Barriers to Entry
- Capacity to Support Profitable Market Growth
- Strong Balance Sheet
- Strong Cash Flow



Brush Engineered Materials Inc.

Organized into Four Separate Reportable Segments

- **Advanced Material Technologies and Services**

Advanced Material Technologies and Services consists of Williams Advanced Materials Inc. (WAM)

- **Specialty Engineered Alloys**

The Specialty Engineered Alloys segment consists of Alloy Products which includes bulk and strip form copper-based alloy products, hydroxide and the Company's line of ToughMet® materials

- **Beryllium and Beryllium Composites**

The Beryllium and Beryllium Composites segment consists of Beryllium Products including beryllia ceramic manufactured by Brush Ceramic Products Inc.

- **Engineered Material Systems**

The Engineered Material Systems segment is comprised of Technical Materials, Inc.



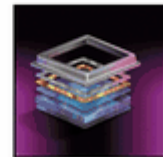
Advanced Material Technologies and Services

2007 Sales: \$519.9 million

Williams Advanced Materials (WAM)

\$519.9 million; 54%

- 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, semi-conductor, performance film, wireless/photronics and precision optics



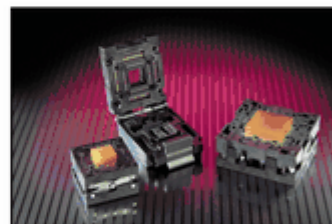
Specialty Engineered Alloys

2007 Sales: \$290.0 million

Alloy Products

\$290.0 million; 30%

- 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



Beryllium and Beryllium Composites

2007 Sales: \$60.5 million

Beryllium Products

\$60.5 million; 6%

- 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.



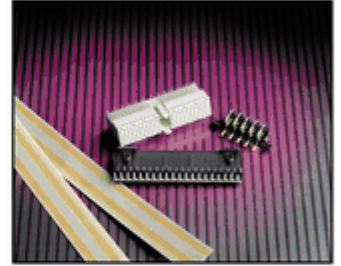
Engineered Material Systems

2007 Sales: \$70.9 million

Technical Materials, Inc. (TMI)

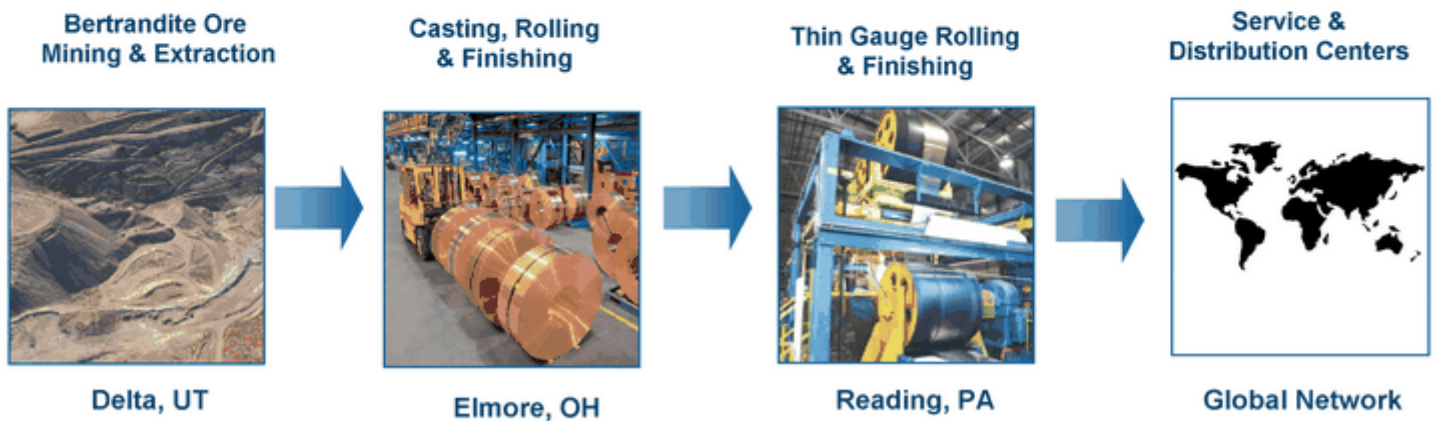
\$70.9 million; 7%

- 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



Fully Integrated Beryllium Producer

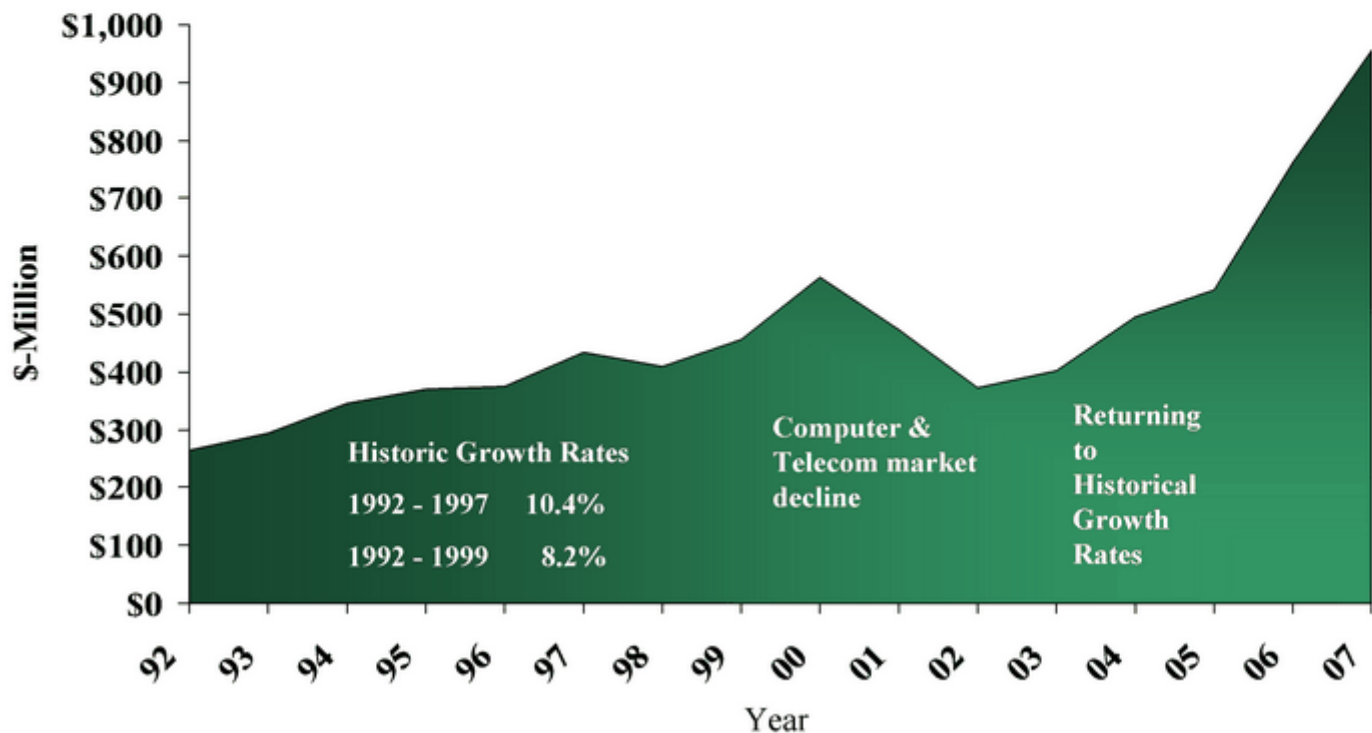
- Beryllium and beryllium alloys are critical to many high performance applications
 - Strong
 - Lightweight
 - Good formability
 - High reliability
 - Thermal and electrical conductivity
 - Corrosion and wear resistant
- Operate the only active bertrandite ore mine in the developed world
 - 7,500 acres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



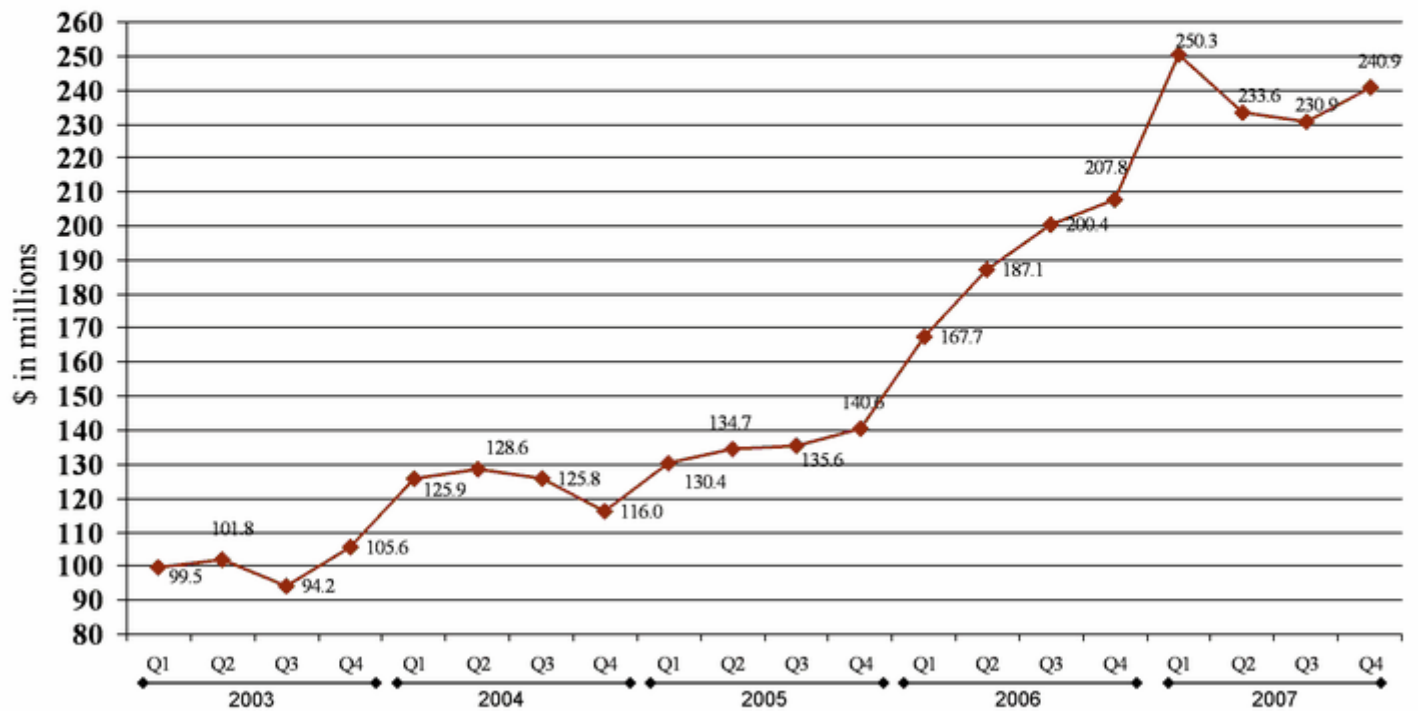
Key Financial Statistics

\$ in millions	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Sales	\$496.3	\$541.3	\$763.1	\$955.7
EBIT	25.0	19.5	43.8	84.5
Interest	8.4	6.4	4.1	1.8
Taxes	1.1	(4.7)	(9.9)	29.4
EPS	0.86	0.92	2.45	2.59
G.P.%	22.4%	20.3%	21.2%	20.6%
O.P.%	5.0%	3.6%	5.7%	8.8%
Depreciation & Amort.	21.2	21.7	24.6	23.9
Capital Spending	9.2	13.8	15.5	33.6
Debt	72.5	57.2	48.9	35.5
Cash	49.6	10.6	15.6	31.7
Debt/Total Cap.	26%	21%	15%	9%

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 2004-2007 growth accelerated*



The 4th quarter 2007 was the twentieth 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 data storage, semiconductor, solar and medical markets
- Spending and conditions in the telecommunications and computer market have improved
- Conditions continue to be strong in the oil and gas, undersea, aerospace and heavy equipment markets.

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

Capacity to Support Profitable Market Growth

Well-positioned to support rapid sales growth with minimal incremental cash investment

- Operating with available excess capacity in Alloy Products
 - Minor debottlenecking investments are required
 - WAM's Brewster, New York facility doubled its capacity in 2007
 - Second phase of WAM's Brewster, New York facility expansion to be completed in 2008
-

Our on-going value creation initiatives are focused in three key areas

Growth

- Expanding and diversifying the revenue base
 - Targeting profitable niche growth applications in growing markets
 - New product innovation and service
- Ongoing global expansion
- Strategic acquisitions, fast accretion

Margin Improvement

- Lean Sigma-driven operating efficiency improvement
- New higher value add products
- Cost reductions

Fixed and Working Capital Utilization

- Inventory turn improvement
 - Lean Sigma-driven factory utilization gains
-

New Products - Growing Applications in Growing Markets (all >10% annual growth expected) ... examples

<u>Product</u>	<u>Market</u>	<u>Driver</u>	<u>Division</u>
PVD Magnetic Media	Hard Disk Drive	Increase Storage capacity	WAM
PVD - UMB	Consumer Electronics	Miniaturization	WAM
PVD - Evap Pro	Compound Semi-conductor	Miniaturization	WAM
Chamber Service	PVD Customers	Service demands	WAM
PVD - Visilid	Optics	IR Wavelength	WAM
Alloy 390 Strip	Portable Elec	Miniaturization and	Alloy
ToughMet®	O&G, Aerospace, Heavy Equipment	Reliability	Alloy
Clad Stainless-Aluminum Strip	Hard Disk Drive	Increase storage capacity	TMI

Balance Sheet

(\$ in millions)

	<u>2000</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Balance Sheet Debt	\$128.4*	\$ 72.5	\$57.2	\$48.9	\$35.5
Debt to Debt Plus Equity	36%	26%	21%	15%	9%

*2000 Balance Sheet debt includes major equipment lease

**Note - Excludes precious metal consignment
and other leases of: \$18.9 \$30.2 \$55.5 \$72.1 \$80.0

Segment Sales Review

\$ in millions

	2005		2006		2007	
	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>	<u>\$</u>	<u>%</u>
Advanced Material Technologies and Services	\$209.5	38%	\$343.4	45%	\$519.9	54%
Specialty Engineered Alloys	213.8	39%	275.6	36%	290.0	30%
Beryllium and Beryllium Composites	53.1	10%	57.6	7%	60.5	6%
Engineered Material Systems	50.0	9%	68.7	9%	70.9	7%
Other	<u>14.9</u>	<u>4%</u>	<u>17.8</u>	<u>3%</u>	<u>14.4</u>	<u>3%</u>
TOTAL	\$541.3	100%	\$763.1	100%	\$955.7	100%



Segment Earnings

\$ in millions

	<u>2005</u>	<u>2006</u>	<u>2007</u>
Advanced Material Technologies and Services	\$20.4	\$30.5	\$59.4
Specialty Engineered Alloys	(5.4)	7.9	7.6
Beryllium and Beryllium Composites	9.8	7.4	7.8
Engineered Material Systems	0.7	2.7	4.7
Other	<u>(6.0)</u>	<u>(4.7)</u>	<u>5.0*</u>
TOTAL	\$19.5	\$43.8	\$84.5

* The Other segment earnings of \$5.0 million in 2007 is primarily due to a gain in Q4 recorded as a result of a legal settlement



Brush Engineered Materials Inc.
Organized into Four Separate Reportable Segments

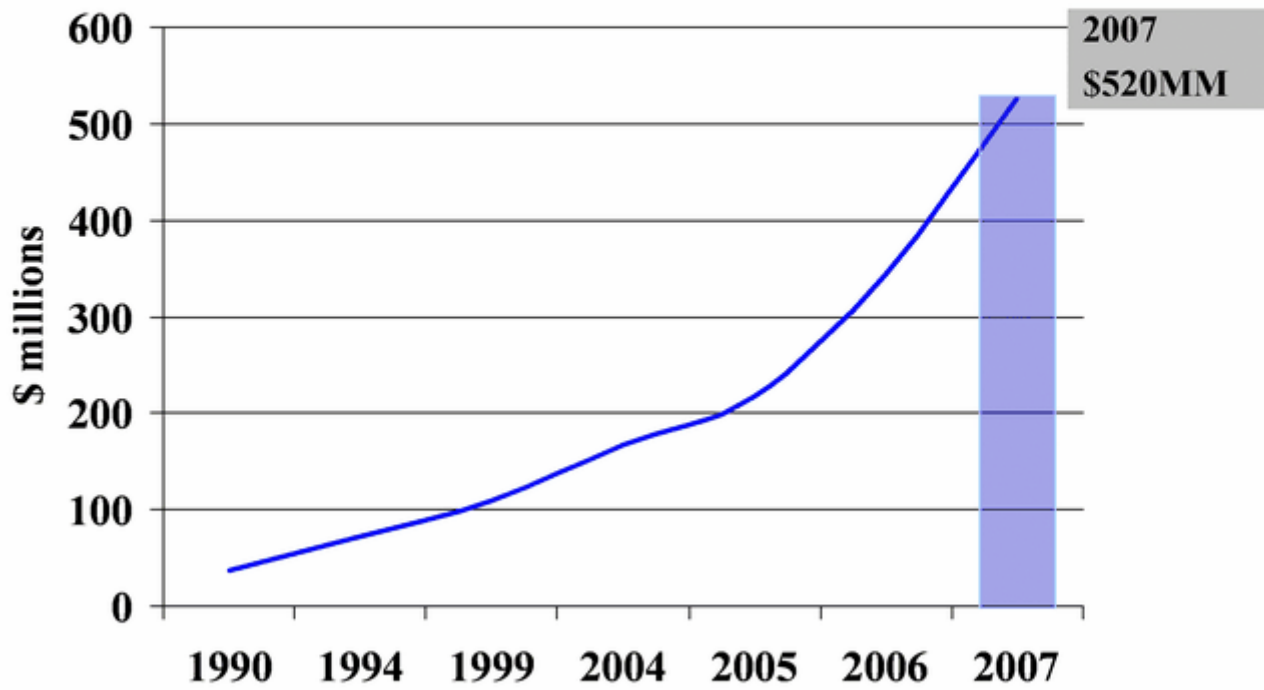
- *Advanced Material Technologies and Services*
 - Specialty Engineered Alloys
 - Beryllium and Beryllium Composites
 - Engineered Material Systems
-

What We Do

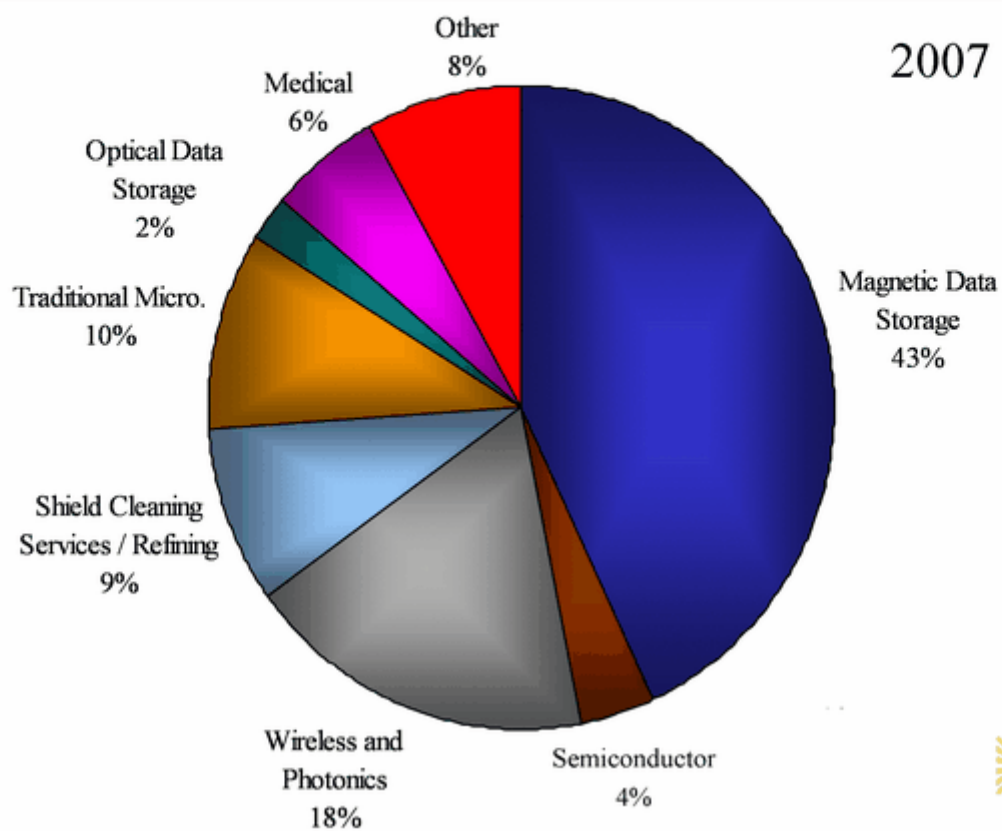
Williams Advanced Materials develops, manufactures and markets materials and services of unique value for the Magnetic and Optical Data Storage, Wireless, Photonics, Semiconductor, Optics, Security, Hybrid Microelectronics, Defense and Performance Coating industries. We also support emerging technologies such as Photovoltaic, Memory, FCCL, Medical and Nanotechnology. Williams' products are primarily based on specialty metal products used in high reliability and performance applications.



Sales History

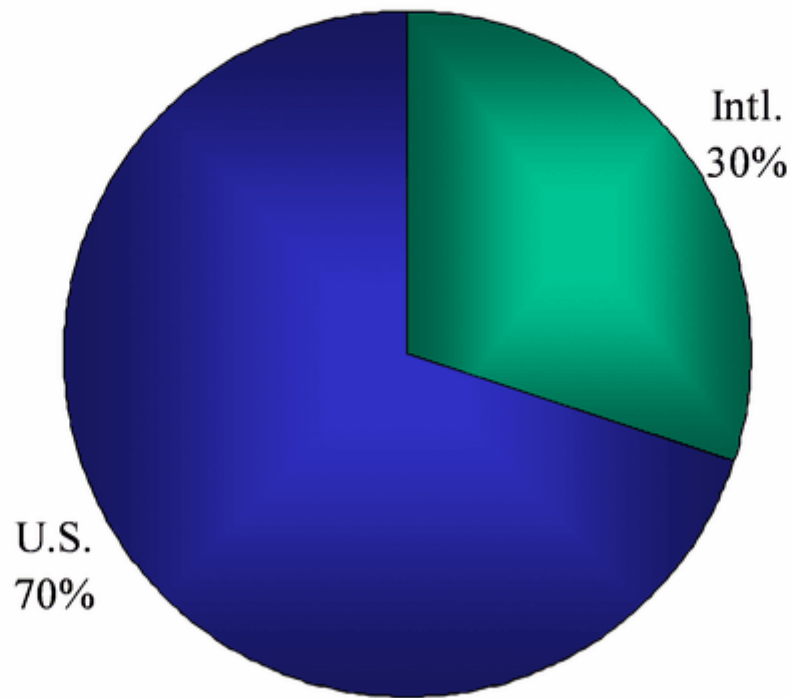


Revenue by Market

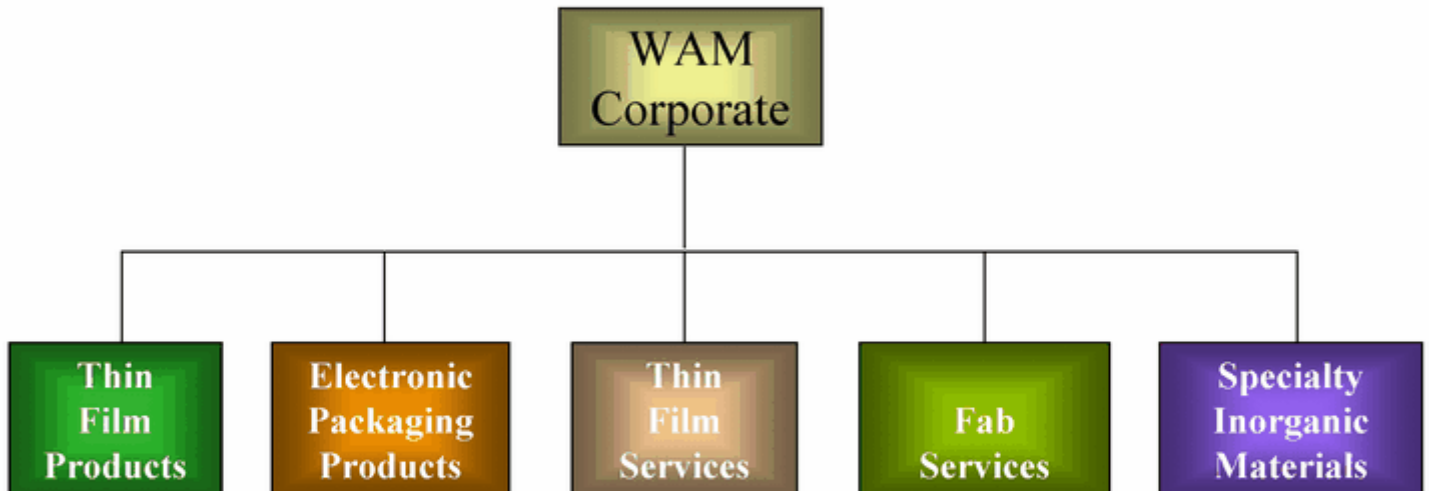


International/Domestic Revenue

2007



2007 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 –
 - 80,000 Sq. Ft. with vacuum melting, hot-pressing, milling, hot & cold rolling, automated machining, grinding, powder metallurgy lab, particle sizing and target bonding capabilities.

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.



Suzhou - China



- Suzhou, China
 - 20,000 Sq ft.
 - Target & Evaporation materials manufacturing, Target bonding services, Distribution, Warehousing, Sourcing, MgF manufacturing and packaging
 - Located near Shanghai Airport and close to many technology centers located in Eastern China.
 - Markets Serve: Semiconductor, Compound Semiconductor, UBM, MEMS, Data Storage, Security and Optics
-

OMC - Limerick



- 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 based markets.



OMC- Czech



- Louny, Czech Republic
 - 20,000 Sq ft.
 - Provides precision parts cleaning and reconditioning services for film Physical Vapor Deposition (PVD) customers in central and eastern Europe
 - State of the art cleaning, stripping and packaging operations
 - Markets Serve: Semiconductor, Compound Semiconductor, UBM, MEMS, Data Storage
-

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



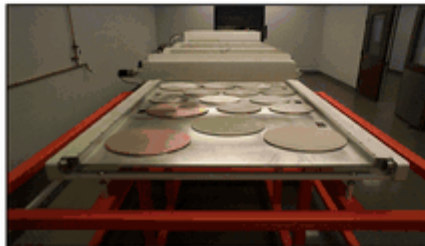
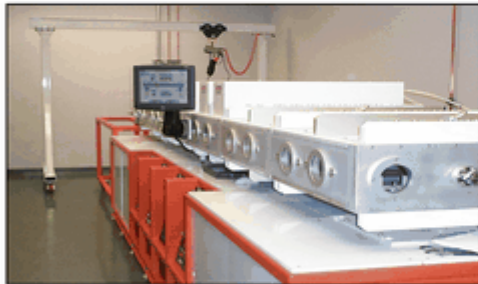
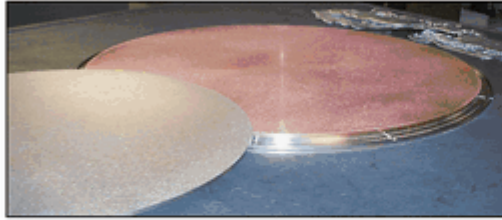
CERAC



- 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
 - China



Global Service and Support

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

Buffalo, NY	Tokyo, Japan
Brewster, NY	Taoyuan, Taiwan
Dallas, TX	Singapore
Tucson, AZ	Manila, Philippines
Santa Clara, CA	London, England
Buellton, CA	Seoul, Korea
Milwaukee, WI	Limerick, Ireland
Suzhou, China	Louny, Czech Republic

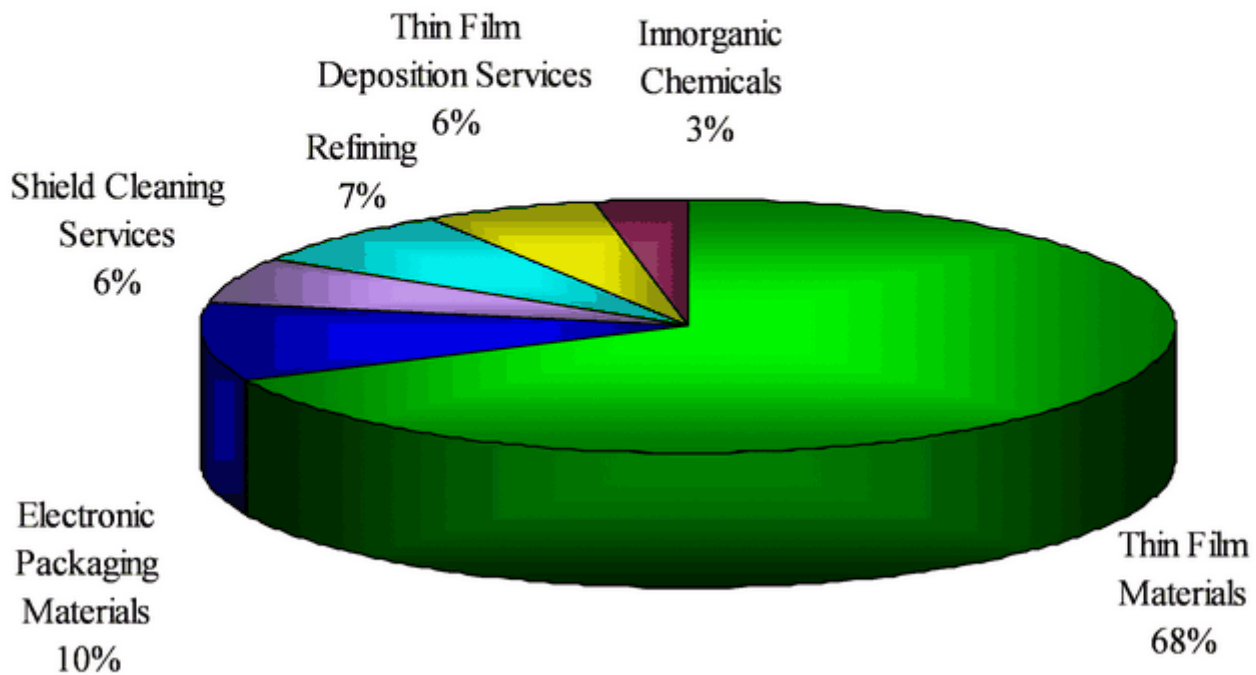
- **Worldwide Representatives**

Italy	France	Germany
India	China	
Sweden	Israel	



Product Mix

2007



Thin Film Products

- **PVD Materials**

- Precious Metal Target Materials
- Non-Precious Metal, Cermets, Ceramics
 - Vacuum Induction Melting
 - Hot Pressing
 - Vacuum Hot Pressing
 - Hot Isostatic Pressing
- EVAPro™ Grade Evaporation Materials
- Localized Target Bonding

- **Chamber Services**

- Shield Cleaning and Conditioning
- Arc Spraying – Electro-polishing
- PM Refining and Upgrading
- Logistics Support



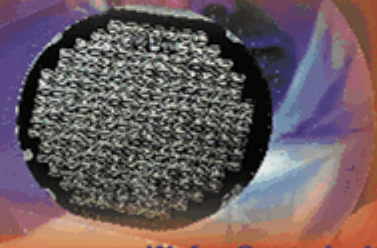
Buffalo
Brewster
Milwaukee
Wheatfield
Singapore
Taiwan
Santa Clara
Ireland
Suzhou,
China
Louny, Czech

End Product Examples Utilizing Thin Film Deposition Materials

**Williams Thin Film
Deposition Materials**



**Sputtering
Deposition Chamber**




**Wafer Coated with
Deposition Materials**

**Williams Products
Bring Technology to Life!**



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 New Photonics applications
- Silver Alloys for HD-DVD and Blue Ray Disc manufacturing
- Expanded refining/chamber services supporting the thin film materials business
- FCCL Materials
- Magnetic Media Materials
- Magnetic Head Materials
- Solar Panel Thin Film Materials
- Nanotechnology Materials



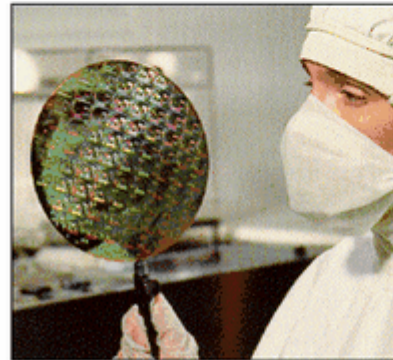
Key Markets – Wireless and Photonics

- 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)



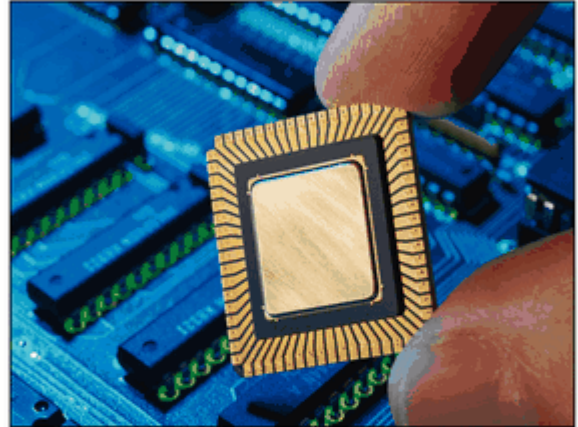
Key Markets – Semiconductor Wafer Fabrication

- 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.



Distinctive Competencies



New Platforms by Market

New Thin Film & Packaging Materials and Designs for:

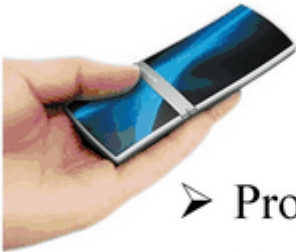
- Magnetic Media (PMR) and Thin Film Head (TMR/PMR)
- Semiconductor Wafer Fabrication
- Under Bump Metallization (UBM) for Flip Chip
- Flexible Copper Clad Laminate (FCCL)
- Wireless and Photonics
- Photovoltaics (Solar Panels)
- MEMS and Photovoltaic Packaging Materials



Brush Engineered Materials Inc.
Organized into Four Separate Reportable Segments

- Advanced Material Technologies and Services
 - ***Specialty Engineered Alloys***
 - Beryllium and Beryllium Composites
 - Engineered Material Systems
-

Brush Specialty Engineered Alloys & Brush Resources Vision



- Provide *technical expertise* and *flexible services* to deliver value through *innovative, practical engineered material solutions*.
- Our *products and services* coupled with our *global distribution and logistics network* are relied upon by our customers making us their *trusted growth partner*.



Brush Specialty Engineered Alloys & Brush Resources Mission

Safely and *reliably* provide the *highest quality*, *innovative* products and services, *fast* and *on-time* to all customers, when they want them at the *lowest possible cost*.



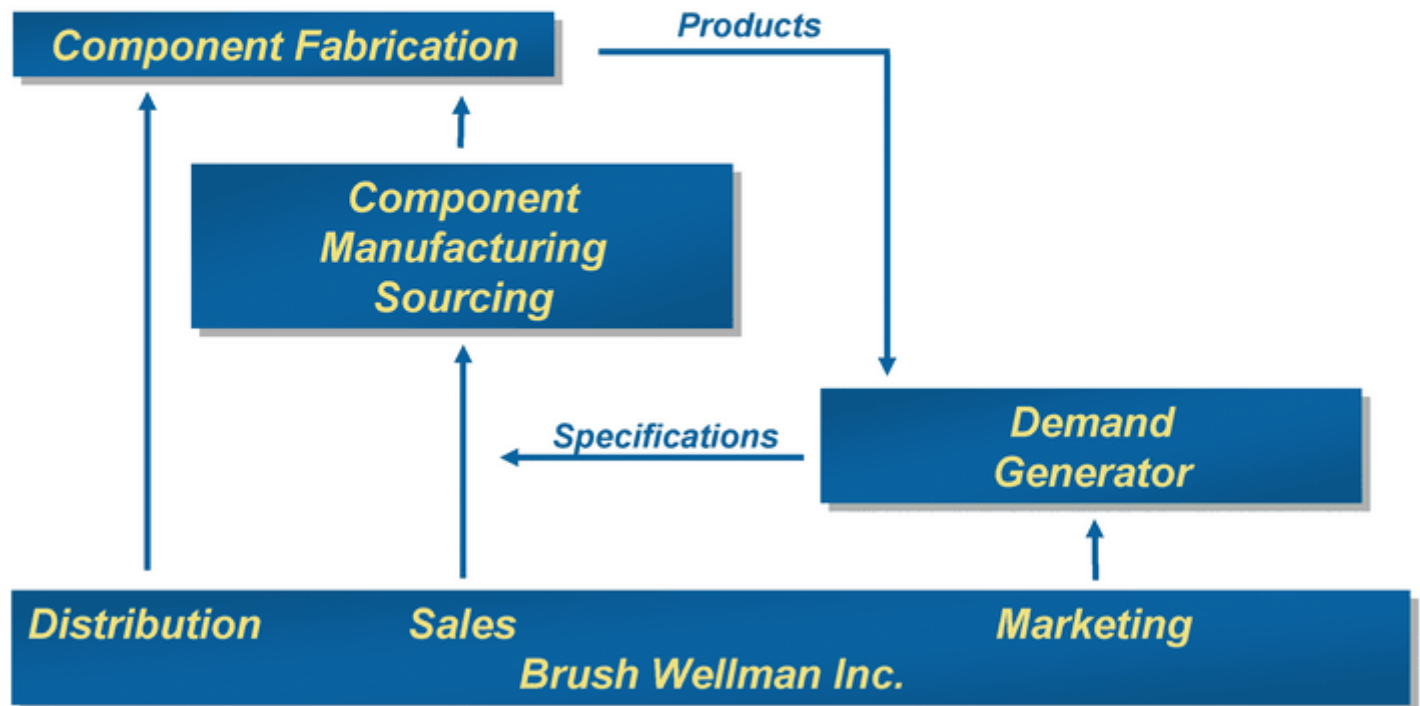
Alloy Products

Operations Strategy—Lean Sigma

- *Safety* practices to provide an injury and illness free workplace
- *Lean Manufacturing* to reduce cycle times, further increase capacity, and provide industry leading service to our customers
- *Six Sigma* to provide industry leading product quality and to reduce costs
- *Supply Chain Management* to provide exactly what is needed, when it's needed, to where it's needed in exactly the right quantity
- *Total Productive Maintenance* to provide industry leading equipment reliability

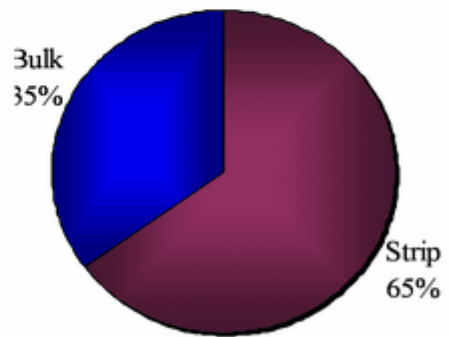


Sales Based on End User Specifications

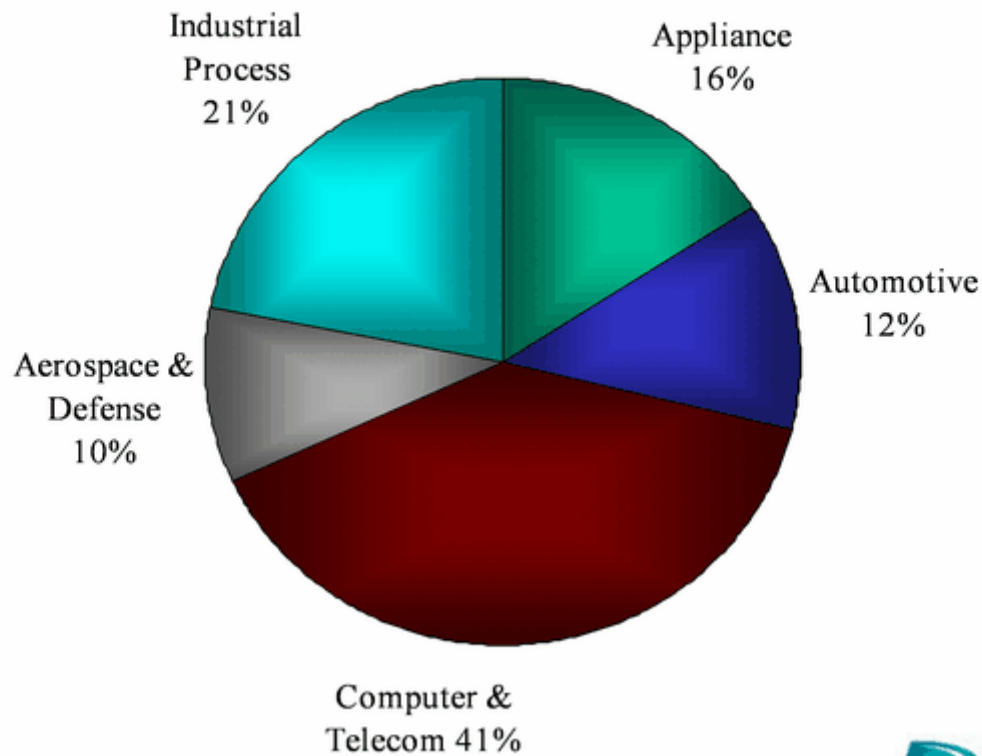


Brush Specialty Engineered Alloys

- The primary business within the Specialty Engineered Alloys Segment, Alloy Products sales in 2007 were \$288 million.
- Manufactures and sells copper and nickel based alloy systems metallurgically tailored to meet customers' specific performance requirements
- Product families:
 - Strip products include thin gauge precision strip and thin diameter rod and wire. These products provide a combination of high strength, formability and electrical conductivity for connectors, contacts, switches, relays and shielding used in mobile communications devices, wireless communications equipment, storage area network systems, data networking equipment, servers, personal computers, appliances, and automotive electronics.
 - Bulk products include rod, bar, tube and plate. These products are known for superior strength, corrosion and wear resistance, thermal conductivity and lubricity. Applications include bearings and bushings for aerospace and heavy equipment, resistant welding components, oil & gas drilling components, plastic mold tooling and telecommunications housing equipment.



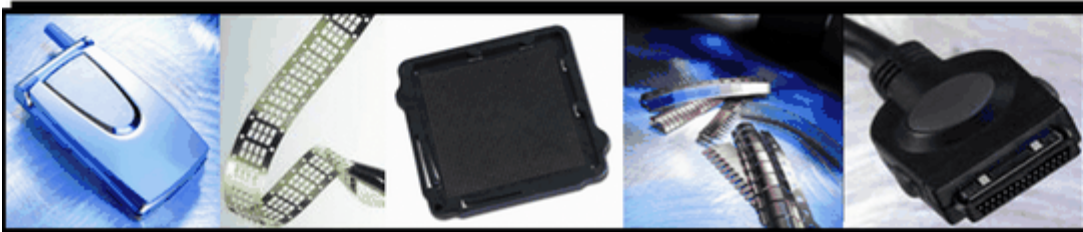
Alloy Products Revenue by Market Year 2007



Strip Alloy Applications

(strength, conductivity, spring characteristics)

- Automotive electronics
- Appliance switches
- Pressure Responsive Devices
- Fire Extinguisher Sprinkler Heads
- EMI Shielding
- Current Carrying Springs and Relays
- Integrated Circuit Sockets
- Electrical and Electronic Connectors in Mobile Handsets, PDA's, Base Stations, Storage Area Networks, Servers, and Personal Computers



BRUSH
WELLMAN
ALLOY PRODUCTS

Strip Products - Strategy

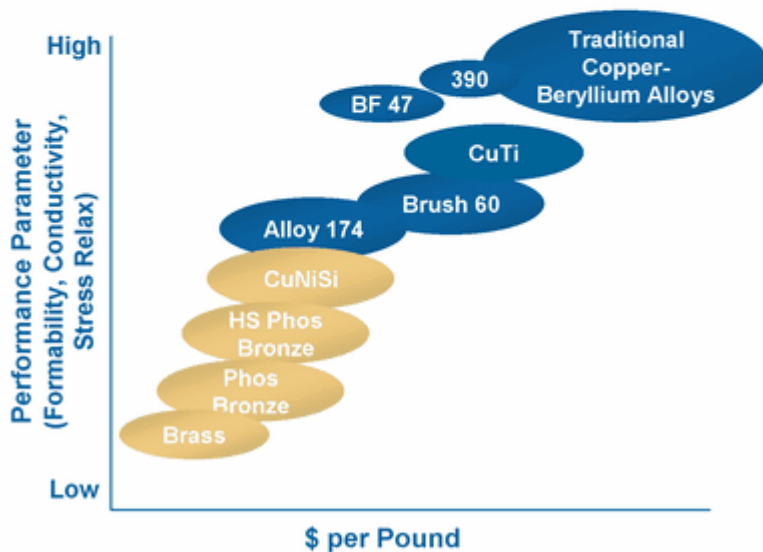
- **Maintain focus on major end-use markets**
 - Computer
 - Telecommunications (mobile & Infrastructure)
 - Automotive
 - Appliance
 - Military
 - Medical
- **Defend leadership in traditional alloy strip, rod & wire**
 - Reduce total cost of manufacture to allow penetration of mid-range alloy applications
 - Enhance product properties to provide additional value to customers
- **Introduce new alloys to meet needs of targeted market opportunities**
- **Geographic Growth**



Strip Products Strong Value Proposition

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

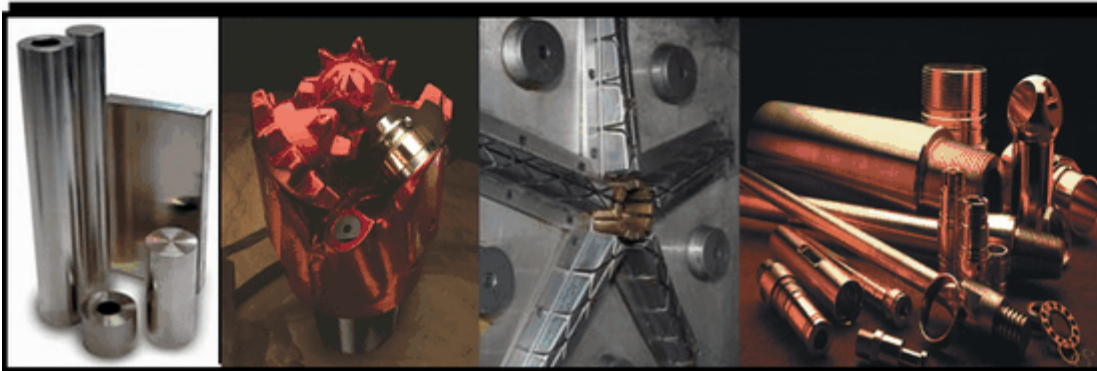
- Unique, high-performance materials
- Technical design capabilities
- Outstanding service center network
- Global marketing, sales and distribution



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



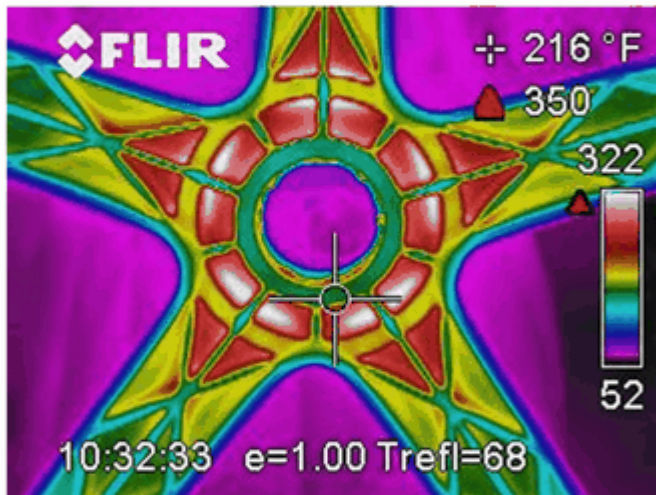
BRUSH
WELLMAN
ALLOY PRODUCTS

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**
- **Focus on new non-traditional growth markets**
 - Bearings, Heavy Equipment & Mining, Marine, advanced Oil & Gas well components, Offshore & Downhole technology, and Pumps
- **Geographic Growth**
 - Expand commercial operations in Asia Pacific, improve customer awareness and distribution



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



Lorain Casting Facility

Spinodal and EquaCast® Technology-Winning!

High performance copper based engineered materials:

- Strength and hardness is comparable to copper beryllium products
- Thermal conductivity

The value proposition differentiates:

- Corrosion resistance
- Superb tribological properties (low friction, 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:

- Drilling Equipment, Aircraft Parts, Mold Tooling

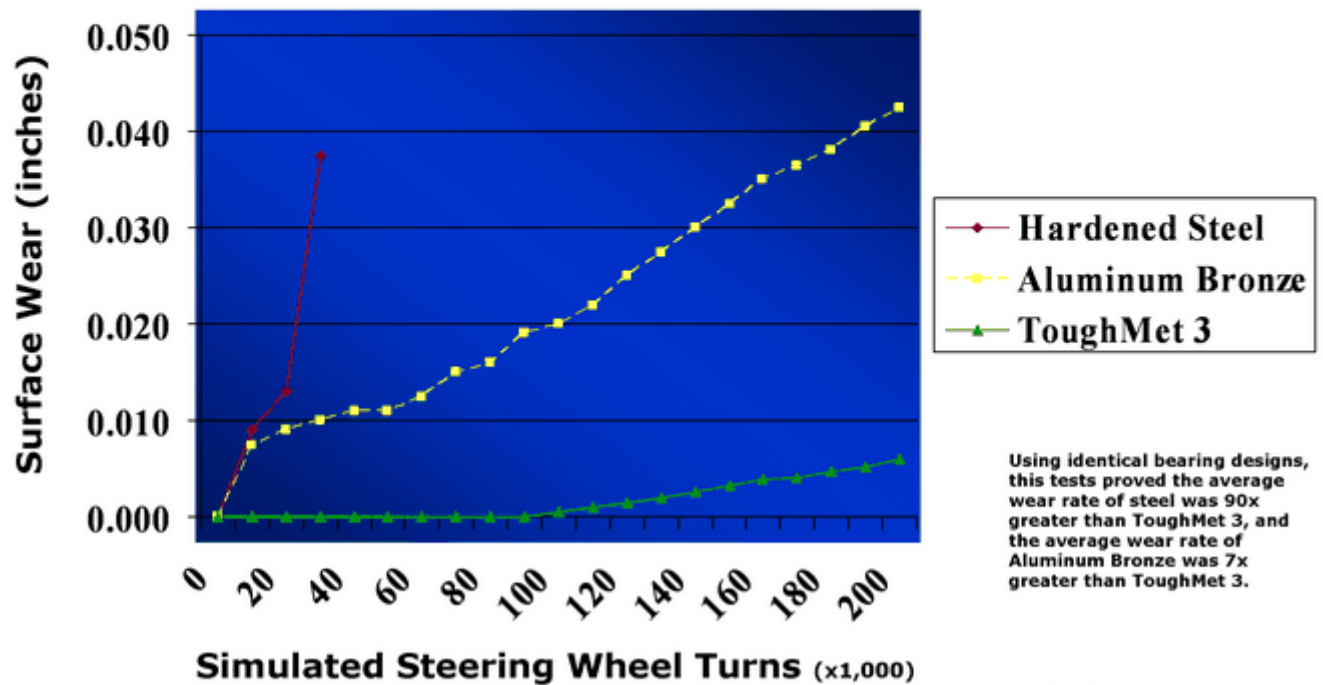
Developing markets/applications where technology is strong:

- Oil Well Completion Equipment, Mining, Heavy Equipment, Drivetrain Components, Hydraulic Systems, Engine Bearings, Semiconductor Fabrication

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



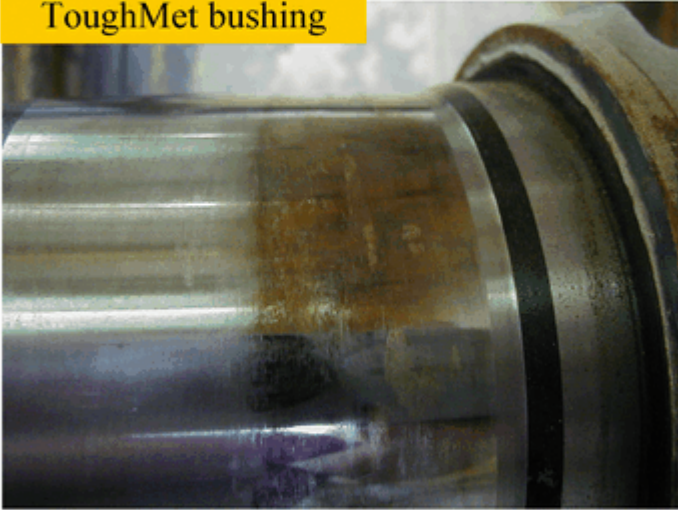
ToughMet® Outlasts Conventional Bearing Materials in 300-ton Mining Truck Steering Test



ToughMet® Bushings Protect Steel Mating Parts.

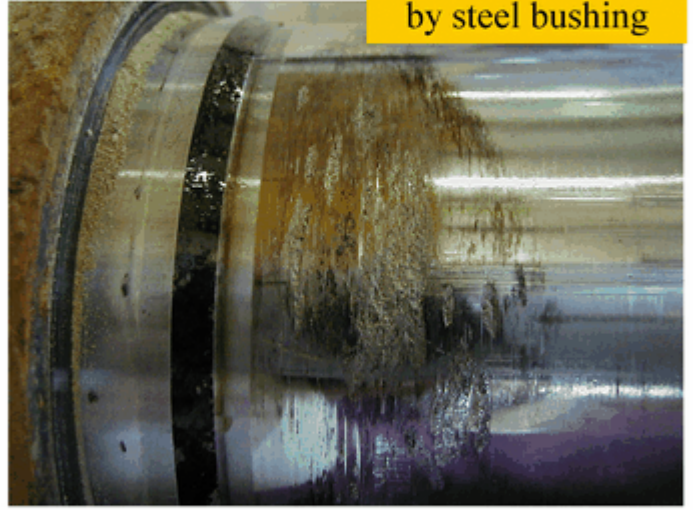
Example: Lubrication failure on bulldozer undercarriage

Steel pin protected by
ToughMet bushing



Left side pin after 500 running hours
against ToughMet 3 CX105 bushing.

Steel pin damaged
by steel bushing



Right side pin after 500 running hours
against hardened steel (HRC 50)
bushing.

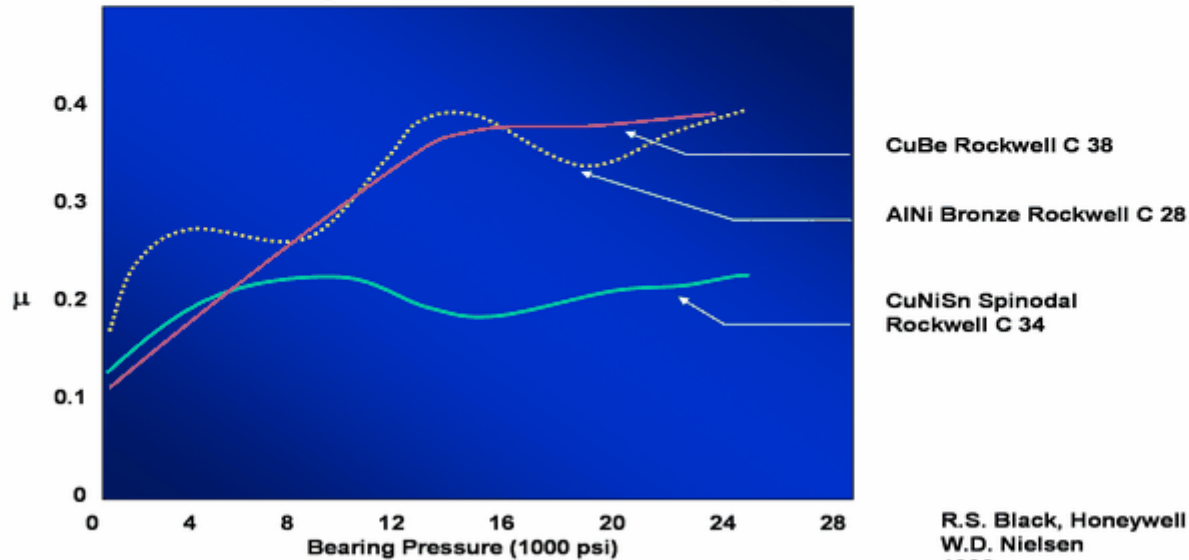
Pin hardness = HRC60.



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

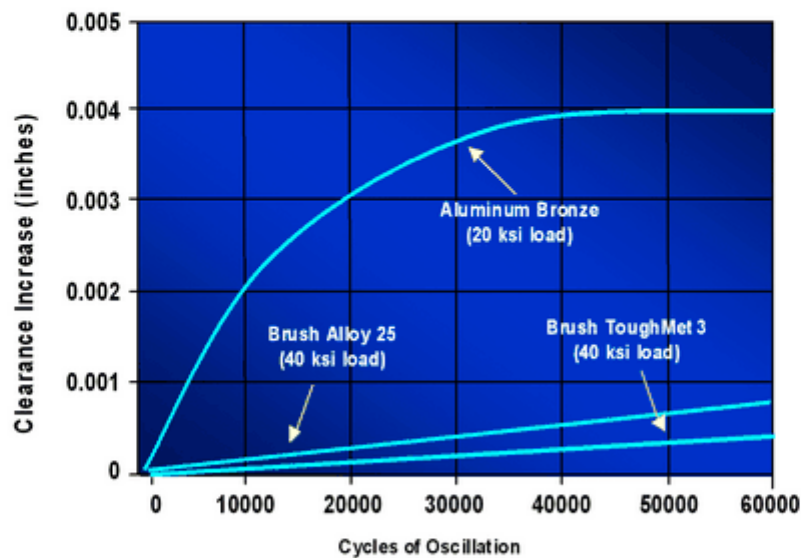


R.S. Black, Honeywell
W.D. Nielsen
1996



Significantly Higher Durability has been Confirmed for ToughMet®

Comparative Sleeve Bearing Wear Tests.



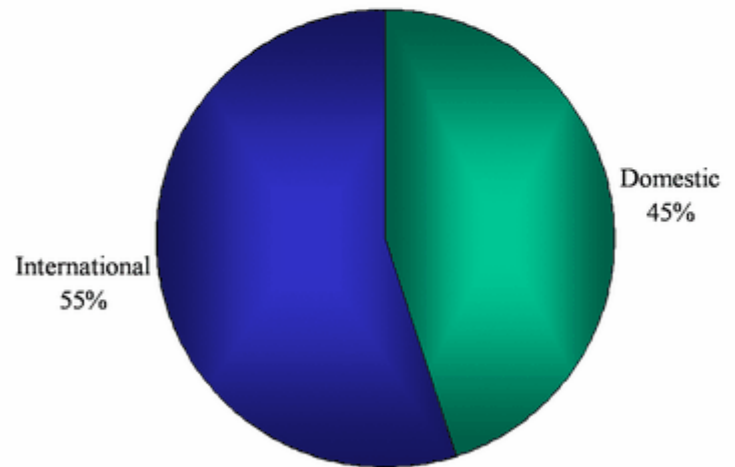
Battelle



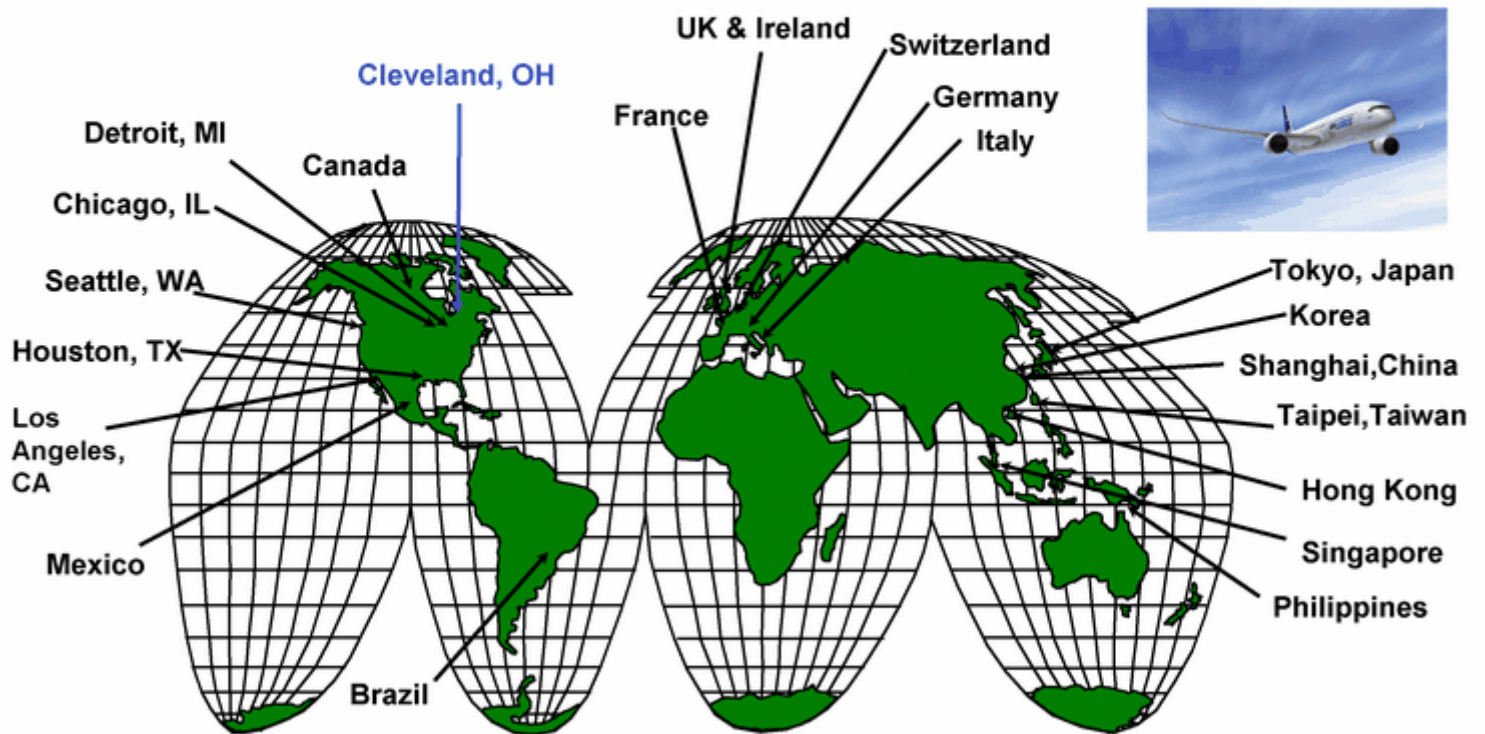
Brush International, Inc.

- Brush International Inc. is a wholly owned subsidiary of Brush Engineered Materials
- Service centers in Germany, England, Japan and Singapore
- Representative offices in Korea, China and Taiwan
- Primary focus on the distribution of alloy products while providing local support to other Brush Engineered Materials' subsidiaries operating internationally

*Alloy International/Domestic Revenue
Year 2007*



Global Sales and Distribution Network



Global Reach..... Local Service

Brush Engineered Materials Inc.
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- Advanced Material Technologies and Services
 - Specialty Engineered Alloys
 - ***Beryllium and Beryllium Composites***
 - Engineered Material Systems
-

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

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

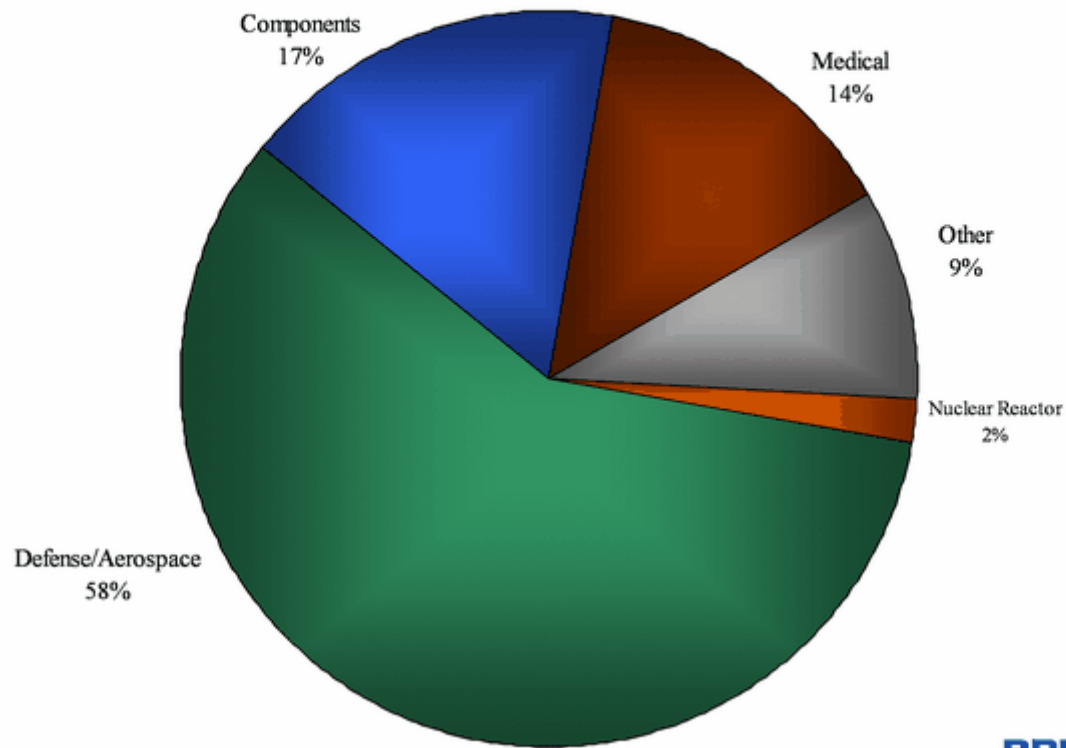
Structural components for high-precision semiconductor processing and industrial robotic equipment

Acoustics

High performance speaker components

Beryllium Products

2007 Revenue by Market

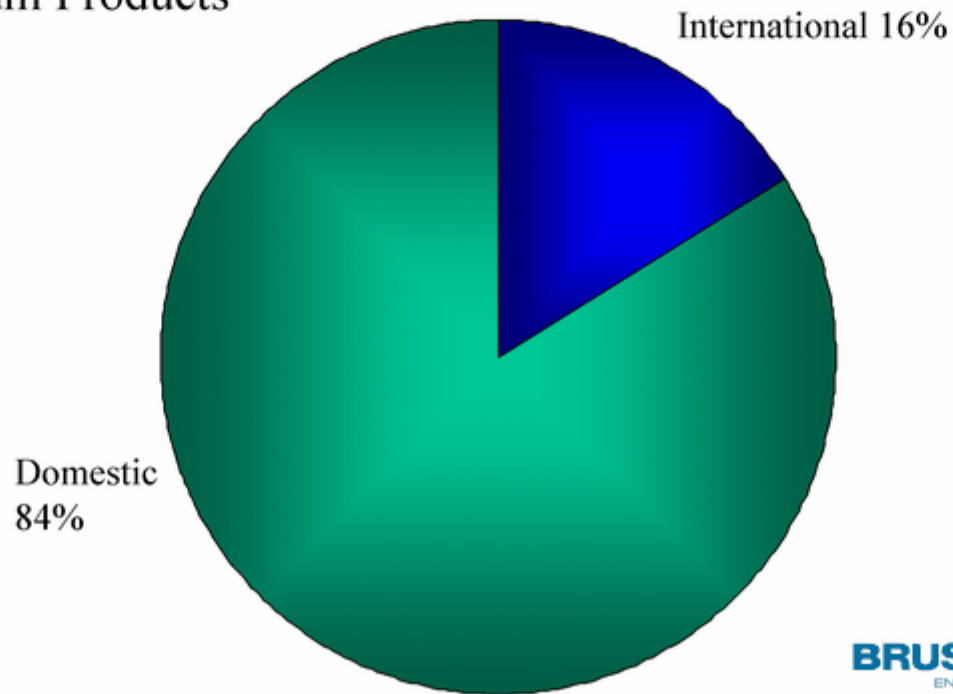


BRUSHWELLMAN
ENGINEERED MATERIALS

International/Domestic Revenue

2007

Beryllium Products



BRUSHWELLMAN
ENGINEERED MATERIALS

Major Applications, New Products and Platforms

Beryllium Products

<u>Product</u>	<u>Market</u>
New AlBeMet Products	Defense
Fabricated Products	Defense
Acoustic	Speakers
High grade Be foil	Medical x-ray

Beryllium 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

BRUSHWELLMAN
ENGINEERED MATERIALS

Brush Engineered Materials Inc.
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 - ***Engineered Material Systems***
-

Technical Materials Inc.

2008



“Providing engineered metal strip products to leading technology manufacturers around the world.”



Market History

- Founded in 1968, TMI's continuous clad and inlay technology produced high-reliability connector and switch materials for the telecom industry.
 - Today TMI's products are used throughout the world by virtually all major technology markets. As a leader in reel-to-reel composite metals engineering, TMI differentiates itself through proprietary process technologies.
 - TMI worldwide sales continue to increase and in 2007 additional inroads were made in Europe and Asia.
 - In 2007, New Product Sales accounted for approximately 31% of TMI's sales volume.
-

TMI Process Technologies

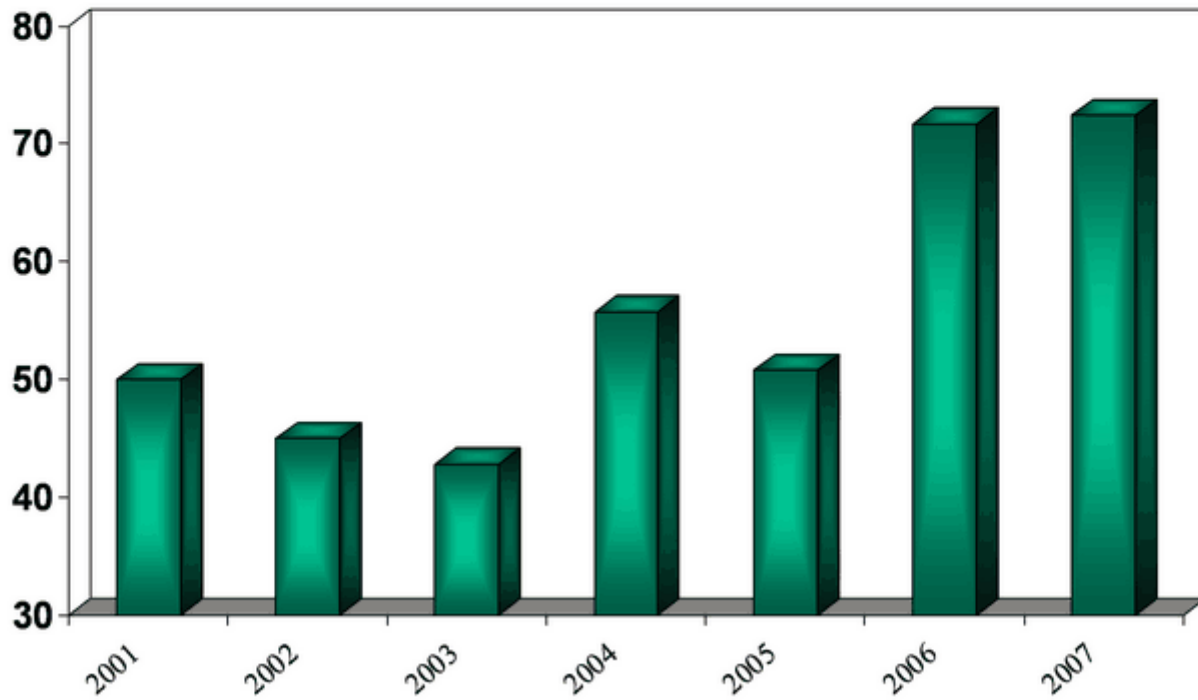


-
- Cladding
 - Inlay
 - Micro Laminates
 - Electroplating
 - Gold, Silver, Base Metals
 - Selective and Overall Coatings
 - Profiling
 - Milling
 - Skiving
 - Continuous Electron Beam Welding
 - Lead-Free Solder Coatings
-

TMI Sales Growth

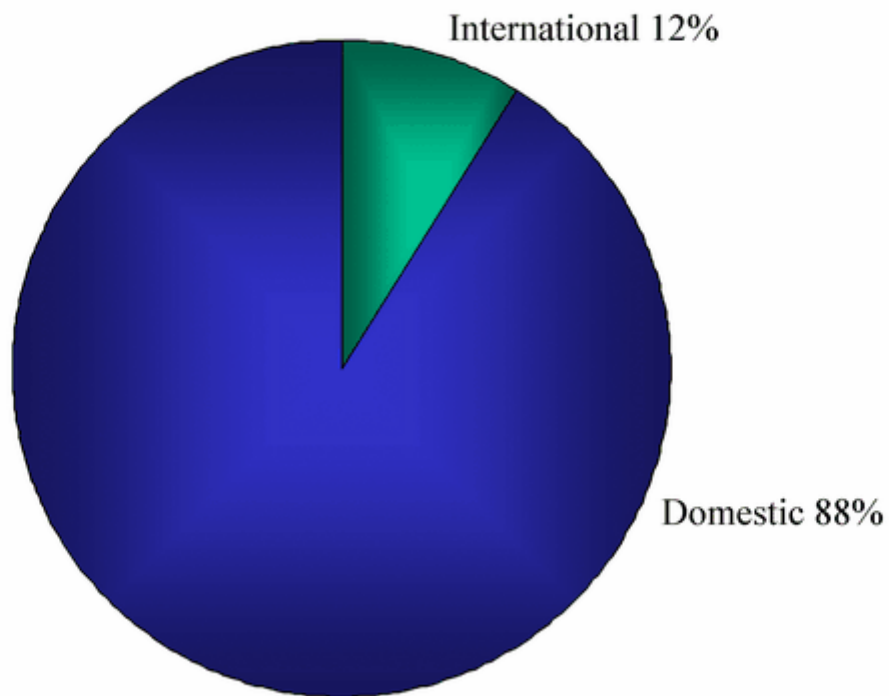


\$ in millions



International/Domestic Revenue

2007



Our Vision



-
- To be a leader in creating innovative engineered material solutions and services that make our customers competitive in global markets.
-

Technology Leader



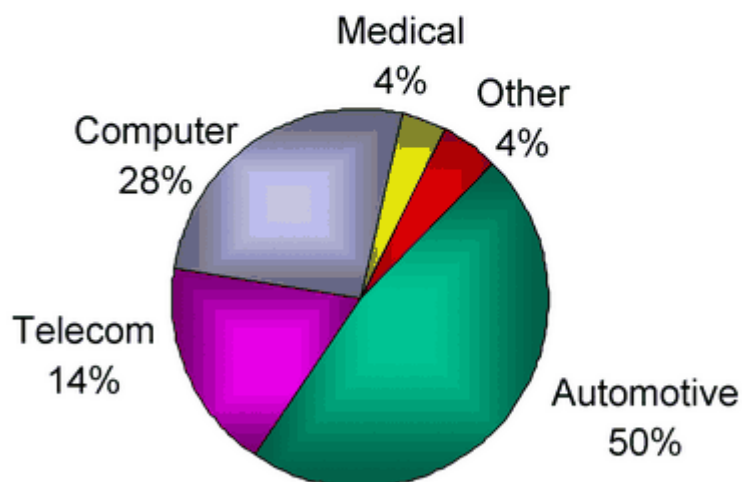
- Quality
 - ISO 9001-2000, Certified by Bureau Veritas
 - ISO 14001, Certified by TÜV
 - Unique Tolerance Capabilities
 - Extensive Digital and Vision-Controlled Processing
 - Engineering
 - Metallurgical Design
 - Technical Customer Support
-



Our Major Markets

2007

- Automotive
- Consumer Electronics
- Computer
- Semiconductor
- Energy
- Medical



Strategic Growth Markets



- Computer Hard Drives
 - Medical Devices
 - Energy Systems
-



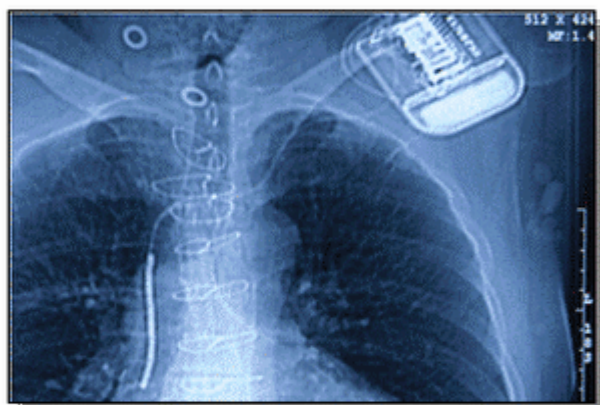
Application: Computer



- *Hard Drive Suspension Materials*

- Stainless/Aluminum Composites
 - High Stiffness-to-Weight Performance
 - Supports Higher Data Density Media
-

Application: Medical

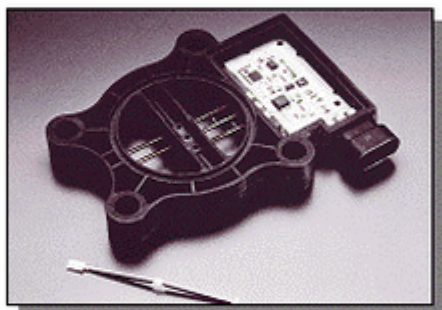


- *Implant Materials*

- Electron Beam Welded and Clad Interconnects
 - Niobium, Tantalum, Titanium, and Stainless Steel Systems
-



Application: Automotive



- *High-Reliability Connector and Leadframe Materials*
 - Safety Devices
 - Engine Performance Sensors
 - Hybrid Components
-

Application: Consumer Electronics



- Leadframes for Digital Camera Sensors
- Cell Phone Passive Components

Application: Energy



- High-Performance Battery Materials
 - Solar Cell Interconnects
 - High-Temperature Fuel Cell Clad Materials
-

2008 Growth Strategy



- Continued Expansion of Electroplating through Process Technology Advantages
 - Focus on Clad and Electron Beam Weld Product Development in High-Growth Niche Markets
 - Continue to Expand TMI's Presence in Europe and the Far East
 - Continued emphasis on New Product and Market Development
-

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>
12/31/06	13	54
03/30/07	12	52
06/29/07	10	32
09/28/07	10	32
12/31/07	9	31

Litigation

- In Year 2007, two cases, involving four plaintiffs, were dismissed by the plaintiffs. In one purported class action, three plaintiffs were dismissed, and the court remanded the case to the trial court for proceedings on five individual plaintiffs. In one purported class action, involving 15 named plaintiffs, judgment was entered in the Company's favor, and the case is closed. One case, involving one plaintiff, was settled and dismissed. No new cases were filed during the year.
 - 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.