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

**FORM 8-K**

**CURRENT REPORT**

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

**Date of Report (Date of earliest event reported) May 12, 2009**

**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))
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**Item 7.01 Regulation FD Disclosure**

On May 12, 2009, Brush Engineered Materials Inc. updated its website with a slide presentation that will be presented by Richard J. Hipple, Chairman, President and Chief Executive Officer to investors on May 12, 2009. A copy of the presentation is attached hereto as Exhibit 99.1.

**Item 9.01 Financial Statements and Exhibits**

Exhibits:

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
99.1	May 2009 Presentation

## 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.

May 12, 2009

Brush Engineered Materials Inc.

By: Michael C. Hasychak

Michael C. Hasychak

Vice President, Treasurer and Secretary



*... a leader in creating innovative engineered material solutions and services to make our customers competitive on a global basis*

*... while enhancing earnings growth, shareholder value, and stability ... by broadening technology, market, and geographic reach*

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***Investor Presentation***  
***May 2009***

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## Forward-Looking Statements

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

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

## 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 – Major Business Units

### Q1-2009 Revenue

#### *Advanced Material Technologies and Services*

##### Williams Advanced Materials

PVD Targets  
Optical Coatings  
Refining  
Electronic Packaging  
59%

#### *Specialty Engineered Alloys*

##### Alloy (Cu based Be and Ni Alloys)

Electronic Connectors  
Industrial Components  
27%

#### *Engineered Material Systems*

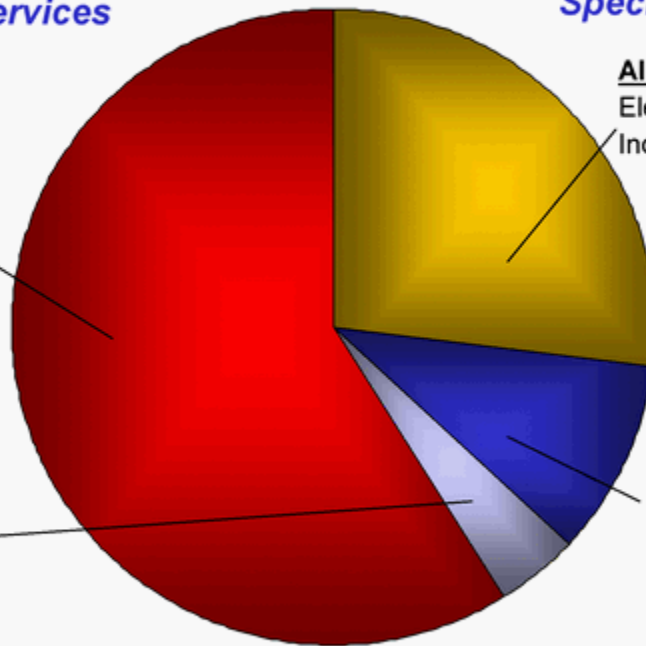
##### TMI (Specialty Clad and Plated Strip)

Automotive Connectors  
Telecommunications  
Consumer electronics  
4%

#### *Be and Be Composites*

##### Be Products

Defense/Aerospace  
Specialty Commercial Products  
10%



## 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 4/03/09
- **Market Cap:** Approximately \$284 million at 4/03/09
- **Component of:** S&P Super Composite 1500, Russell 2000 S&P Small Cap 600
- **Annual Revenue:** \$910 million @ 12/31/08
- **Q1 2009 Revenue:** \$135 million @ 4/03/09
- **Diluted EPS:** \$(0.40) which includes a net inventory valuation charge, severance costs due to manpower reductions and a pension benefit resulting from the reduction in workforce, or \$(0.36) excluding the above items
- **Debt to Total Capitalization: (net of cash)** 10% at 4/03/09

## 2008 Recap

- Sales of \$910 million
- Diluted earnings per share of \$0.89\*
- Acquisition of assets of Techni-Met, Inc. for \$86.5 million
  - Techni-Met produces precision precious metal coated flexible polymeric films used in a variety of high-end applications, including diabetes diagnostic test strips
- Contract with government to build new beryllium pebbles plant
- Perpendicular media product qualifications progressing

\* Includes certain non-operating items. The operating run rate is \$1.44. See Reconciliation of Non-GAAP Financial Measures

## Non-GAAP Financial Measures

	Fourth Quarter Ended		Twelve Months Ended	
	Dec. 31, 2008	Dec. 31, 2007	Dec. 31, 2008	Dec. 31, 2007
GAAP diluted EPS	\$ (.16)	\$ .60	\$ .89	\$ 2.59
Benefit on sale of ruthenium inventory	-	-	-	(.70)
Lower of cost of market ruthenium inventory charge	.30	.02	.50	.15
Loss on sale of a subsidiary	-	-	-	.02
Accounts receivable correction related to 2007	-	(.04)	.09	(.09)
Discrete tax items and other	-	-	(.06)	-
Non-recurring purchase accounting costs	-	-	.02	-
Litigation settlement in 2007	-	(.27)	-	(.27)
Non-GAAP operating run rate	\$ .14	\$ .31	\$ 1.44	\$ 1.70

## Q-1 2009 Recap

- Revenue \$91 million or 40% below prior year driven by global events and supply chain inventory adjustments
  - Consumer electronics markets especially weak
  - Defense and medical were up in Q-1
- Net loss was \$(0.40) a share and was expected
- No real recovery noted in the quarter, albeit the bottom does appear to have occurred
- Cost reduction and cash control actions were significant
  - Variable margins 2.0 pts above prior year on \$91 million less sales
  - Overheads down due to cost reductions
  - Pension “curtailment” helped the P&L by \$0.04 a share
- Severance and inventory charges hurt the P&L by \$(0.08) a share

## 2009 Outlook

- Not much clarity; still uncertain about Q-2 and beyond, but some markets seem to be improving
- Order entry is improving, especially in the consumer electronics-oriented markets
- Full impact of cost reduction by mid 2<sup>nd</sup> quarter
- Cost reductions yield significant leverage on incremental sales
- Expect Q-2 loss to be less than half the 1<sup>st</sup> quarter level
- Expect to be profitable in 2<sup>nd</sup> half

# Strength in Challenging Times

## 12/31/08 Balance Sheet

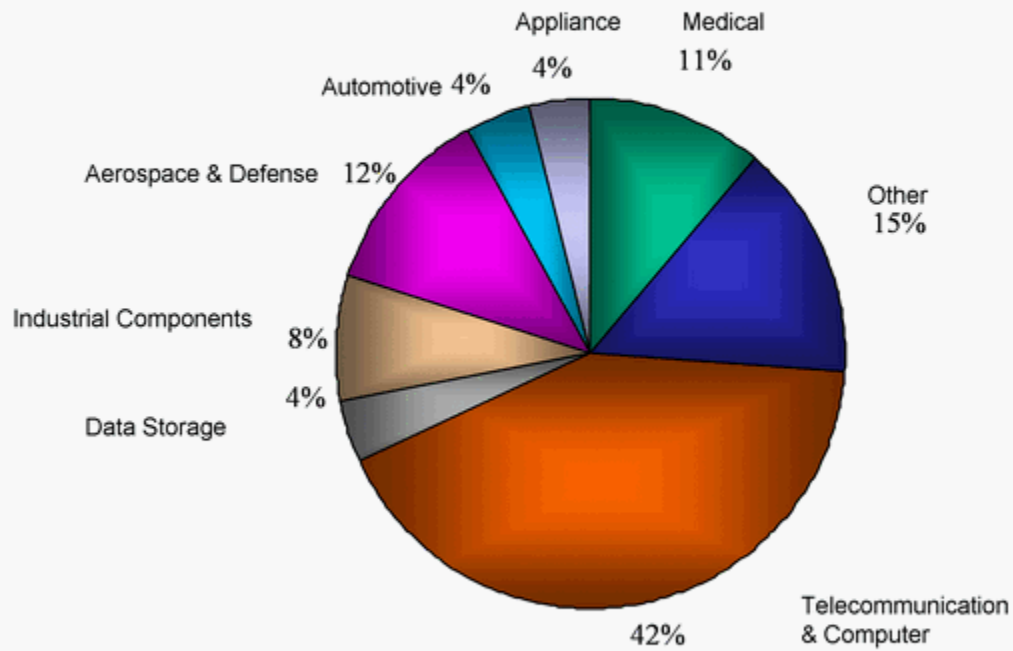
- Revolver
  - \$240 mm committed facility, matures November 2012
  - More than \$200 million in availability
- Market Strength
  - Stronger position in medical, defense, optics and solar
  - Market diversification in wireless and photonics, telecommunication and computer, oil & gas, heavy equipment and aerospace

## Advancing the World's Technologies

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

# Global Leader in High Performance Engineered Materials

## Q-1 2009 Revenue by Market





## Typical End Uses



Notebook computers  
and network servers

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



Defense



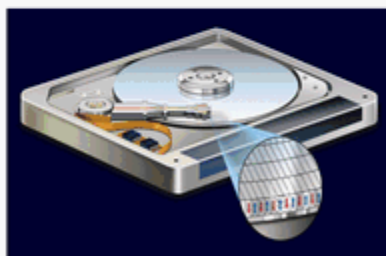
Commercial  
Aerospace



Electronic components  
in cars and trucks



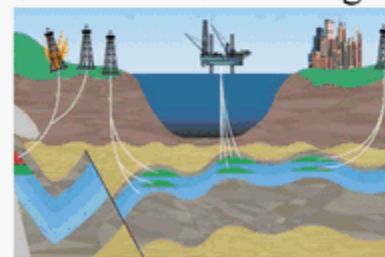
Industrial products for  
Oil & Gas and Mining



Medical  
Devices



Data Storage



# 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

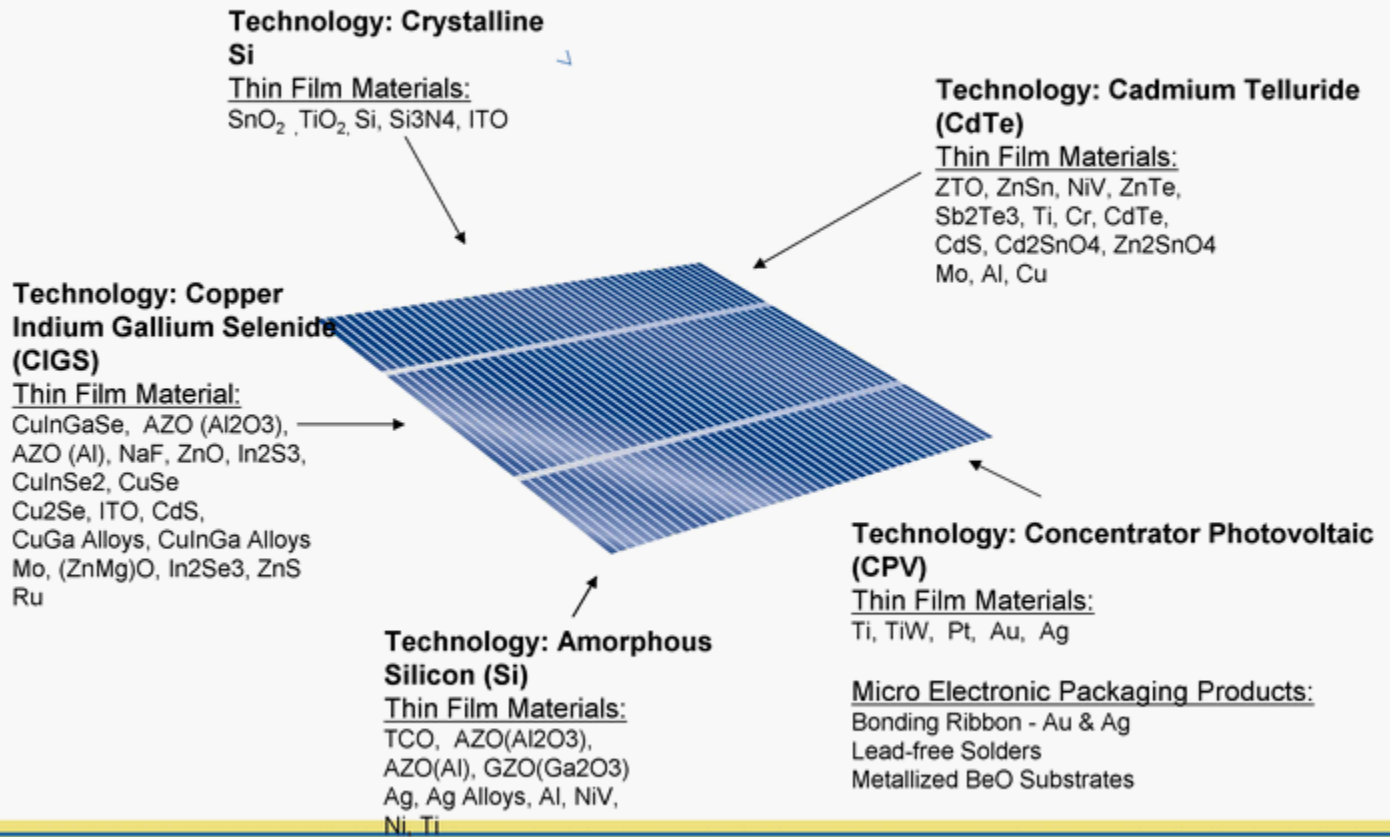
## I/O Connector Contacts (Alloy):

- 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)



# Applications – Hard Disk Drives

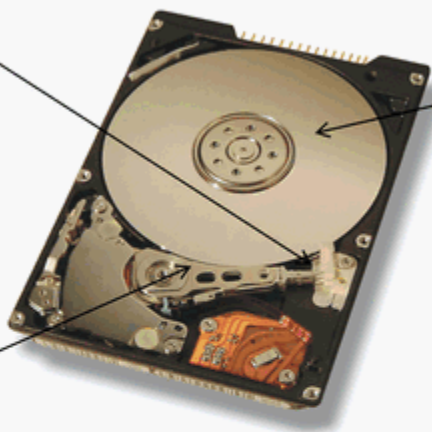
Thin film materials for the read/write head. (WAM)

•Sputtering Targets/Evaporation Materials (Precious Metals, Alloys, Non-Precious Metals, Alloys, Magnetic Materials, Heusler Alloys and Oxides)

Disk Drive Arm (TMI)

•Clad Materials (Aluminum and Stainless Alloys)

*Applications growing into many commercial and mobile electronic products.*



Thin film materials for the Disk Substrate (WAM)

•Sputtering targets (Precious Metals, Alloys, Non-Precious Metals, Alloys, Magnetic Materials, Oxides)



Example – Hard Disk Drive 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 - Oil & Gas

## Wellhead Control Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3



## Drill Bits (Alloy):

- Brush Alloy 25
- ToughMet® 3

## Structural Rig Components (Alloy):

- ToughMet® 3

## Directional Drilling Equipment (Alloy):

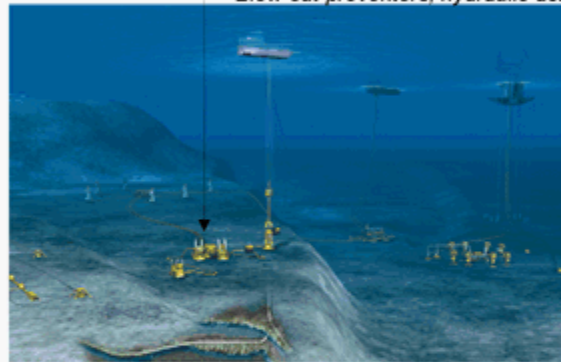
- Brush Alloy 25
- ToughMet® 3

MWD, LWD, MPT systems

## Under Water Wellhead Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3

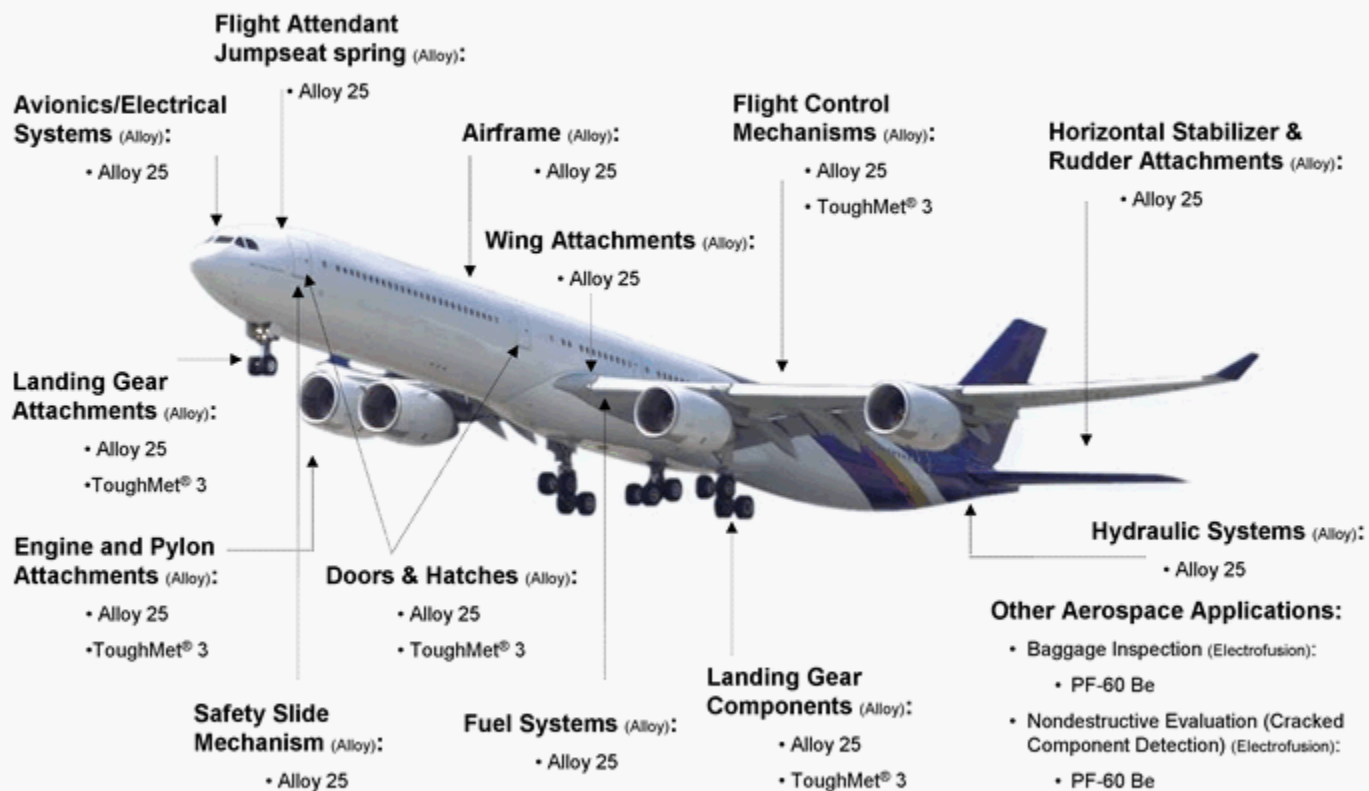
Blow out preventers, hydraulic actuators



## 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

## Seizure Control (WAM/TFT):

- Thin Film Deposition Implantable Electrode – Parkinson's disease (R&D)

## X-Ray Mammography (Electrofusion):

- IS-50M Be

## Subcutaneous Glucose Analysis (WAM/TFT/TechniMet):

- Thin Film Coatings – Electrode Monitoring device

## External Glucose Analysis

(WAM/TFT/Techni-Met):

- Subcutaneous sensors for glucose measurement

## Insulin Pump (Alloy):

- EMI Shielding
- Electrical Terminals in Connectors
- Mechanical Chips
- Connector Systems for equipotential grounding



## Dental X-Ray (Electrofusion):

- PS-200 Be

## Cardiac Rhythm Management (TMI):

- Electronic Interconnects/Components
- Niobium/Titanium Electron Beam Weld

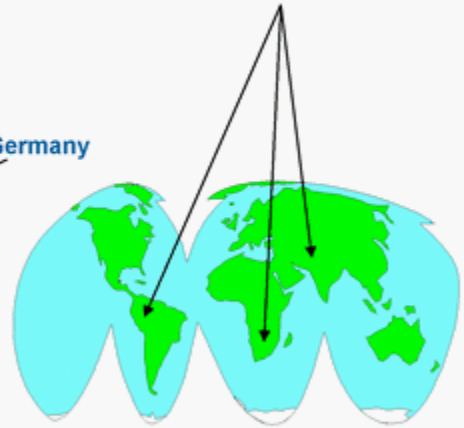
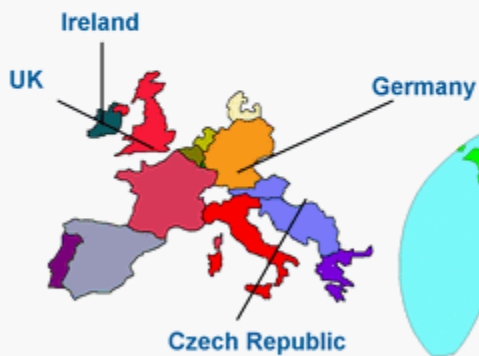
## Other Medical Applications:

- CT Scan (Electrofusion): PF-60 Be; PS-200 Be
- Bone X-Ray (Electrofusion): PF-60 Be
- Ultrasonic Scalpels (Be Products): S-200F Be
- Advanced Drug Delivery Components (TMI): Clad Stainless
- Hypodermic Components (TMI): Multigauge Stainless
- Diagnostic Electronic Components (TMI): Gold Plating
- Anesthesia Monitoring Components (TMI): Gold Plating
- Biopsy Instruments (TMI): Electron Weld Beam Stainless
- Cauterizing Electronic Scalpel (TMI): Clad Stainless

# Global Sales and Distribution Network

- Operations in the U.S. and eleven foreign countries
- Q1 2009 International sales were \$42 million (31%)
- Act globally ... service locally!

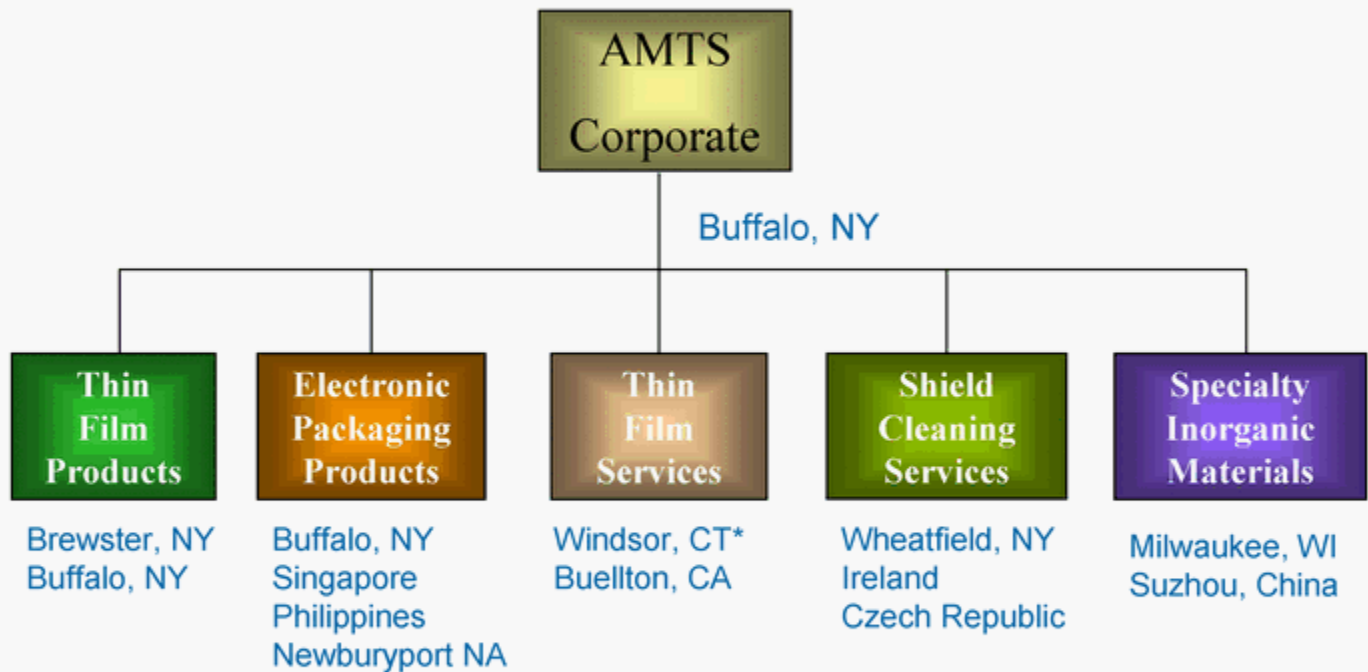
◀ ----- Asia / Pacific ----- ▶    ◀ ----- Europe ----- ▶    ◀ - Exports from USA - ▶





## Advanced Material Technologies and Services Business Structure Today and Evolving

### Operating Locations



Additional Service Operations: Taiwan, Suzhou, Ireland, Singapore, California

\*acquired 2-4-08

## Williams Advanced Materials also has broad capabilities in precious and non-precious materials

- **Comprehensive product line**
  - High purity / proprietary PVD targets
  - Micro-electronic packaging materials
  - Specialty inorganic chemicals
- **Strong end use markets**
  - Data storage
  - Wireless/handsets
  - Semiconductor
  - Optical media
  - Photonics
  - Optics
  - Medical
  - Solar
- **Industry leading service and support**
  - Global sales and applications support
  - "Best-in-class" response times
  - Growing business in chamber services
  - Low-cost operations in Singapore, Taiwan and the Philippines
  - New offices in Korea, Japan, Shanghai, Czech Republic
  - Acquisition of Techni-Met



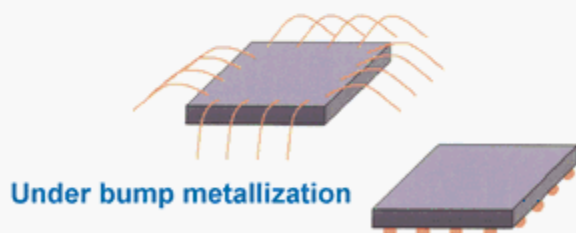
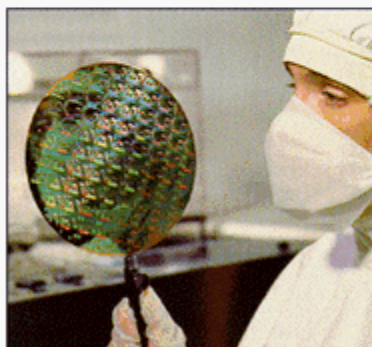
## ***Key Markets – Wireless and Photonics***

- **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)**



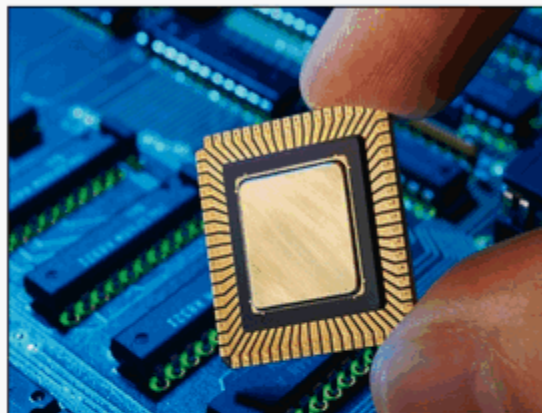
## Key Markets – Semiconductor Wafer Fabrication

- 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.



Solder preforms and clad materials

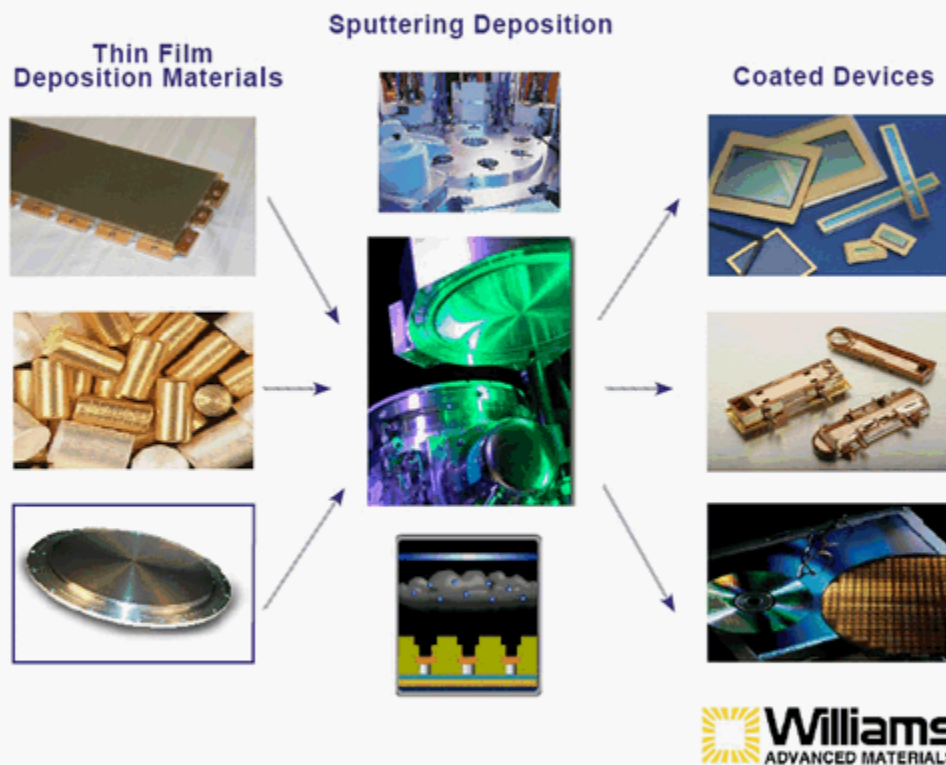


# ***New Product and Technology Development***

- Magnetic Media and Head Materials
- Under Bump Metallization (UBM) for Flip Chip
- FCCL Materials
- Wireless
- Visi-Lid™ - A transparent lid for New Photonics applications
- Expanded refining/chamber services supporting the thin film materials business
- Silver Alloys for HD-DVD and Blue Ray Disc manufacturing
- Solar Panel Thin Film and Concentrator Materials
- MEMS and Photovoltaic Packaging Materials
- Nanotechnology Materials
- High Intensity LEDs
- High Purity Beryllium
- Truextent™ speaker domes
- Eco-Ru™ Sputtering Target
- Precious Metal Rod
- Li Ion Battery Interconnects
- Optical coating materials
- ToughMet® Alloy for High Volume Bearing Applications



# Physical Vapor Deposition (PVD) Process



# World's only Fully Integrated Beryllium Producer

**Bertrandite Ore  
Mining & Extraction**



**Delta, UT**

**Casting, Rolling  
& Finishing**



**Elmore, OH**

**Thin Gauge Rolling  
& Finishing**



**Reading, PA**

**Service &  
Distribution Centers**



**Global Network**

*New Beryllium Pebbles Plant underway with DOD Title III funding,  
targeted for completion in 2010*

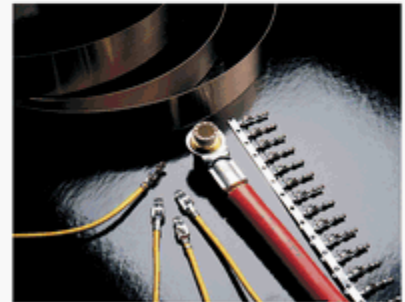
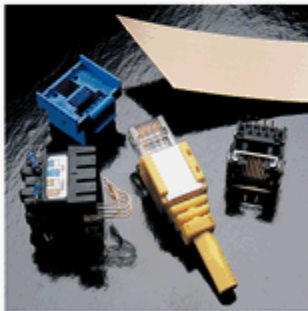
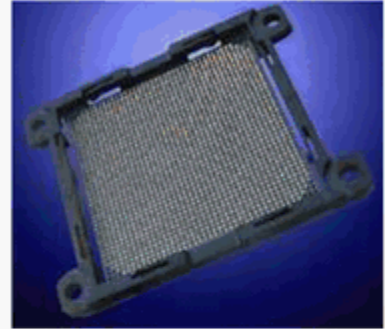


# Strip Alloy Applications

(strength, conductivity, spring characteristics ... typically 1% to 2% Beryllium)

## *Reliability and Miniaturization*

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



# Bulk Alloy Applications

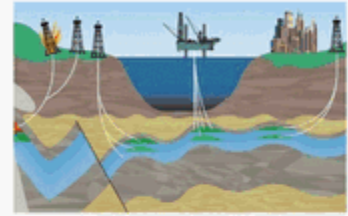
(strength, corrosion resistance, non-galling, conductivity ... typically 1% to 2% Beryllium)

- 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



# Toughmet® - a new unique solution for the most challenging wear and load conditions

- Oil & Gas...deeper drilling...tougher conditions
  - Rotary steering drills
  - Sour well drilling and completion tools
  - Sub-sea control valves
  - Blow-out preventions
- Heavy equipment ... larger equipment ... critical uptime
  - Critical bearings in mining and construction
  - Large vehicle drive trains
  - Industrial pumps
  - Manufacturing equipment bearings
- Aerospace ... larger planes ... heavier loads
  - Landing gear, wheels, and braking systems
  - Airframe attachments
  - Fluid power systems, actuators
  - Boeing 777, 787; Airbus 380, 350
  - Military – JSF35, Airbus 400M



*Replacing bronze, stainless, and nickel alloys ... strength, lubricity, and wear resistance*

## Beryllium Products – Applications

(lightweight, strength, dimensional, stability...typically 40% to 100% Beryllium)

- Optical mirrors for NASA space-based telescopes
- Infrared sensors for fighter jet optical targeting, radar and navigation/guidance systems and special ops (FLIR)
- Structural and electronic components for satellites
- X-ray windows in medical, security and commercial imaging systems
- Diaphragms for commercial and concert quality speaker systems



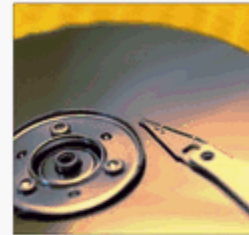
# Technical Materials, Inc. – solving customers' problems with engineered strip metals

## Mill Products

- Specialty cladding and inlay
- Electron beam welding of dissimilar materials
- Profiling shapes by milling and/or grinding
- Close tolerance rolling

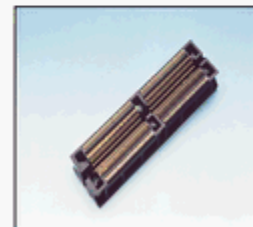
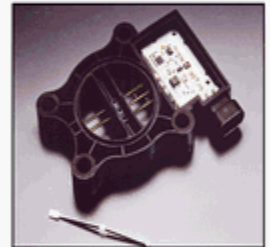
## Electroplating

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



**Disk  
Drive  
Arms**

**Automotive  
Control  
Components**



**Specialty  
Electronic  
Connectors**

*Automotive, Telecom/Computer, Medical, Energy*

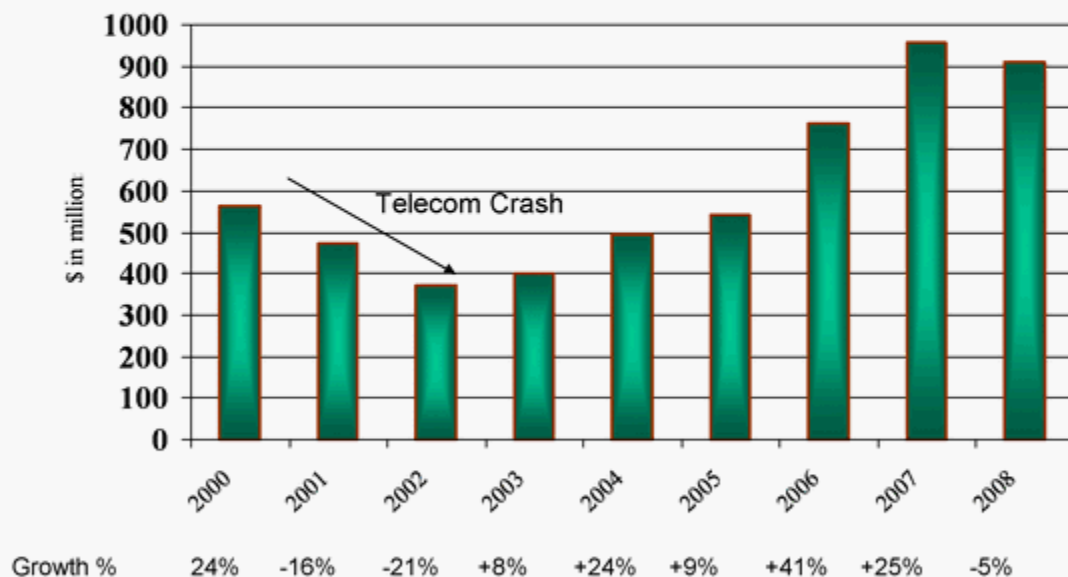


## BEM – Execution Initiatives

- Profitable organic growth through new products, new applications, and new services
  - Close collaboration with customers
- Expansion of international base and sales
- Broaden markets and technology
- Leverage above through "smart" acquisitions
- No let up in manufacturing excellence ... Lean Sigma process
- Increasing shareholder value
- *Having the ability and passion to thrive on change !!!*

## Annual Revenue: Historical

*Our diversification and value creation initiatives are leading to strong growth in revenue and profitability*



## 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



# 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