
**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) April 1, 2010

Brush Engineered Materials Inc.

(Exact name of registrant as specified in its charter)

Ohio

(State or other jurisdiction
of incorporation)

001-15885

(Commission
File Number)

34-1919973

(IRS Employer
Identification No.)

6070 Parkland Blvd., Mayfield Hts., Ohio

(Address of principal executive offices)

44124

(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 April 1, 2010, Brush Engineered Materials Inc. 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 2009.

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.

April 1, 2010

Brush Engineered Materials Inc.

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
 - 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 including automotive electronics, telecommunications and computer
- Today, consumer electronics represent over 55% of our sales



Brush Engineered Materials Inc. Profile

- A leading manufacturer of high performance advanced 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 a common 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 20.2 million at 12/31/09
- Market Cap: Approximately \$375 million at 12/31/09
- Component of: S&P Super Composite 1500, Russell 2000
S&P SmallCap 600, Russell 3000
- 2009 Revenue: \$715 million
- 2009 Diluted EPS: \$(0.61) which includes a net inventory
valuation charge, derivative mark-to-market
valuation, severance costs due to manpower
reductions, acquisition costs and a pension benefit
resulting from the reduction in workforce
- Debt to Total Capitalization: 16% at 12/31/09



BEM – the transformation

- From Metals & Mining through Specialty Metals to Advanced Materials
- From an “old industrial” to a “new age technology” company



BEM – the transformation

- Broaden the base...focused on > GDP opportunities
 - new technologies
 - new markets
 - new products
 - expanded geography
- Target fastest growing segments of fast growing markets
- First Priority.....organic growth
- Second Priority....“manageable” acquisitions
- All while building and maintaining a strong balance sheet



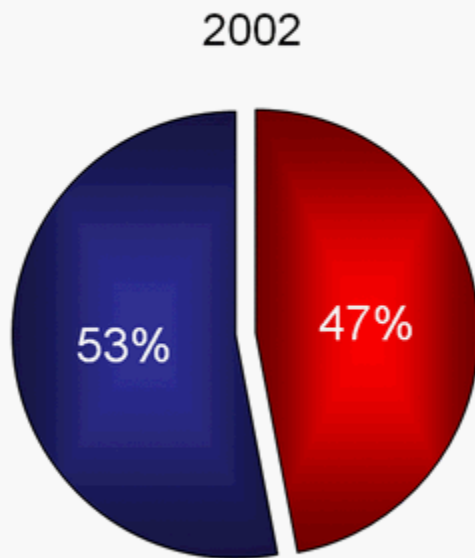
BEM – the transformation

- Investments...prioritizing a targeted business model
 - low capital intensity...both working capital and reinvestment capital
 - high IP....technology driven business
 - non-commodity products...high margins
 - good growth potential in >> GDP opportunities

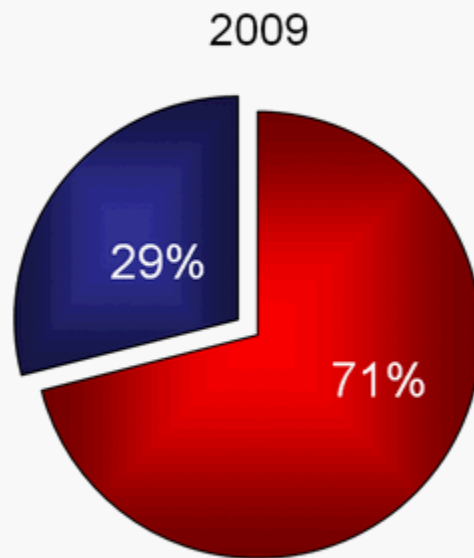
- Acquisition goals
 - Accretive within 12 months
 - Approximately \$50 million invested per year from cash flow
 - Use debt and equity when appropriate while maintaining quality of balance sheet and financial flexibility



BEM – the transformation

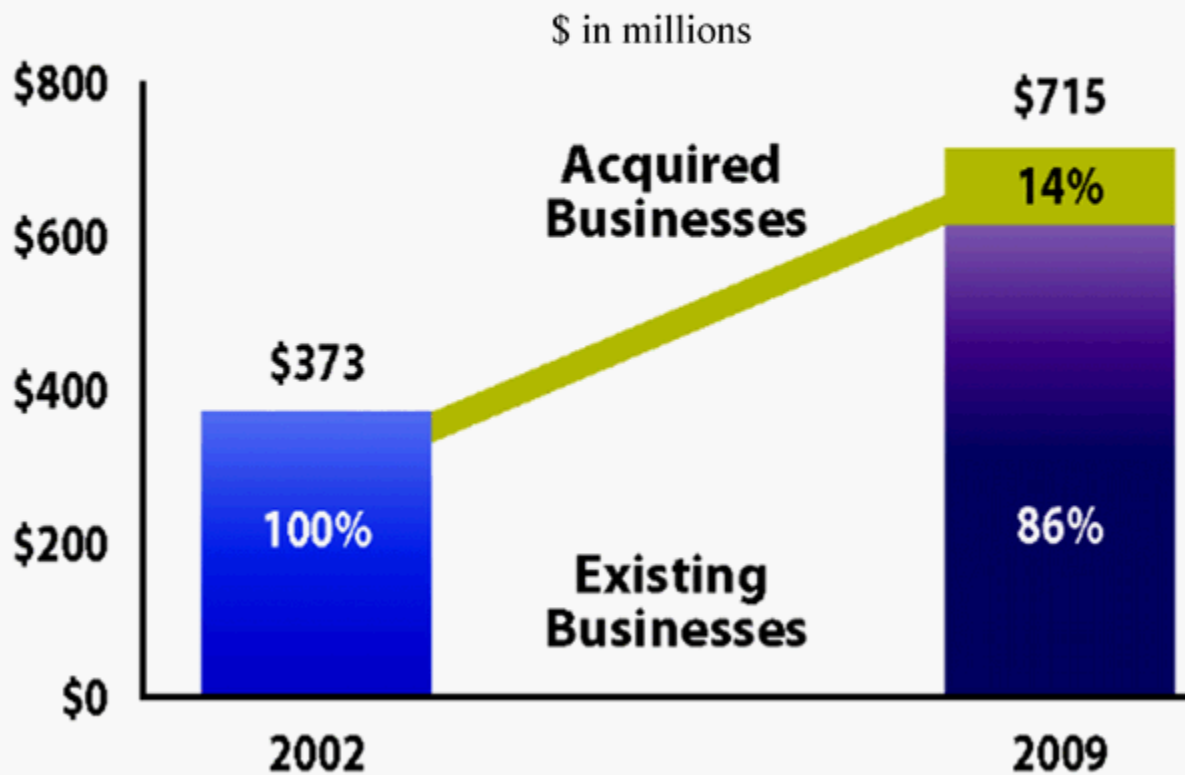


■ Performance Materials



■ Advanced Materials

Targeted acquisitions increasingly important to total sales



2009 Recap

- Sales of \$715 million
- Diluted earnings per share of \$(0.61)
- Acquisition of Barr Associates, Inc. for \$55.2 million
 - Barr produces precision thin film optical filters that enable complex technologies and components throughout the defense, aerospace, medical, energy, semiconductor, telecommunications, lighting and astronomy markets



Strength in Challenging Times

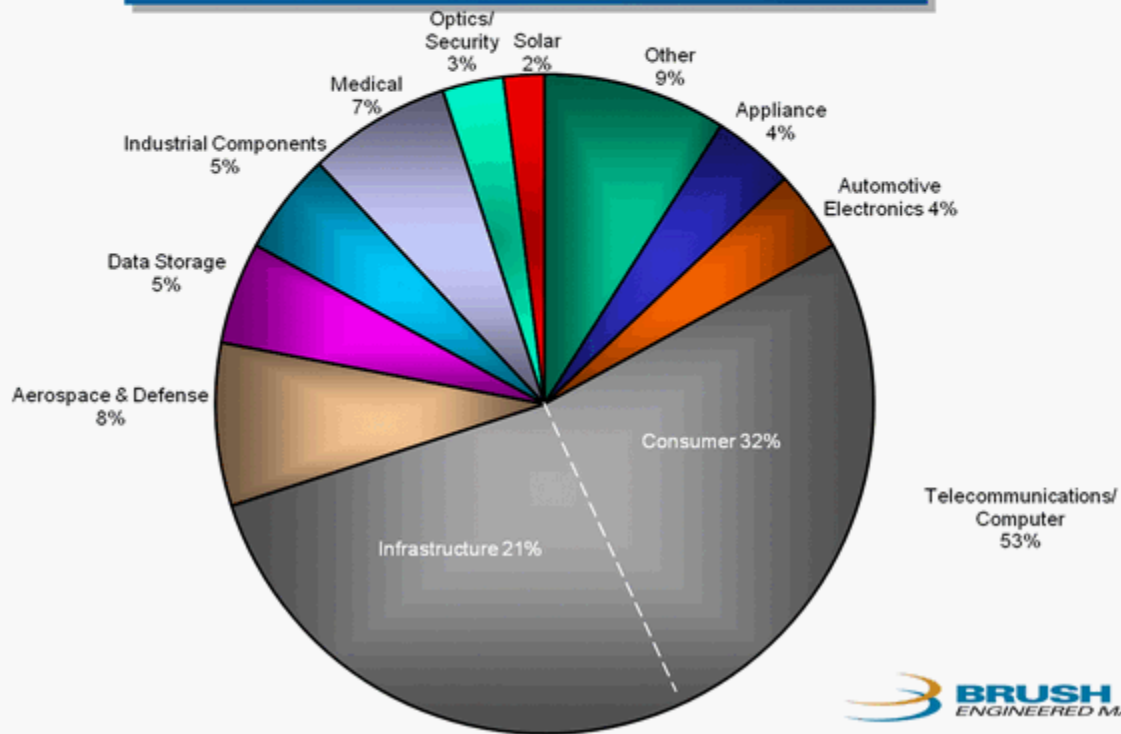
Balance Sheet

- Revolver
 - \$240 mm committed facility, matures November 2012
- Debt
 - Debt to total capital of 16%
- Working Capital
 - Turnover improved from 164 days in 2008 to 132 days in 2009



Global Leader in High Performance Engineered Materials

2009 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

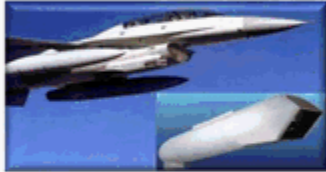


Typical End Uses



Defense

Notebook computers
and network servers



Cellular phones, i-Pods™ and other
wireless communication devices



Commercial
Aerospace



Electronic components
in cars and trucks

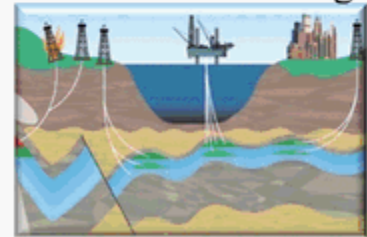


Data Storage

Medical
Devices



Industrial products for
Oil & Gas and Mining



 **BRUSH**
ENGINEERED MATERIALS

Applications - Cell Phones

Grounding Clips and Audio Jacks (Alloy):

- Brush 60
- Alloy 25/190/290

Internal Antenna Contacts (Alloy):

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

Internal Electronics (WAM):

- Thin Film Materials – Power amplifiers, SAW and BAW devices, filters, and IC's
- 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 25/190/290

I/O Connector Contacts (Alloy):

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

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 – Photovoltaic (Solar)

Technology: Crystalline Silicon (Si)

Interconnect Materials

Front and backplane systems for high efficiency designs.

Technology: Flexible Solar Cells / Building Integrated Photovoltaic:

Thin Film Services:

Solar cells built in flexible substrates to accommodate applications such as roofing tiles or defense.

Technology: Cadmium Telluride (CdTe)

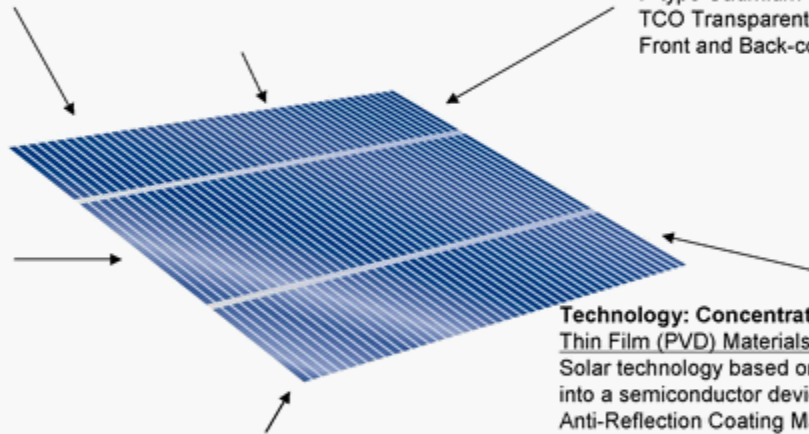
Thin Film (PVD) Materials

Cadmium based solar cell architecture. N and P type Cadmium Semiconductor materials
TCO Transparent Conductive Oxide layers
Front and Back-contact layers

Technology: Copper Indium Gallium Selenide (CIGS)

Thin Film (PVD) Materials as well as Powders for Printing CIGS applications

Copper Indium Gallium Selenide thin film and screen printing applications for flexible and rigid solar cells.



Technology: Amorphous Silicon (a-Si, tandem and multi-junction) Thin Film (PVD) Materials

Silicon based photovoltaic cells
Front and back contact layers
TCO Transparent Conductive Oxide layers

Technology: Concentrator Photovoltaic (CPV)

Thin Film (PVD) Materials

Solar technology based on concentrating Solar rays into a semiconductor device via large lens.
Anti-Reflection Coating Materials
Precious metal contact materials

Micro Electronic Packaging Products:

Bonding Ribbon - Au & Ag
Lead-free Solders
Metallized Ceramic Substrates



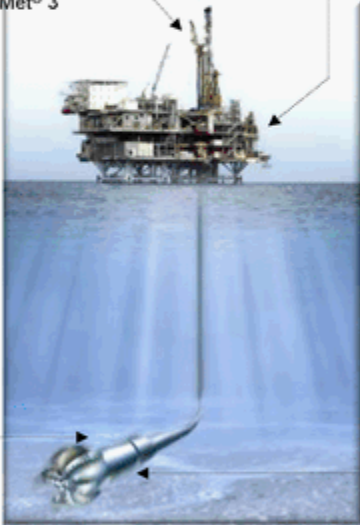
Applications – Oil & Gas

Wellhead Control Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3

Structural Rig Components (Alloy):

- ToughMet® 3



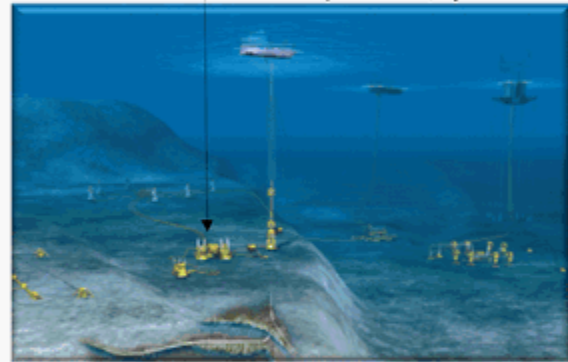
Drill Bits (Alloy):

- 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

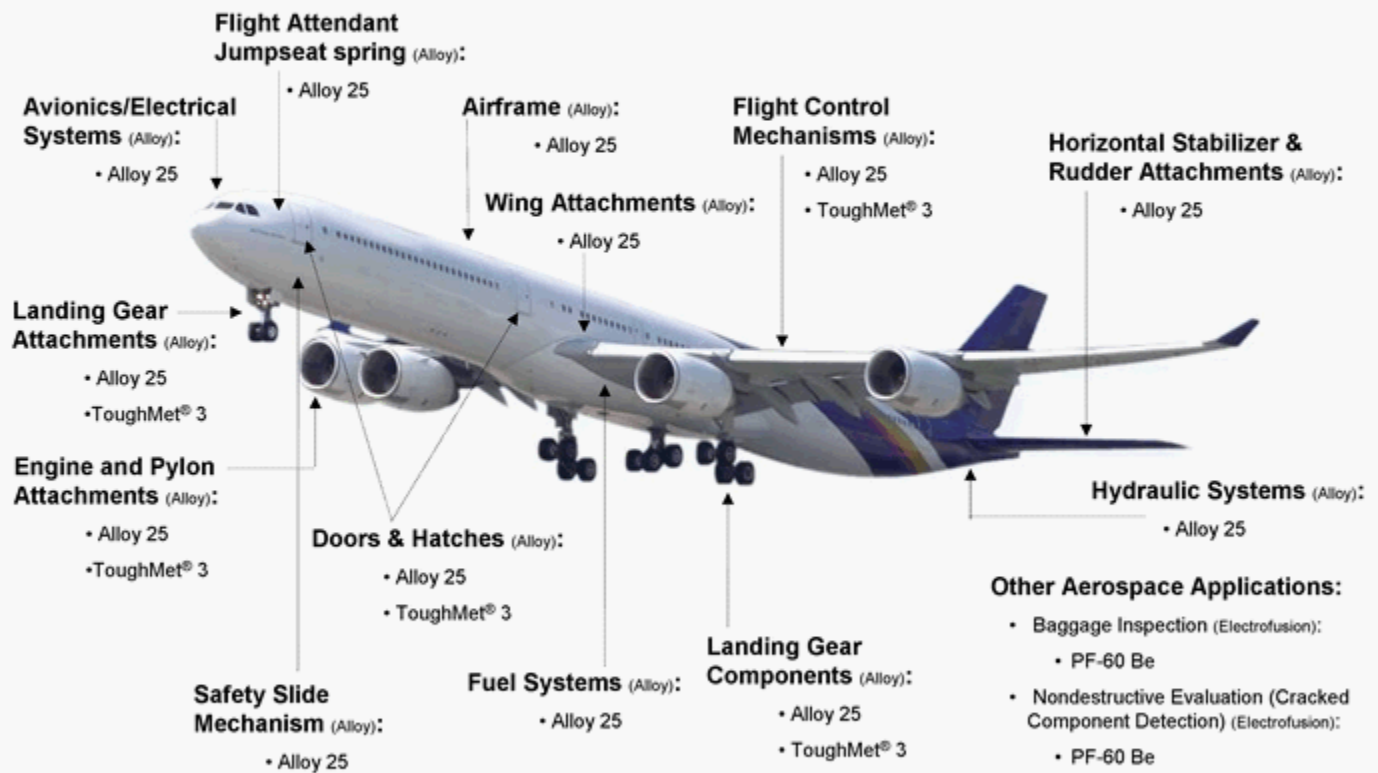
Blow out preventers, hydraulic actuators

Other Oil & Gas Applications:

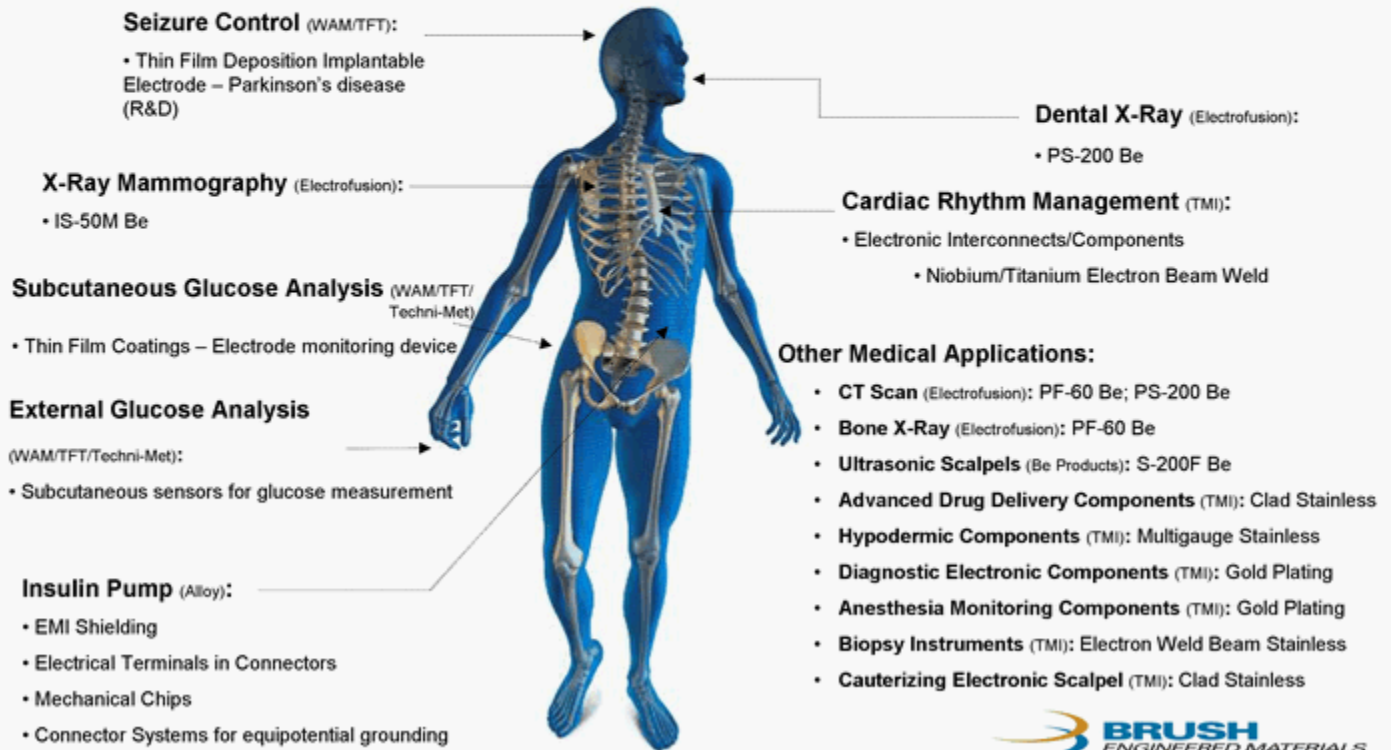
- **Elemental Analysis** (Electrofusion):
 - PF-60 Be; IF-1 Be
- **Down Hole X-Ray Inspection** (Electrofusion):
 - PS-200 Be



Applications – Aerospace



Applications – Medical



Strategic Highlights

- The Company is well positioned; strong balance sheet and revolver capacity to operate in this severe economic environment and to take advantage of strategic opportunities as they arise
- Strong, diverse set of markets served
- Global market reach
- New products and services ... a culture of innovation
- Niche-oriented product offerings
- Acquisitions adding to growth and earnings
- Focus on manufacturing excellence resulting in improved operations
- Strong cash flow



Vision – Mission - Values

Vision

We will be a *leader* in creating innovative engineered material *solutions and services* that make our *customers competitive* in global markets

Mission

...in support of our vision:

- We bring *value* to our *customers*, globally, through innovative *technology, service*, and *collaboration*
- Our *employees* are passionately *focused* on exceeding *customers'* expectations
- We are *committed* to build a strong *financial future* for our employees and shareholders, striving to consistently *grow* revenues and earnings
- We are driven to continuously *improve* our supply chain, creating the highest *value* for our customers while reducing costs... using *Lean Six Sigma*
- We design, manufacture, and distribute our products in a *safe, environmentally responsible* manner

Values

...We believe in a set of individual and team values, where:

- Each of us is committed to safety as our first priority
- We are committed to the highest standard of ethics and integrity in our business affairs
- We conduct ourselves with honesty and respect among our fellow employees, customers, suppliers, shareholders, and our communities
- We are proactive stewards of the safe use of our materials
- We share a trust among our employees that encourages aggressive performance commitments
- We have the authority, individually and in teams, to achieve our goals
- We embrace change and reject complacency
- We are committed to strengthen the organization by attracting and developing talented, dedicated individuals
- We collaborate with our customers and suppliers to create higher value
- We are involved in the betterment of our communities



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) and, beginning in the first quarter 2009, Zentrix Technologies Inc.

- **Specialty Engineered Alloys**

The Specialty Engineered Alloys segment consists of Alloy Products, which includes bulk and strip form products, and beryllium hydroxide produced by Brush Resources Inc.

- **Beryllium and Beryllium Composites**

The Beryllium and Beryllium Composites segment consists of Beryllium Products and Brush Ceramic Products Inc.

- **Engineered Material Systems**

The Engineered Material Systems segment consists of Technical Materials, Inc.



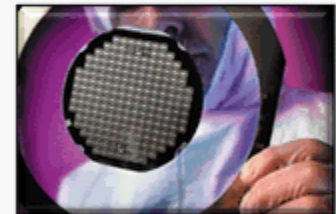
Advanced Material Technologies and Services

2009 Sales: \$460.8 million

Williams Advanced Materials (WAM)

\$460.8 million; 64%

- Manufactures precious, non-precious and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials, ultra-fine wire, specialty inorganic materials, optics, performance coatings and electronic packages.
- Products are used in wireless, semiconductor, photonic, hybrid and other micro-electronic applications within the telecommunications and computer market. Other key markets for these products include medical, data storage, defense, security and solar energy.



Specialty Engineered Alloys

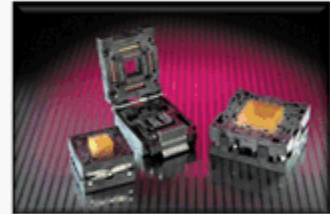
2009 Sales: \$172.5 million

Alloy Products

\$172.5 million; 24%

Manufactures and sells three main product families: strip products, bulk products and beryllium hydroxide.

- Strip products, the larger of the product families, include thin gauge precision strip and thin diameter rod and wire. These copper and nickel beryllium alloys provide a combination of high conductivity, high reliability and formability for use as connectors, contacts, switches, relays and shielding. Major markets for strip products include telecommunications and computer, automotive electronics, appliance and medical.
- Bulk products are copper and nickel-based alloys manufactured in plate, rod, bar, tube and other customized forms that, depending upon the application, may provide superior strength, corrosion or wear resistance, thermal conductivity or lubricity. Applications for bulk products include oil and gas drilling components, bearings, bushings, welding rods, plastic mold tooling and undersea telecommunications housing equipment.
- Beryllium hydroxide is produced by Brush Resources Inc., a wholly owned subsidiary, at its milling operations in Utah from its bertrandite mine and purchased beryl ore. The hydroxide is used primarily as a raw material input for strip and bulk products and, to a lesser extent, by the Beryllium and Beryllium Composites segment.



Beryllium and Beryllium Composites

2009 Sales: \$47.0 million

Beryllium Products

\$47.0 million; 7%

- Manufactures beryllium-based metals and metal matrix composites in rod, sheet, foil and a variety of customized forms. These materials are used in applications that require high stiffness and/or low density and they tend to be premium-priced due to their unique combination of properties.
- Defense and government-related applications, including aerospace, is the largest market for Beryllium and Beryllium Composites, while other markets served include medical, telecommunications and computer, electronics (including acoustics), optical scanning and general industrial



Engineered Material Systems

2009 Sales: \$34.7 million

**Technical
Materials,
Inc. (TMI)**

\$34.7 million; 5%

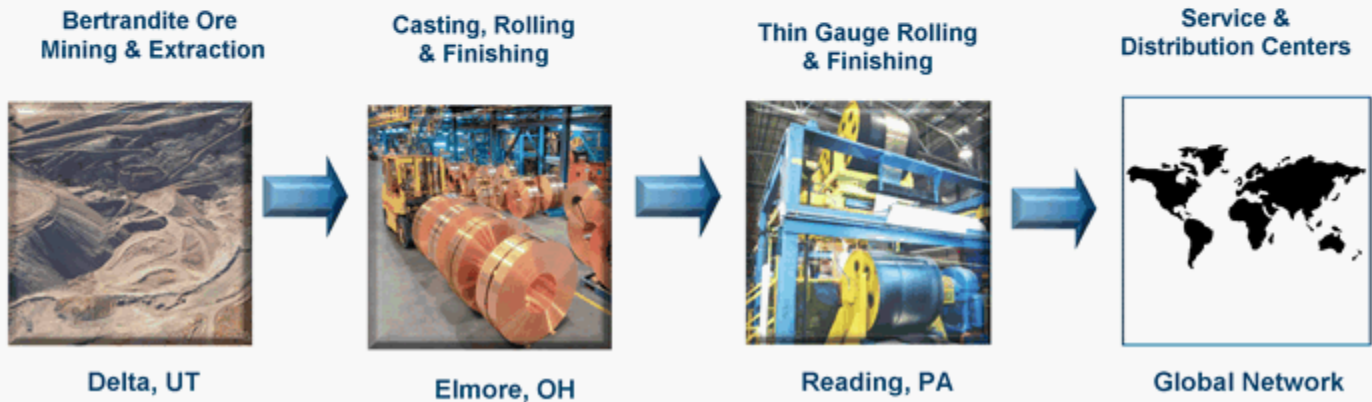
- Include clad inlay and overlay metals, precious and base metal electroplated systems, electron beam welded systems, contour profiled systems and solder-coated metal systems. These specialty strip metal products provide a variety of thermal, electrical or mechanical properties from a surface area or particular section of the material. Our cladding and plating capabilities allow for a precious metal or brazing alloy to be applied to a base metal only where it is needed, reducing the material cost to the customer as well as providing design flexibility.
- Major applications for these products include connectors, contacts and semiconductors while the largest markets are automotive electronics, telecommunications and computer and data storage. The energy and defense and medical electronic markets are smaller but offer further growth opportunities.



 **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



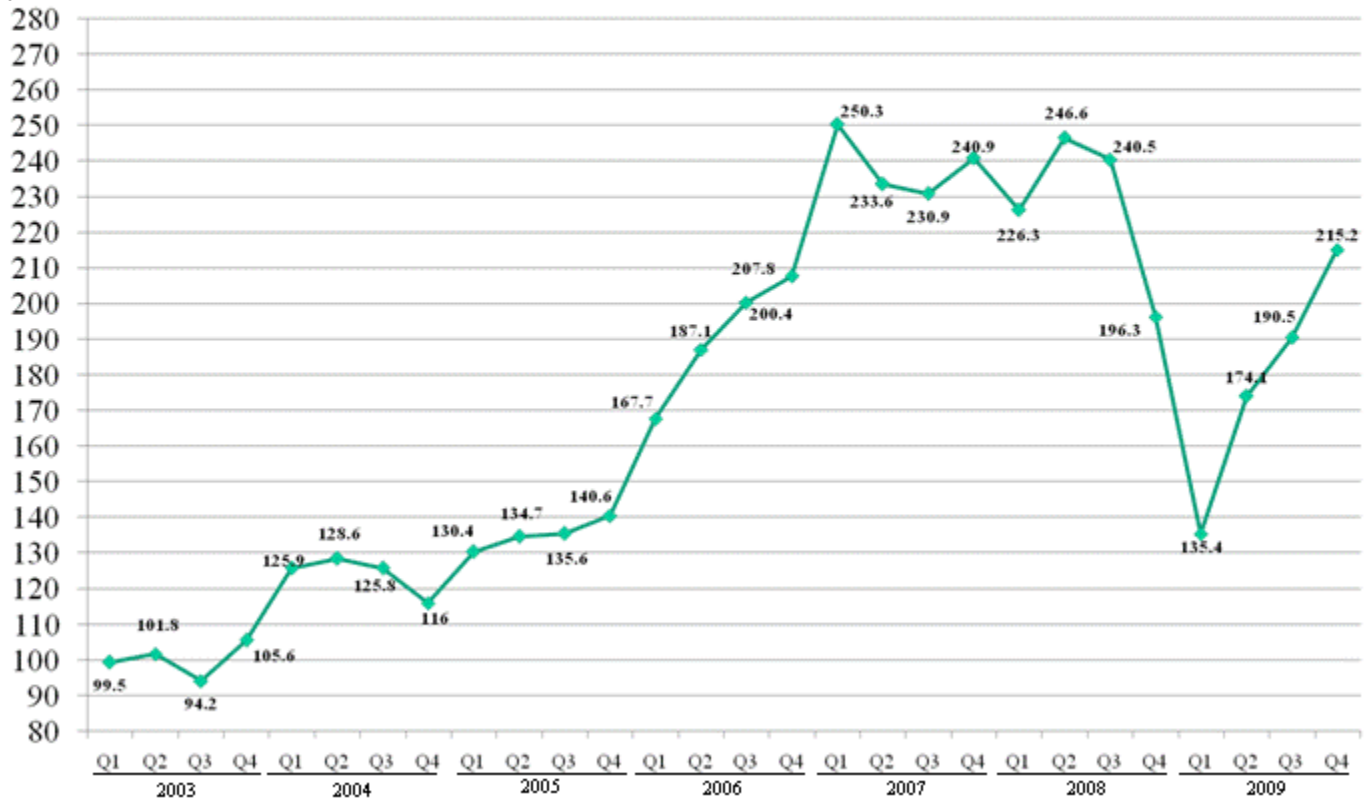
Key Financial Statistics

(Dollars in millions except per share amounts)	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Sales	\$763.1	\$955.7	\$909.7	\$715.2
EBIT	43.8	84.5	28.1	(19.5)
Interest	4.1	1.8	2.0	1.3
Taxes	(9.9)	29.4	7.7	(8.4)
Diluted EPS	2.45	2.59	0.89	(0.61)
G.P.%	21.2%	20.6%	16.7%	12.8%
O.P.%	5.7%	8.8%	3.1%	(2.7%)
Depreciation & Amort.	24.6	23.9	33.8	31.9
Capital Spending*	15.5	30.1	27.9	16.8
Debt	49.0	35.5	41.8	64.5
Cash	15.6	31.7	18.5	12.3
Debt/Total Cap.	15%	9%	11%	16%

*Net of reimbursements under government contracts in 2007, 2008 and 2009

Historical Revenue by Quarter

\$ in millions



Capacity to Support Profitable Market Growth

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

- Operating with available excess capacity for future growth
 - Brush Wellman Inc.'s Elmore, Ohio facility is partnering with the U.S. Department of Defense for the construction and start up of a \$90.3 million primary beryllium facility. Brush Wellman's contribution for this expansion, including the research and development, technology, land, buildings and ongoing operations is valued at \$23.2 million. Construction began in the third quarter 2008 and is expected to be completed in the second half of 2010.
-

Our ongoing 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 added products
- Cost reductions

Fixed and Working Capital Utilization

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

New Product and Technology Development

- ADVANCED MATERIAL TECHNOLOGIES AND SERVICES
 - Magnetic Media and Head Materials, Eco-Ru™ Sputter Targets
 - Under Bump Metallization (UBM) for Flip Chip
 - FCCL Materials
 - Optics coating materials
 - Precision Optical Thin Film Coatings (specialty filters)
 - High Value Optical Coatings (large format optic components)
 - Visi-Lid™ - Optical Package for New Photonics applications
 - Expanded refining/chamber services – Compliment to Thin Film Materials and coating businesses
 - Silver Alloys for HD-DVD and Blue Ray Disc manufacturing
 - Solar Panel Thin Film and Concentrator Materials
 - Solar Panel Barrier Film Coatings (BIPV)
 - MEMS and Photovoltaic Packaging Materials
 - Nanotechnology Materials
 - Precursor Materials for High Intensity LEDs
 - Precious Metal Materials – rod, bar, sheet, slugs, etc.
-

New Product and Technology Development

- SPECIALTY ENGINEERED ALLOYS
 - ToughMet® Alloy for High Volume Bearing Applications
 - Cupronickel alloy rod for offshore and marine seawater systems
 - Alloy 390E and Alloy 25BiQ High Performance Copper Beryllium Strip Alloy for Burn in and Test Sockets (BiTS) applications
 - BrushForm 158 and BrushForm96 Copper Nickel Tin Strip alloys for electronics and mechanical spring
 - BE AND BE COMPOSITES
 - Nearer net shape fabrication (hot isostatic pressing)
 - Truextent™ speaker diaphragms
 - Coatings
 - Nuclear beryllium materials
 - ENGINEERED MATERIAL SYSTEMS
 - Li Ion Battery Interconnects
 - Solar panel interconnects
 - Nitinol processing (medical)
-

Balance Sheet

(\$ in millions)

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Balance Sheet Debt*	\$57.2	\$49.0	\$35.5	\$41.8	\$64.5
Debt-to-Debt-Plus-Equity	21%	15%	9%	11%	16%

* Note - Excludes precious metal consignment and other leases of:	\$51.6	\$72.1	\$79.5	\$110.6	\$103.2
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Segment Sales Review

\$ in millions	2007		2008		2009	
	\$	%	\$	%	\$	%
Advanced Material Technologies and Services ¹	\$533.5	56%	\$480.3	53%	\$460.8	64%
Specialty Engineered Alloys	290.0	30%	299.9	33%	172.5	24%
Beryllium and Beryllium Composites	60.5	6%	63.6	7%	47.0	7%
Engineered Material Systems	70.9	8%	65.9	7%	34.7	5%
Other	0.8	0%	0.0	0%	0.2	0%
TOTAL	\$955.7	100%	\$909.7	100%	\$715.2	100%

¹Effective 1/1/09 Zentrix Technologies Inc. became a part of this segment. Previously it was included in Other. Previous years have been restated to reflect this change.



Segment Operating Profit (Loss)

\$ in millions

	<u>2007</u>	<u>2008</u>	<u>2009</u>
Advanced Material Technologies and Services ¹	\$60.5	\$10.9	\$22.6
Specialty Engineered Alloys	7.6	5.8	(32.3)
Beryllium and Beryllium Composites	7.8	8.4	2.1
Engineered Material Systems	4.7	5.9	(2.5)
Other	<u>3.9²</u>	<u>(2.9)</u>	<u>(9.4)</u>
TOTAL	\$84.5	\$28.1	\$(19.5)

¹Effective 1/1/09 Zentrix Technologies Inc. became a part of this segment. Previously it was included in Other. Previous years have been restated to reflect this change.

²The Other segment earnings of \$3.9 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
-

Advanced Material Technologies and Services’ (Williams Advanced Materials Inc.) Vision

- Globally Recognized High Quality/Technology Supplier of Products and Services for “State Of The Art”, Emerging and Leading Edge Markets and Industries.
- Williams will Create a “Unique” Business Model with its Central Focus being to Relentlessly Strive for Product Differentiation through a Combination of Technology, Services and Quality, Providing “Remarkable” Solutions.
- Our Business Values and Corporate Integrity will be the Cornerstone of the way we relate to our Customers, Partners, Suppliers, the Communities in which we Reside and most Importantly our Employees.

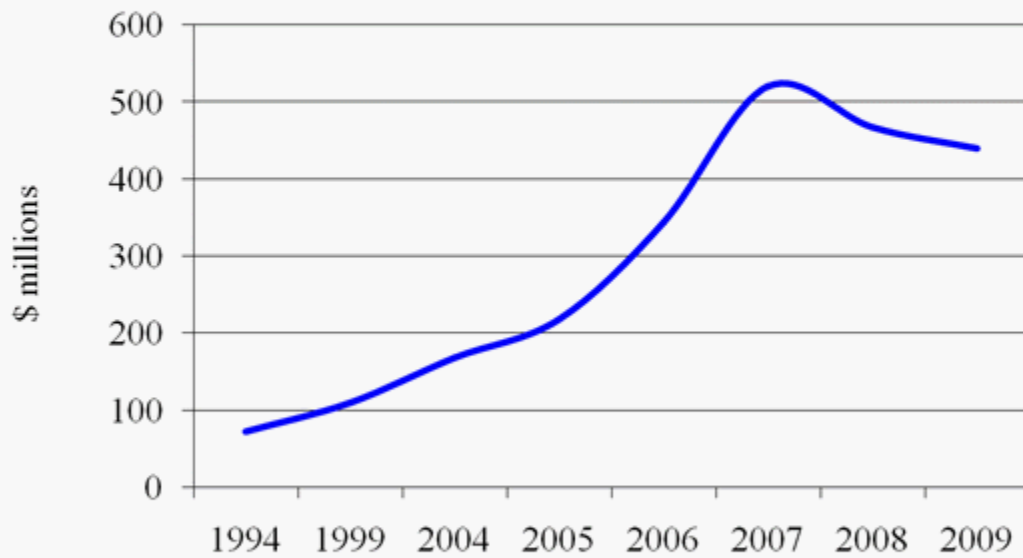


What We Do

Williams Advanced Materials develops, manufactures and markets materials, thin film deposition technology and services of unique value for the Magnetic and Optical Data Storage, Medical, Wireless, Photonics, Semiconductor, Optics, Security, Hybrid Microelectronics, Defense and Performance Coating industries. We also have identified key segments on emerging technologies such as Photovoltaic (Solar), Solid State Memory, Flexible Cable, and Nanotechnology. Williams' products are primarily based on specialty and unique materials and thin film processes used in high reliability and performance applications.



Sales History



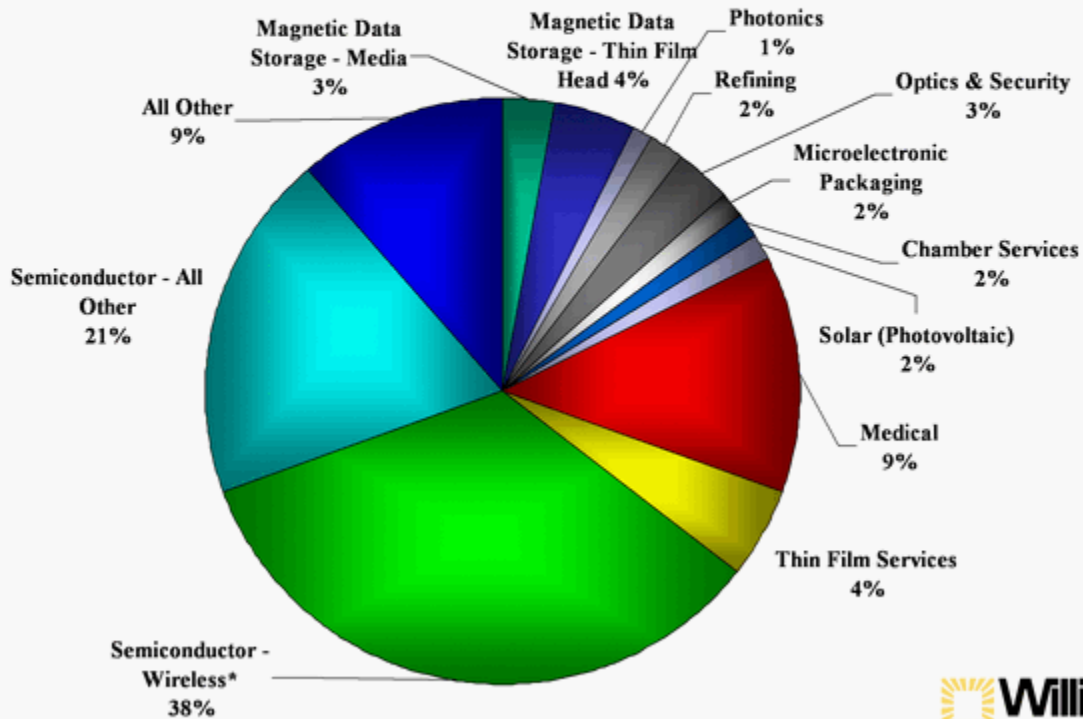
2009
\$439.5 Million

Excluding BARR Associates Inc.



Revenue by Market

2009

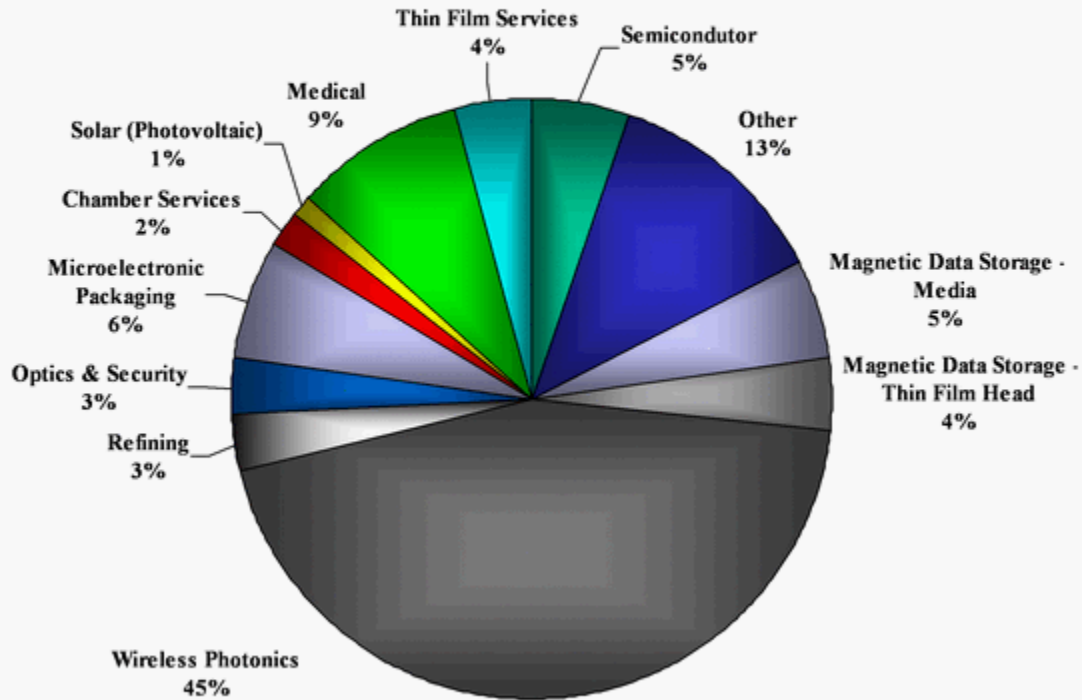


* Wireless sales had previously been reported in the Wireless Photonics market. They are now being reported in the Semiconductor-Wireless market.

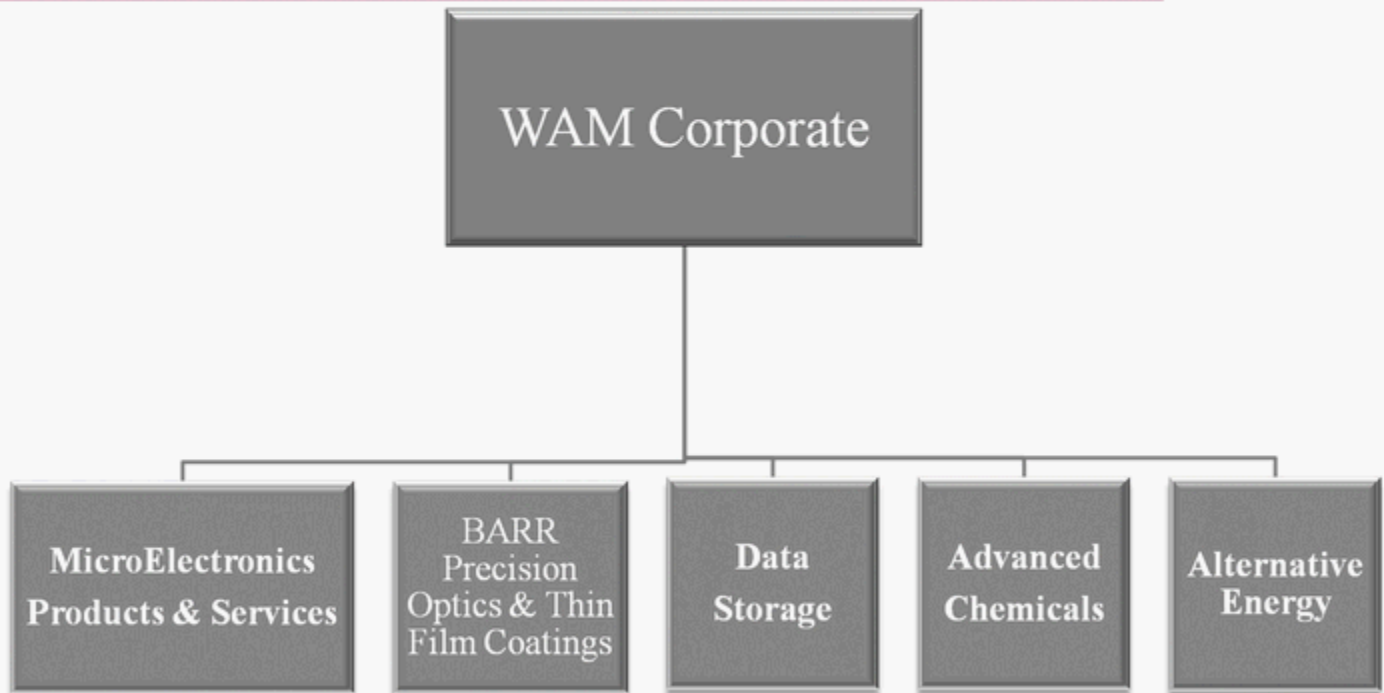


Revenue by Market

2008

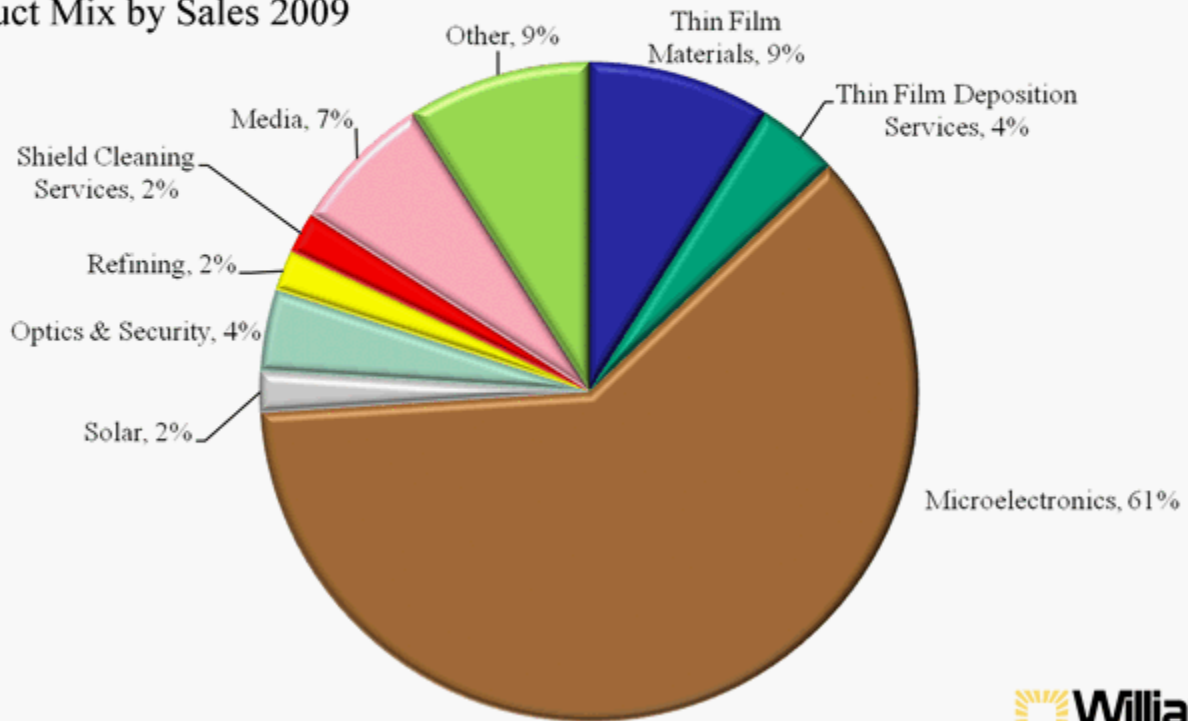


2010 Business Structure



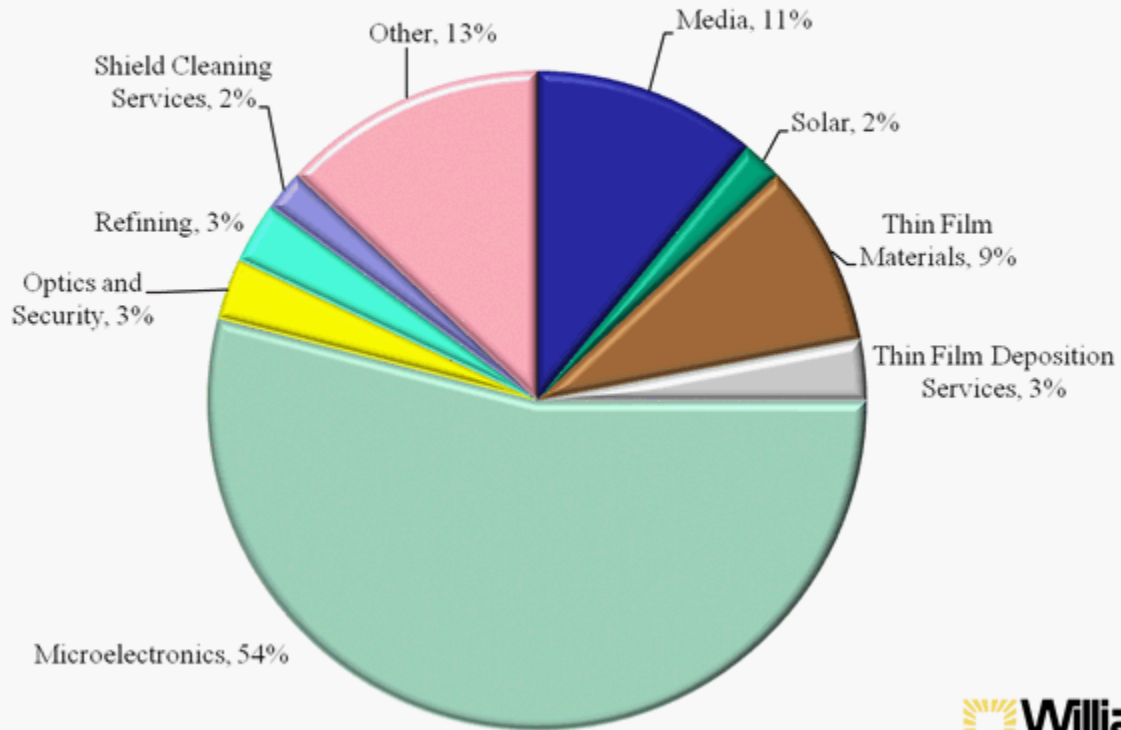
Product Mix

Product Mix by Sales 2009



Product Mix

2008

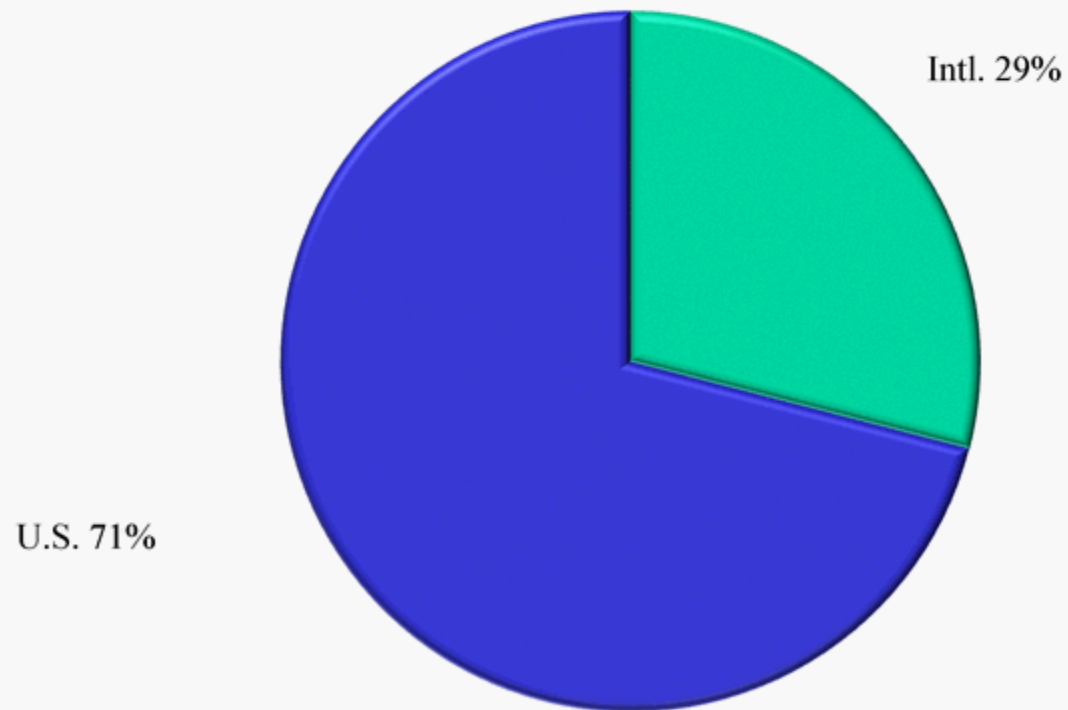


Augmentation History

▪ Williams Precious Metals Acquired in	1987
▪ Advanced Materials Technology	1989
▪ Hydrostatics Inc.	1994
▪ Pure Tech Inc.	1998
▪ Wheatfield (Greenfield)	1998
▪ Semi Alloys Inc	2001
▪ Honeywell FLA (Technology)	2003
▪ OMC Scientific Ireland	2004
▪ Thin Film Technology	2005
▪ CERAC inc.	2006
▪ Suzhou, China (Greenfield)	2007
▪ Louny, Czech Republic (Greenfield)	2007
▪ Techni-Met	2008
▪ Barr Associates, Inc.	2009
▪ Academy Corporation	2010



International/Domestic Revenue 2009



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
Albuquerque
Wheatfield
Singapore
Taiwan
Santa Clara
Ireland
Suzhou, China
Louny, Czech

Packaging Materials

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



Buffalo
Singapore
Wheatfield
Buellton
WAM
Taiwan
WAM Philippines

Engineered Thin Films

- Various Deposition Technologies
- Optical Filters & Coatings
- Thin Films Hybrid Circuits
- Web Coatings
- CVD Coatings
- Slitting
- Sensors Manufacturing
- Microelectronics Windows
- Filter Arrays
- Filter Sub-assemblies



Buellton, CA

Windsor, CT

Westford, MA



WAM Headquarters



Buffalo, NY USA –

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



Specialty Alloys Operations



Wheatfield, NY

- 30,000 Sq. Ft. with volume vacuum casting, rolling, annealing, powder atomizing and machining. 10 acres for expansion.
- Shield metal recovery and cleaning / Clean room packaging



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.
- Dedicated R&D staff and capabilities to support rapid new product development in key markets.



Techni-Met



Windsor, CT

- 2 facilities - total of 75,000 sq. ft.
- 48 employees – two (2) shift operations.
- High Value Added Precision Coated Materials.
- Continuous Vacuum Deposition of Inorganic Materials onto Rolls of Flexible Polymeric Films and other Substrates.



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



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



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 Served: Semiconductor, UBM, Security and Optics



Far East Operations

WAM Far East Ltd.



Singapore

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



Subic Bay, Philippines

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

WAM TAIWAN



Taoyuan County, Taiwan

- Target bonding, evaporation materials & bonding wire.



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 technology based markets.



OMC- Czech



Louny, Czech Republic

- 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
- Machining capabilities for Optical Media and other PVD segments
- Markets Served: Semiconductor, Compound Semiconductor, UBM, MEMS, Data Storage



Global Service and Support

- **Sales and Applications Engineering support**

Buffalo, New York
Brewster, New York
Tucson, Arizona
Santa Clara, California
Buellton, California
Milwaukee, Wisconsin
Dallas, Texas
Windsor, Connecticut
Westford, Massachusetts

Tokyo, Japan
Taoyuan, Taiwan
Singapore
Manila, Philippines
London, England
Seoul, Korea
Limerick, Ireland
Shanghai, China
Albuquerque, New Mexico

- **Representative**

Italy
Germany

France
Israel

China
India



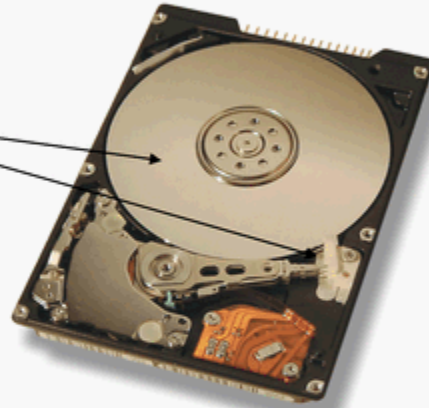
New Product and Technology Development

- Optical Filters
- Bio-Sensors
- Materials for Thin Film PV (Solar): Cu(I)Ga(S), CdS, CdTe, TCO Materials, etc
 - Ag Alloys for Solar backside contact
- New Cleaning Methods for Shield Cleaning & Material Reclamation
- Magnetic Data Storage
 - Media Materials; Oxide Gen II and Eco-Ru
 - Head Materials Heusler Alloys & FePt
- Flexible Solar Cells



Key Markets – Magnetic Head and Media

- Sputtering Targets/ Evaporation Materials (Precious Metals, Alloys, Non-Precious Metals, Alloys, Magnetic Materials, Heusler Alloys and Oxides)
- Chamber Services complement materials offering.



*Example – Hard Disk Drive Media PMR
Material Stack*

Recording Layer	CoCrPt + Oxide
Orient Interlayer	Ru
Soft Underlayer	Iron & Cobalt Based Alloys
AFC Layer	Ru
Soft Underlayer	Iron & Cobalt Based Alloys
Substrate (Glass or Aluminum)	



Applications - Cell Phones

Internal Electronics (WAM):

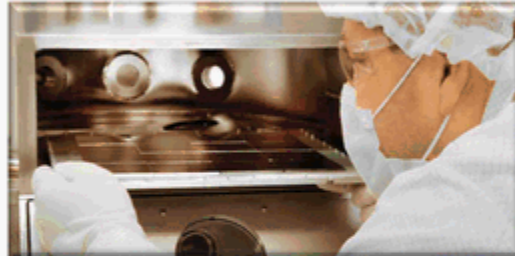
- Thin Film Materials for the manufacturing of Power amplifiers, SAW and BAW devices, filters, and IC's
- Frame Lid Assemblies for SAW device packaging
- Thin Film Material for backlight applications using LED technology
- Shield Cleaning Services enabling lowest cost to market value package solutions



Key Markets - Medical (Sensor) Applications

Thin Film Deposition Services

- Batch Sensor Electrode Manufacturing
- Roll to Roll Strip Sensor Manufacturer
- Metal Deposition and Precision Slitting



Williams Thin Film Products

- Sputter & Evaporation Materials for Sensor Manufacturing
- Refining and Recovery
- Shield Cleaning Services



Key Markets - Thin Film and Electronic Packaging Materials & Services

Night Vision (Defense)

Thin Film Deposition Services

- Coated Infrared Optics
- Hermetic Windows for FPA Packaging
- Flexible Interconnects
- Filter Arrays
- Filter Sub-assemblies



Williams Thin Film Materials

- Sputtering Targets for FPA Manufacturing
- High Purity Infrared Coating Materials

Electronic Packaging Materials

- Precision Machined Components
- High Purity Solder Materials



Key Markets - Defense Applications

Aerospace

Thin Film Technology

- Large Area Coating of Irregular Shaped Flight Components
- Coatings on Composite Materials
- Thin film hybrid circuits
- Specialty Engineered Films
- Optical Filters & Coatings
- IR Filters
- Filter Arrays
- Ultra High Efficiency Reflectivity



Williams Advanced Materials

- Hermetic Combo Lids
- High Purity Solder Materials
- Precision Machined Components

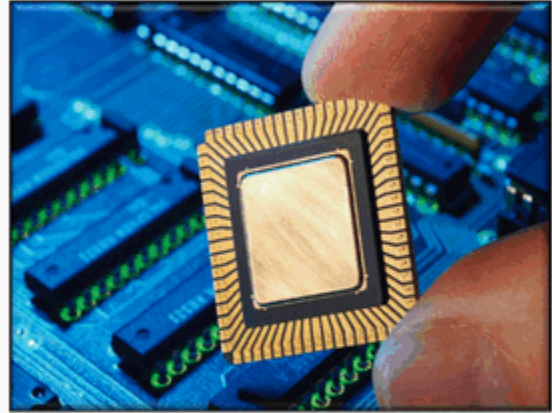
Williams Thin Film Products

- Sputter & Evaporation Materials for critical surfaces



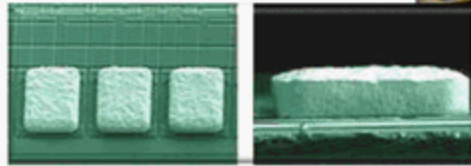
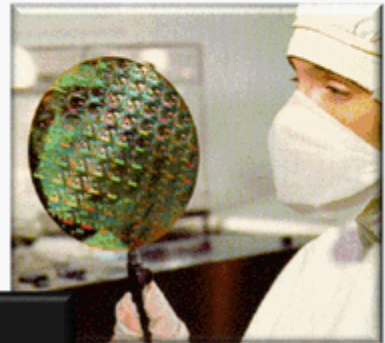
Key Markets – Semiconductor Packaging

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



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.



Applications – Photovoltaic (solar)

Technology: Crystalline Si

Thin Film Materials:

SnO₂, TiO₂, Si, Si₃N₄, ITO

Technology: Copper Indium Gallium Selenide (CIGS)

Thin Film Material:

CuInGaSe, AZO (Al₂O₃),
AZO (Al), NaF, ZnO, In₂S₃,
CuInSe₂, CuSe
Cu₂Se, ITO, CdS,
CuGa Alloys, CuInGa Alloys
Mo, (ZnMg)O, In₂Se₃, ZnS
Ru

Technology: Cadmium Telluride (CdTe)

Thin Film Materials:

ZTO, ZnSn, NiV, ZnTe,
Sb₂Te₃, Ti, Cr, CdTe,
CdS, Cd₂SnO₄, Zn₂SnO₄
Mo, Al, Cu

Technology: Concentrator Photovoltaic (CPV)

Thin Film Materials:

Ti, TiW, Pt, Au, Ag

Technology: Amorphous Silicon (Si)

Thin Film Materials:

TCO, AZO(Al₂O₃),
AZO(Al), GZO(Ga₂O₃)
Ag, Ag Alloys, Al, NiV,
Ni, Ti

Micro Electronic Packaging Products:

Bonding Ribbon - Au & Ag
Lead-free Solders
Metalized BeO Substrates



Optics Markets

- **Security**
 - ZnS , MgF_2 , SiO_2
- **Laser optics**
 - ThF_4 , YF_3 , SiO_2 , Ge
- **Communications**
 - SiO_2 , Ta_2O_5 , Nb_2O_5 ,
 - LaB_6 Cathodes
- **Ophthalmics**
 - SiO_2 , Al_2O_3 , Ti_3O_5 , Cr-SiO



Opto-Electronic Markets

- **Resistor material for hybrid circuits**
 - Cr-Si, W-Ti
- **Projection Display Products**
 - HfO_2 , Cr, SiO_2 , MgF_2
- **Clear conductive coatings**
 - ZnO
- **Data Storage**
- **Photovoltaics (Solar)**
 - CdS, CdTe, Cu-In-Ga-Se



Specialty Inorganic Markets

- **Protective coatings for aerospace applications**
 - TiB_2 , B_4Si
- **Defense Applications**
- **Semiconductor gas precursors**
 - Zn_3As_2
- **Data Storage**
- **Medical devices**
 - V_2O_5
- **Specialty Batteries**
 - Li_2O , CoS_2



Global Chamber Services Value Package

- Shield Cleaning Services Improve raw material utilization, precious metal recovery and equipment uptime improvements
- Mechanical and chemical recovery techniques
- Shield Surface treatment capabilities
- Clean Room environment and packaging
 - Ultrasonic cleaning with particle count monitoring
 - Drying a.k.a. baking a.k.a. out gassing
 - Clean room packaging
 - SPC Data collection
- Custom final packaging
- Precious Metal Management
- Logistics support



Chamber Services/Refine



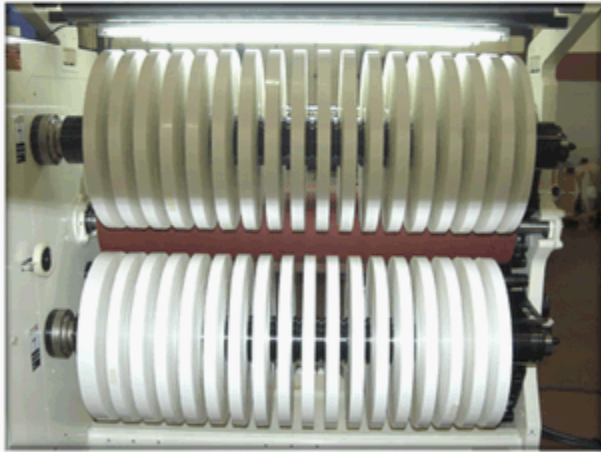
Shield Kit Precision Parts Cleaning



Thin Film Technologies



Techni-Met – Converting and Spooling



Distinctive Competencies



New Horizons

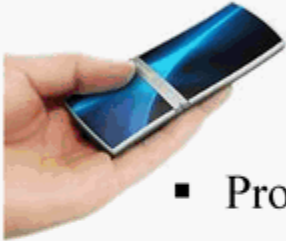
- New Internal Program –
 - “Making Williams Our Customers’ First Choice™”
- Rotatable/Planar Large Area Targets
- Medical Sensors
- Structural Medical Components
- Optical Sensors Fabrication
- Flexible Solar Solutions
- IR Coatings and Packages
- Refining and Recycling- New Materials



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*.



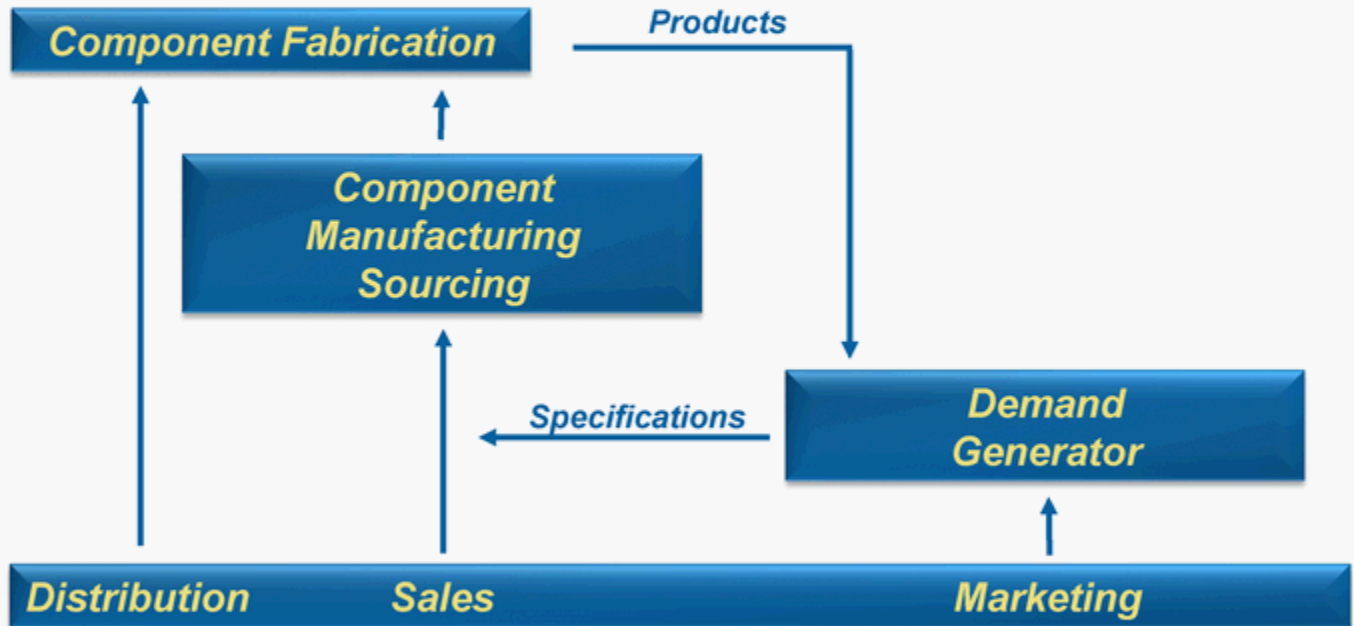
Specialty Engineered Alloys (Alloy Products)

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

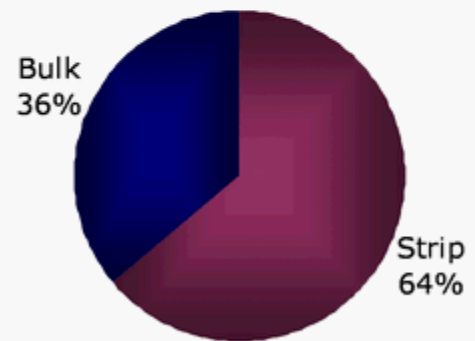


Brush Specialty Engineered Alloys

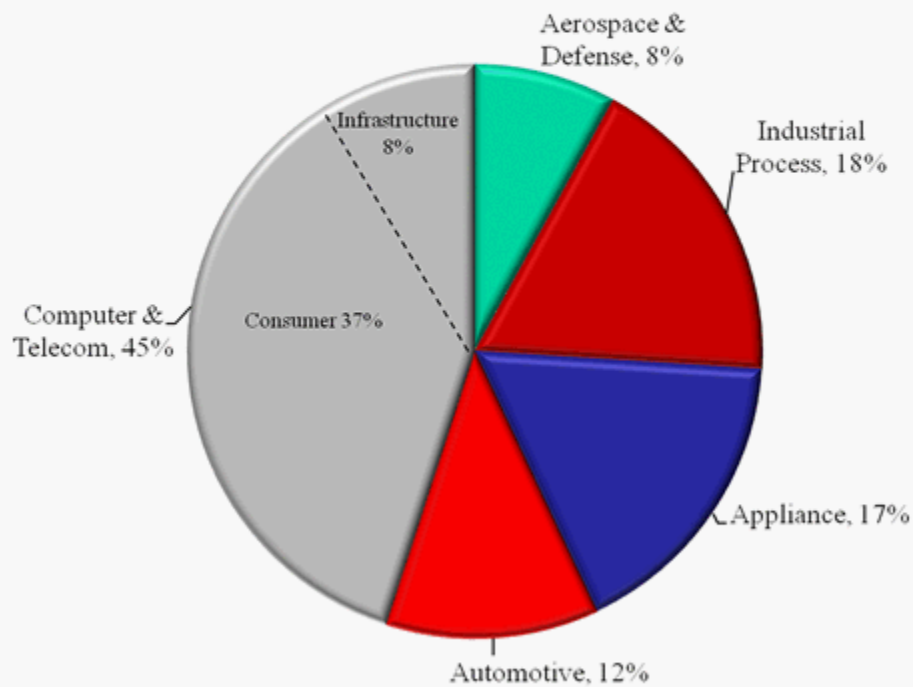
- Manufactures and sells copper and nickel based alloy systems and components metallurgically tailored to meet customers' specific performance requirements

- 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, notebooks, netbooks, plasma & LCD HD televisions, medical electronics, 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, resistance welding components, oil & gas drilling components, plastic mold tooling and telecommunications housing equipment.



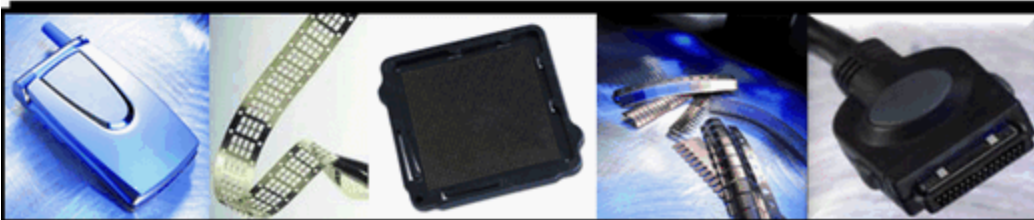
Alloy Products Revenue by Market Year 2009



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, PDAs, Base Stations, Storage Area Networks, Servers, Notebooks, Netbooks, Plasma & LCD HD Televisions and Medical Electronics



BRUSH
WELLMAN
ALLOY PRODUCTS

Strip Products - Strategy

- **Maintain focus on major end-use markets**

- Computer
- Telecommunications (mobile & Infrastructure)
- Automotive
- Appliance
- Military
- Medical
- Consumer electronics



- **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**

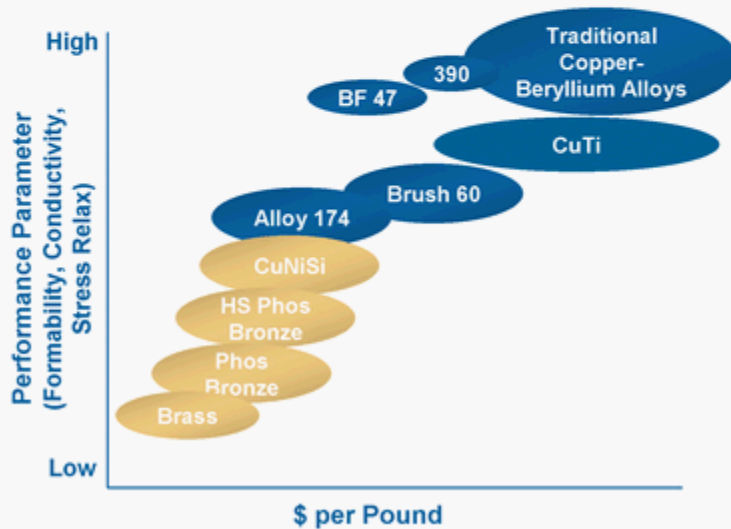
- **Geographic Growth**



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

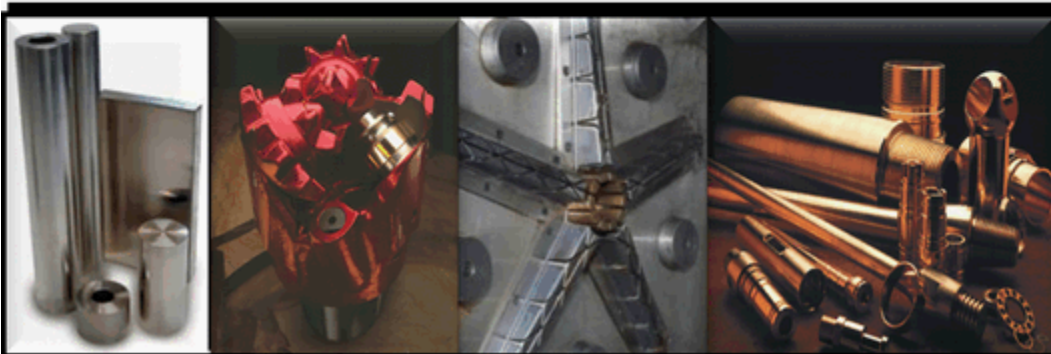
- Unique, high-performance materials
- Technical design capabilities
- Outstanding service center network
- Global marketing, sales and distribution



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 Hardware 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

- **Grow Existing business in finished and semi-finished components**

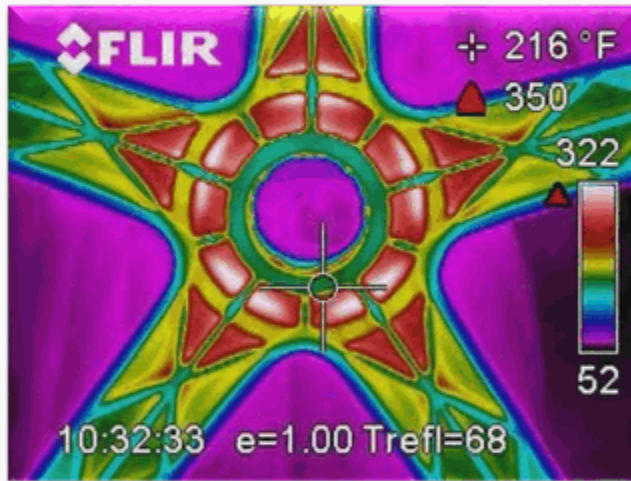
- Offer design assistance and one-stop shopping to end users

- **Geographic Growth**

- Expand commercial operations in Asia Pacific (including India) and Eastern European markets, improve customer awareness and distribution



MoldMAX[®] Alloys for the Plastics Industry



Our engineers use infrared imaging at the customers' facility to pinpoint where MoldMAX[®] will provide the maximum benefit.

*FLIR is a registered trademark of FLIR Systems.

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

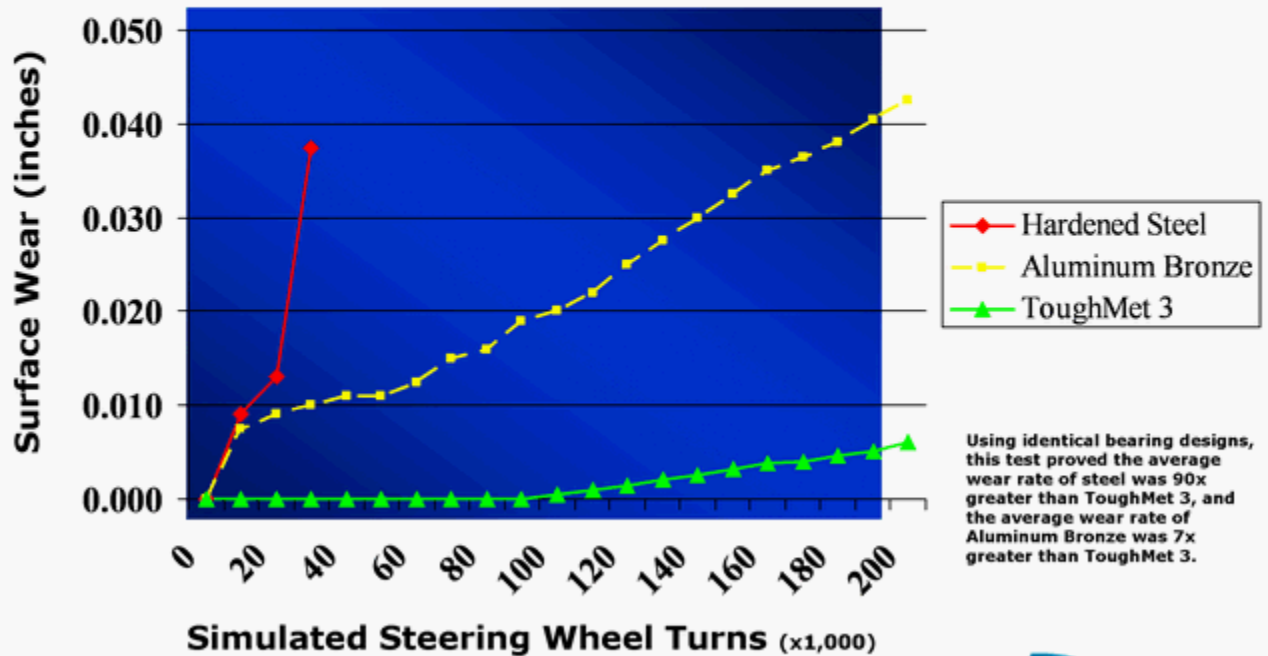
Developing markets/applications where technology is strong:

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

Lorain Technology: Expanding market and application reach



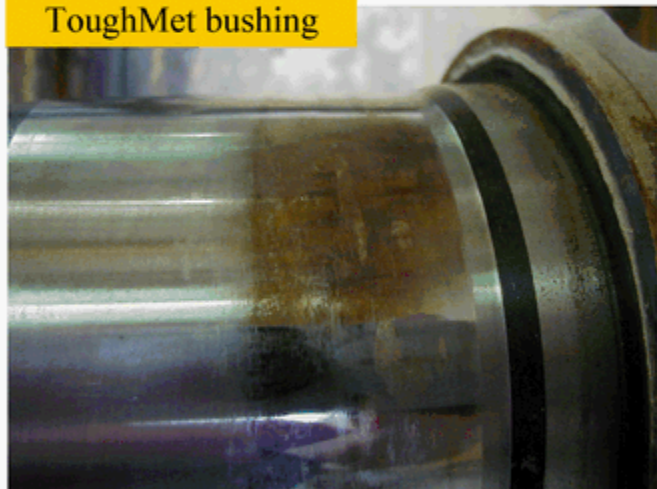
ToughMet® Outlasts Conventional Bearing Materials in 300-ton Mining Truck Steering Test



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.

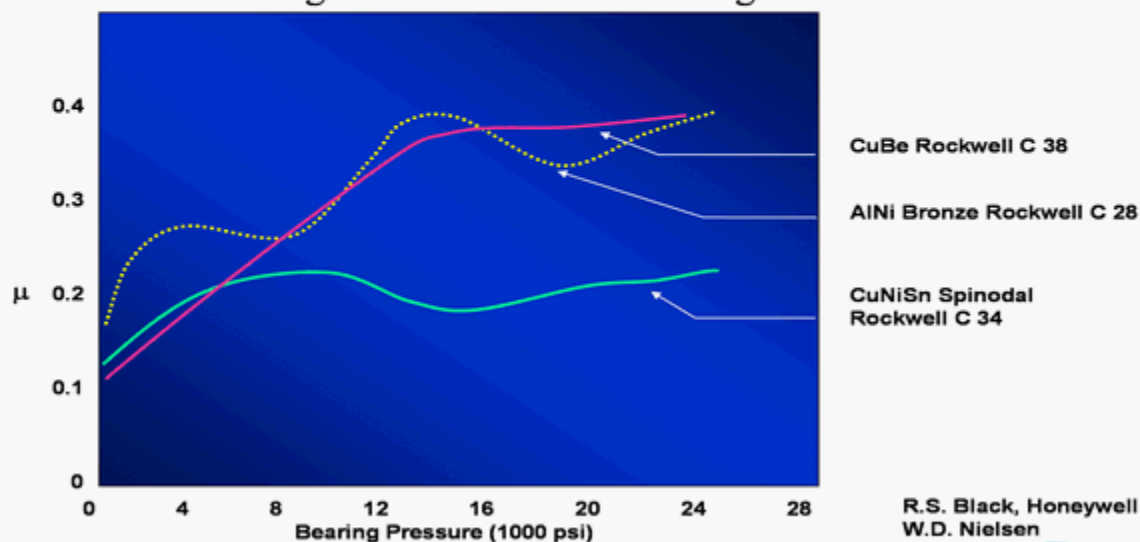
Pin hardness = HRC60.



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

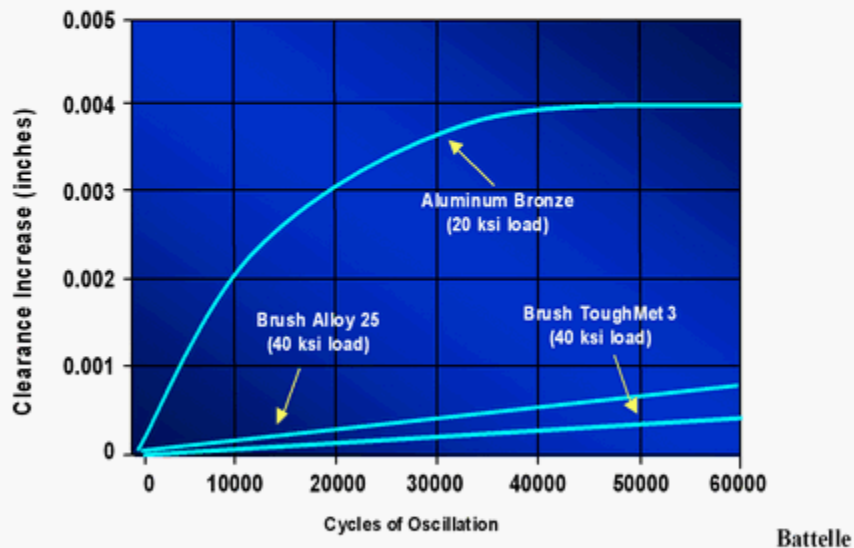


R.S. Black, Honeywell
W.D. Nielsen
1996



Significantly Higher Durability has been Confirmed for ToughMet®

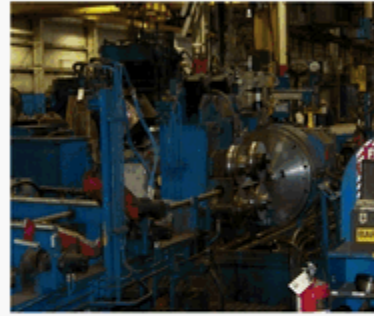
Comparative Sleeve Bearing Wear Tests.



Process – Rod, Bar and Tube

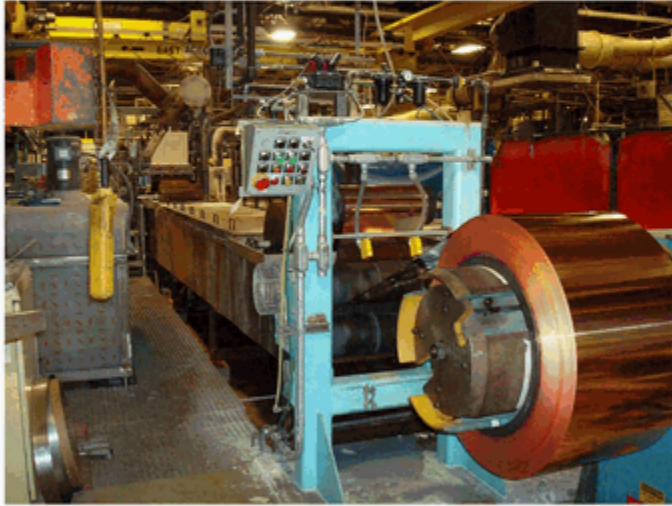


Process – Rod, Bar and Tube



BRUSH
WELLMAN
ALLOY PRODUCTS

Process – Strip



Process – Rod and Wire



Process – Rod and Wire



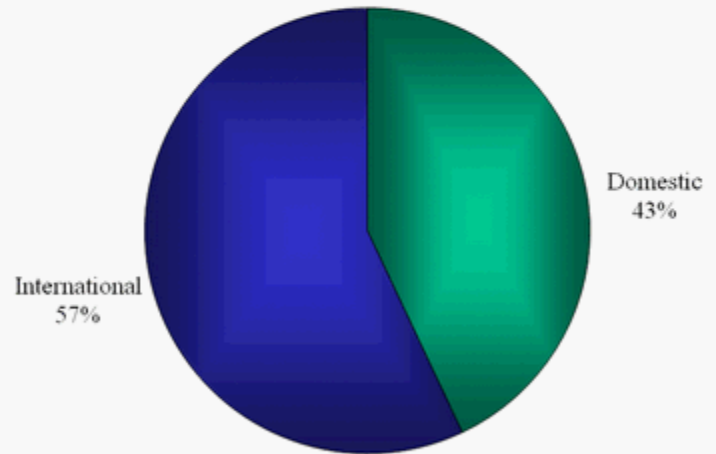
Lorain Casting Facility



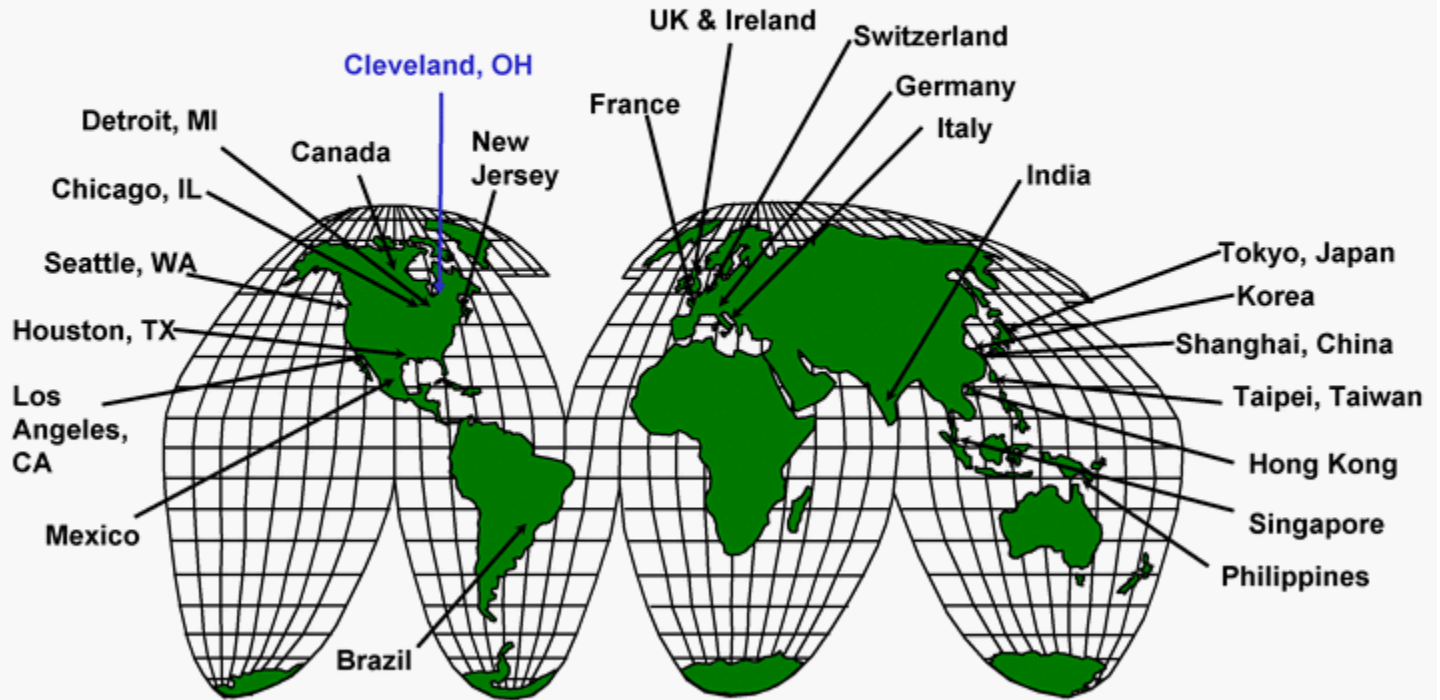
Brush International, Inc.

- 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, Taiwan, and India
- 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 2009*



Global Sales and Distribution Network



Global Reach..... Local Service

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
-

Beryllium and Beryllium Composites Comprises Two Business Units

- Brush Beryllium Products
- Brush Ceramic Products

Brush Beryllium Products

Products

Beryllium Metal - One of the lightest metals known

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

AlBeMet™

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

Brush 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 Beryllium Products

Facilities

Elmore, Ohio

Fremont, California

BRUSHWELLMAN
ENGINEERED MATERIALS

Elmore – Melt Chamber



BRUSHWELLMAN
ENGINEERED MATERIALS

Elmore – CNC Mill



BRUSHWELLMAN
ENGINEERED MATERIALS

Brush Beryllium Products

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 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 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 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

Major Applications, New Products and Platforms

Brush Beryllium Products

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

BRUSHWELLMAN
ENGINEERED MATERIALS

Beryllium Products

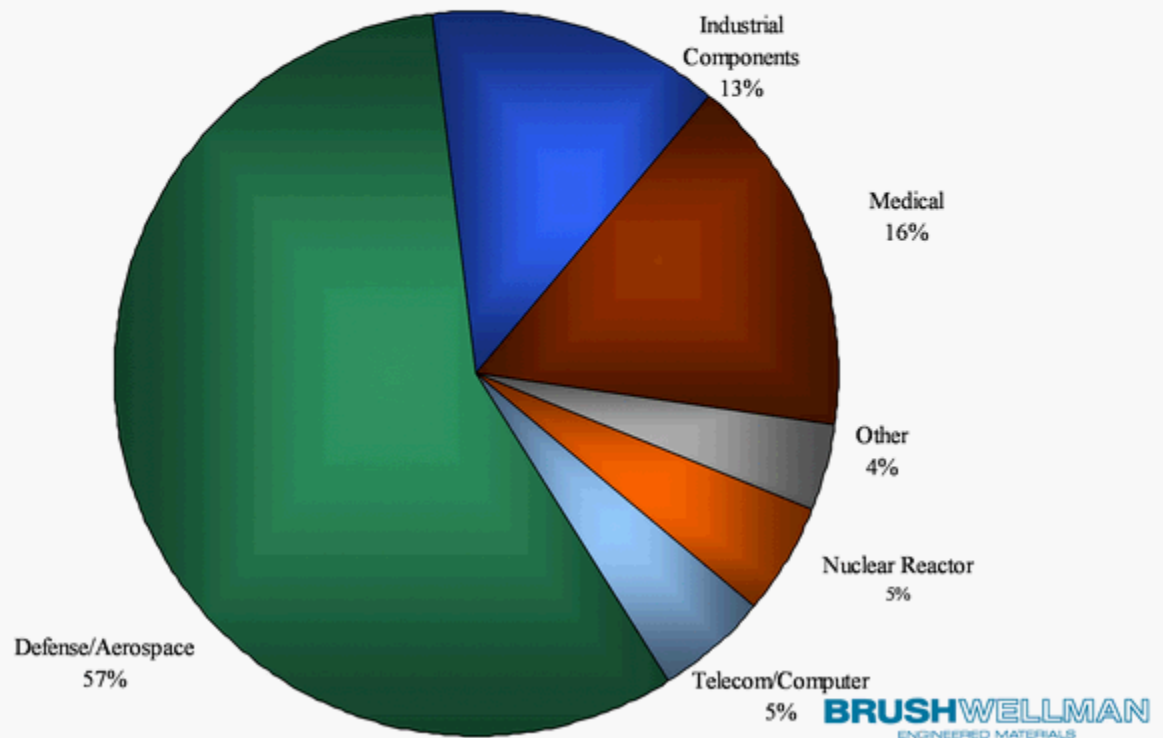
Brush Ceramic Products

- 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

Beryllium and Beryllium Composites

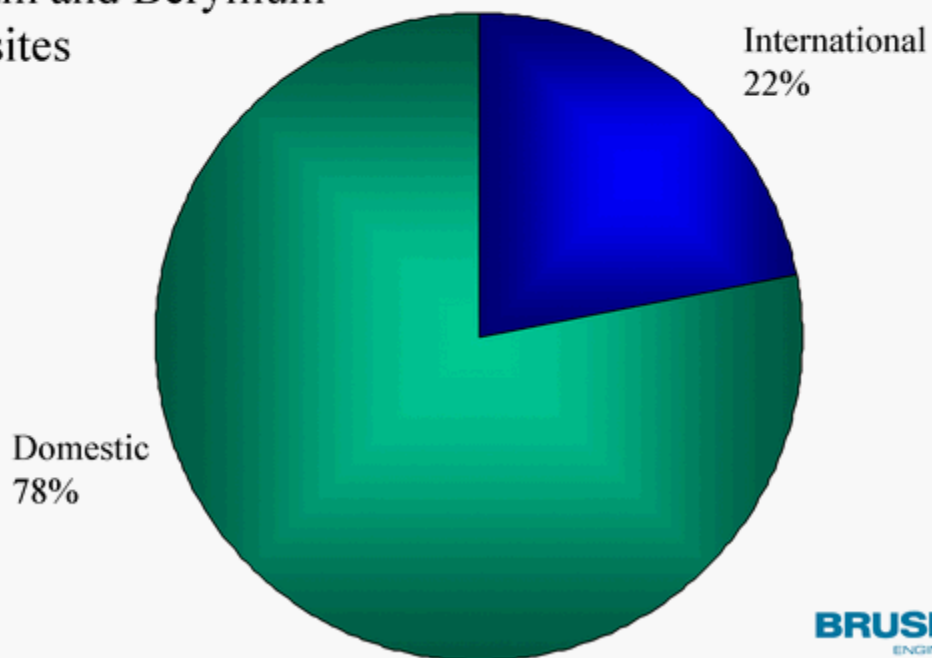
2009 Revenue by Market



International/Domestic Revenue

2009

Beryllium and Beryllium
Composites



BRUSHWELLMAN
ENGINEERED 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***
-

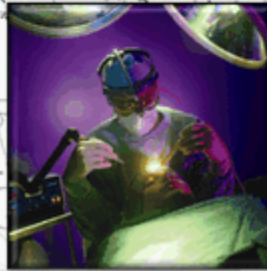
Technical Materials, Inc.

Our Vision



INNOVATIVE MATERIAL SOLUTIONS

Committed to improving our customers'
competitiveness in global markets.





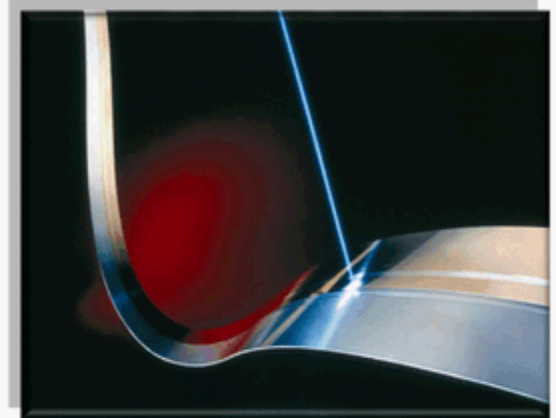
Market History

- When TMI was founded in 1968, its cladding 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 continues to expand globally, partnering with leading high-technology OEMs worldwide.
 - In 2009, New Product Sales accounted for approximately 37% of TMI's sales volume.
-

TMI Process Technologies



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



High-Technology Metal Processing



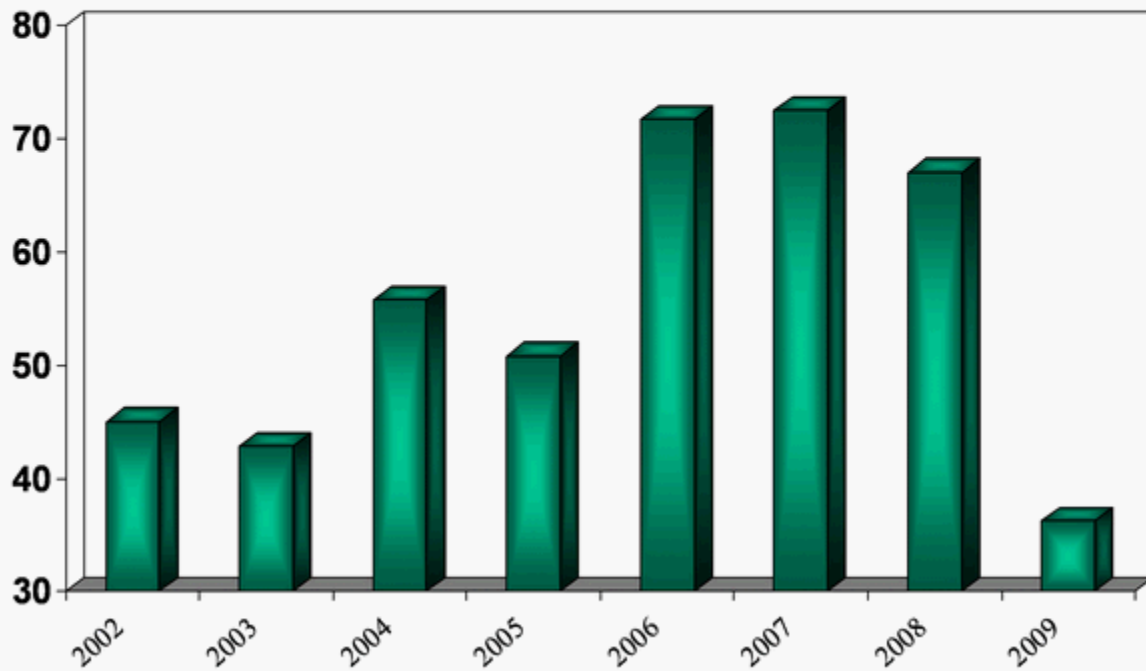
Proprietary Electroplating Technologies



TMI Historical Sales

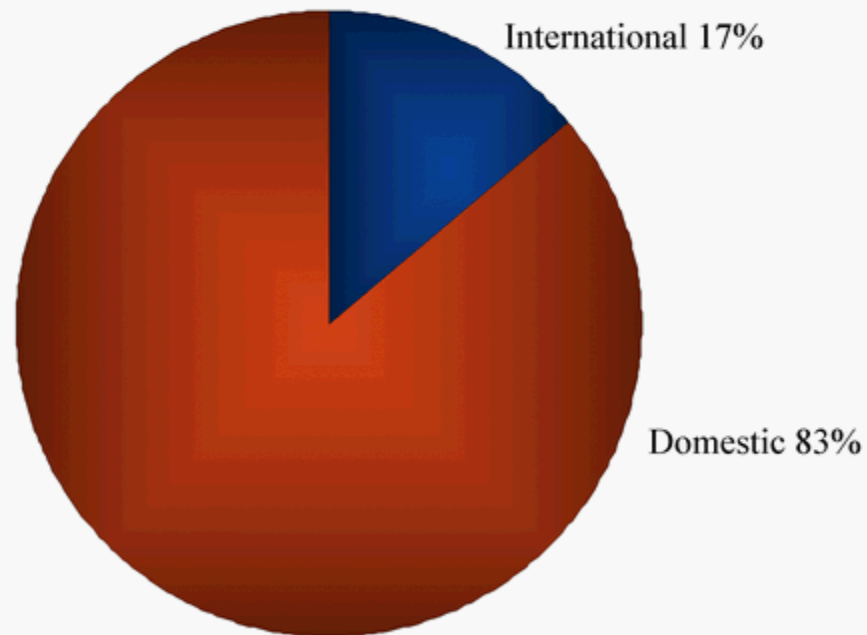


\$ in millions



International/Domestic Revenue

2009



Technology Leader

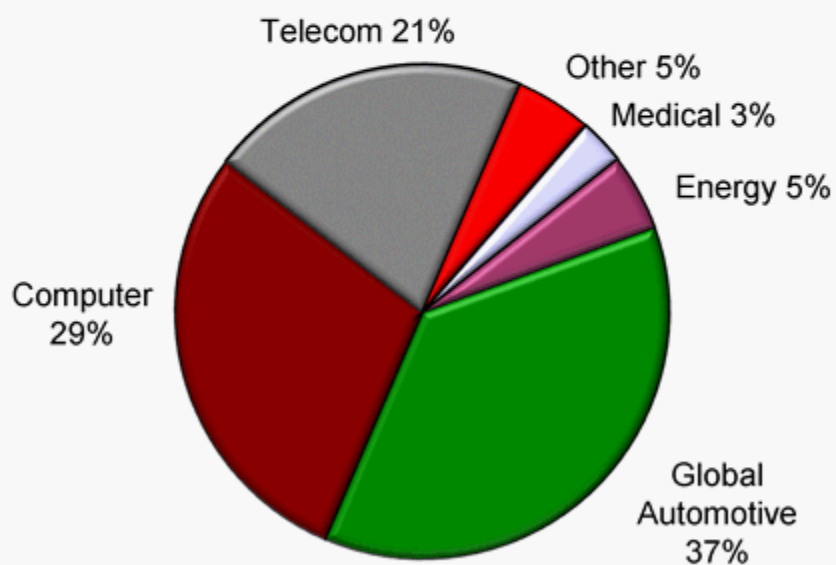


- Quality
 - ISO 9001:2008, Certified by Bureau Veritas
 - ISO 14001:2004, Certified by TÜV
 - Unique Tolerance Capabilities
 - Extensive Digital and Vision-controlled Processing
 - Engineering
 - Metallurgical Design
 - Technical Customer Support
-

Our Major Markets - 2009



- Automotive
- Computer
- Telecom
- Energy
- Medical
- Other

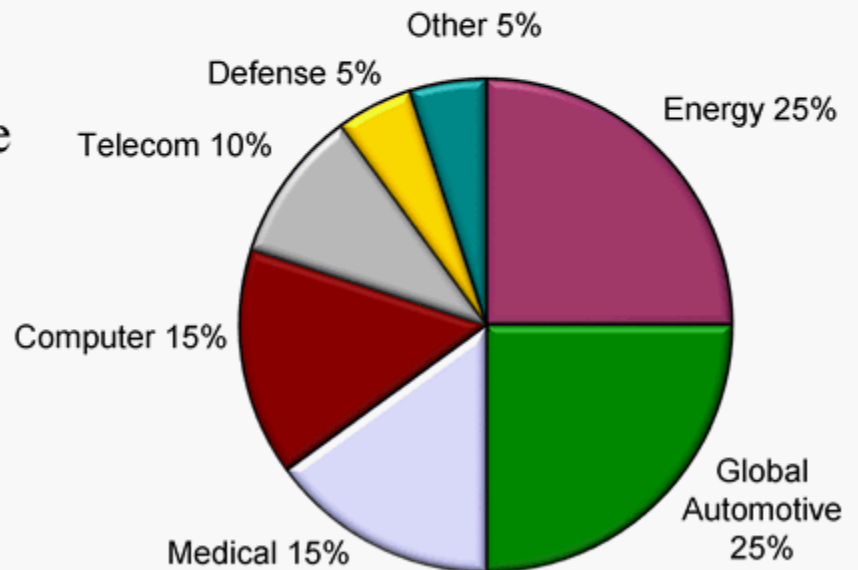


Strategic Plan



3-Year Market Objectives

- Energy
- Global Automotive
- Medical
- Computer
- Telecom
- Defense
- Other



Strategic Growth Markets



- Solar
 - Hybrid & Electric Vehicle Materials
 - Medical Devices
 - Power Electronics
 - Defense
 - Hard Drives
 - Battery
 - Fuel Cells
-

Market: Energy



- Solar
 - Cell Interconnects
 - Discrete Components

 - Fuel Cells
 - High-temperature Components and Materials
-



Market: High-Performance Batteries

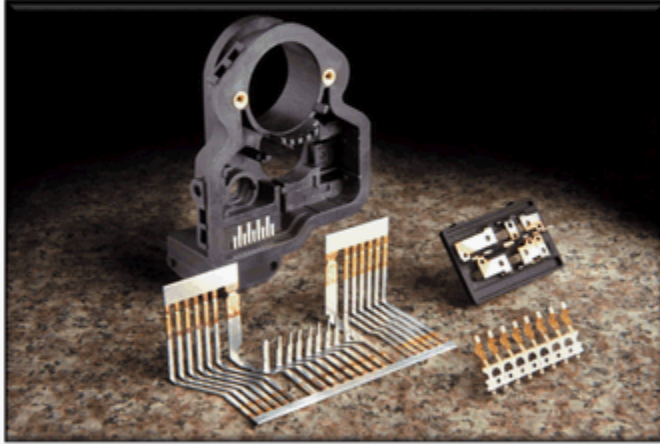


■ Lithium Ion Battery Components

- Pack Interconnects
- Cell Components



Market: Power Electronics



- *High-reliability Connector and Leadframe Materials*
 - Safety Devices
 - Engine Performance Sensors
 - High Temperature Systems

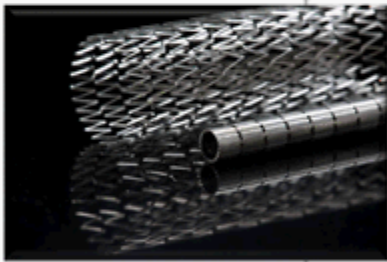
Market: Computer



■ *Hard Drive Suspension Materials*

- Stainless and Aluminum Composites
 - Precision Stiffness-to-Mass Performance
-

Market: Medical



- Cardiac Nitinol Strip
- Electroplated Drug Delivery Electronics
- Ultra-Precision Cutting Materials
- Niobium, Tantalum, and Titanium Specialty Materials

Market: Consumer Electronics



- Leadframes for Digital Camera Sensors
 - Cell Phone Passive Components
 - Specialty Clad Materials
-

2010 Growth Strategy

- Focus on High-Growth Niche Markets for TMI's Proprietary Material Capabilities
 - Continually Expand Process Capabilities to Meet Next Generation's High Tech Requirements
 - Continue TMI's Growth in the Far East and Europe
 - Drive Strategic Product Development in Energy, Medical, and Defense Markets
-

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>
12/31/08	9	36
4/03/09	9	37
7/03/09	8	29
10/02/09	7	26
12/31/09	4	8