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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, 2008**

**Brush Engineered Materials Inc.**

(Exact name of registrant as specified in its charter)

Ohio

(State or other jurisdiction  
of incorporation)

001-15885

(Commission  
File Number)

34-1919973

(IRS Employer  
Identification No.)

17876 St. Clair Avenue, Cleveland, Ohio

(Address of principal executive offices)

44110

(Zip Code)

Registrant's telephone number, including area code 216-486-4200

Not Applicable

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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### Item 7.01 Regulation FD Disclosure

On May 12, 2008, Brush Engineered Materials Inc., an Ohio corporation (the “Company”), updated its website with a slide presentation that will be used for investor presentations. 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>
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99.1	May 2008 Presentation
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### 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.

May 12, 2008

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 2008***

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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

### Q-1 2008 Revenue

#### *Advanced Material Technologies and Services*

##### Williams Advanced Materials

PVD Targets  
Optical Coatings  
Refining  
Electronic Packaging  
53%

#### *Specialty Engineered Alloys*

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

Electronic Connectors  
Industrial Components  
32%

#### *Engineered Material Systems*

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

Automotive Connectors  
Telecommunications  
Consumer electronics  
8%

#### *Be and Be Composites*

##### Be Products

Defense/Aerospace  
Specialty Commercial Products  
6%

*Other* 1%

# 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 20.4 million at 3/28/08
- **Market Cap:** Approximately \$540 million at 3/28/08
- **Component of:** S&P Super Composite 1500, Russell 2000  
S&P Small Cap 600
- **Annual Revenue:** \$956 million @ 12/31/07
- **First Quarter Revenue:** \$226 million @ 3/28/08
- **First Quarter Diluted EPS:** \$0.22 for Q1-2008 which includes an accounts receivable correction relating to 2007, a change in a deferred tax asset valuation and non-recurring purchase accounting costs, or an operating rate of \$0.35 excluding the above items
- **Debt to Total Capitalization:** 20% at 3/28/08



## 2007 Recap

- Record sales of \$956 million, up 25% over 2006
- Earnings per share of \$2.59 compares to prior year's \$2.45
- Earnings per share of \$1.79\* compares to prior year's \$1.38 excluding items that should not repeat
- Sales growth, adjusting for metal price increased 20%
- A new annual sales high, even after adjusting for metal price inflation
- Twenty consecutive quarters of sales growth, nine consecutive quarters of double digit growth
- Operating profit was 6.4% of sales (excluding the benefit of non-recurring charges and metal price inflation) compared to 5.7% in 2006

\* \$1.79 excludes a litigation settlement, lower of cost or market charges, the loss on the sale of a small business and the gain on the sale of low cost ruthenium purchased in 2006

## Q1 2008 Recap

- Sales of \$226 million
- Earnings per share of \$0.22\*
- Acquisition of assets of Techni-Met for, Inc. for \$87.4 million
  - Techni-Met produces precision precious metal coated flexible polymeric films used in a variety of high-end applications, including diabetes diagnostic test strips.

\* Includes an accounts receivable correction relating to 2007, a change in a deferred tax asset valuation and non-recurring purchase accounting costs

## 2008 Outlook

- Forecasted sales growth rate in 2008 in double digits
- Stronger demand as the second quarter begins and expectations for higher shipments of perpendicular media materials as the year progresses
- Continued strength from the oil and gas, heavy equipment, aerospace, medical, telecom and consumer electronics markets
- Current expectations are for significant quarter over quarter improvement in operating earnings as the year progresses
- Weak first quarter start, but defense order entry rates have significantly picked up
- Potential for EPS to be as much as 30% greater than the 2007 operating run rate of \$1.79 per share\* (range of \$1.80 to \$2.20 per share)

\* \$1.79 excludes a litigation settlement, lower of cost or market charges, the loss on the sale of a small business and the gain on the sale of low cost ruthenium purchased in 2006

## Strong conditions in key markets driving solid sales and earnings growth

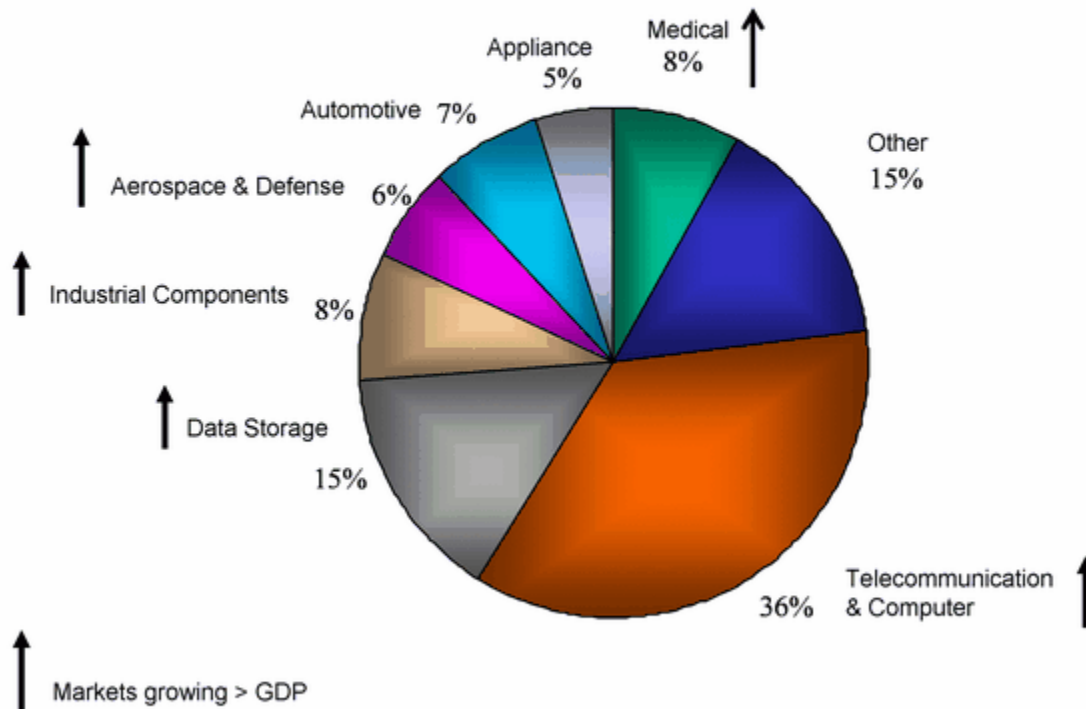
- Strong sales growth driven by
  - Broad based demand increase and new products
  - Added sales from acquisitions
  - Higher metal prices
- Consumer electronics a primary factor
  - Hard disk drives/data storage
  - Portable devices, such as cell phones
  - Gaming devices
- Industrial products growth another important factor
  - Oil and gas
  - Heavy equipment
  - Aerospace
  - Sales for the medical market should continue to grow with the acquisition of Techni-Met

## 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

## Q1 2008 Revenue by Market



## Typical End Uses



Notebook computers  
and network servers

Cellular phones, i-Pods and other  
wireless communication devices



Defense



Electronic components  
in cars and trucks



Commercial  
Aerospace



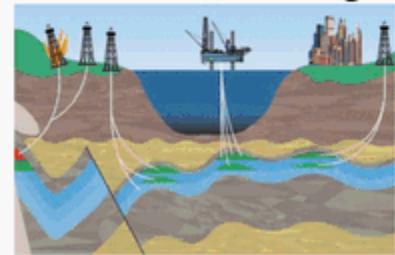
Industrial products for  
Oil & Gas and Mining



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 – Hard Disk Drives

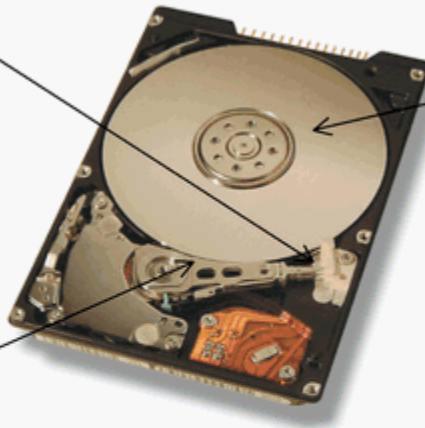
Thin film materials for the read/write head. (WAM)

•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)

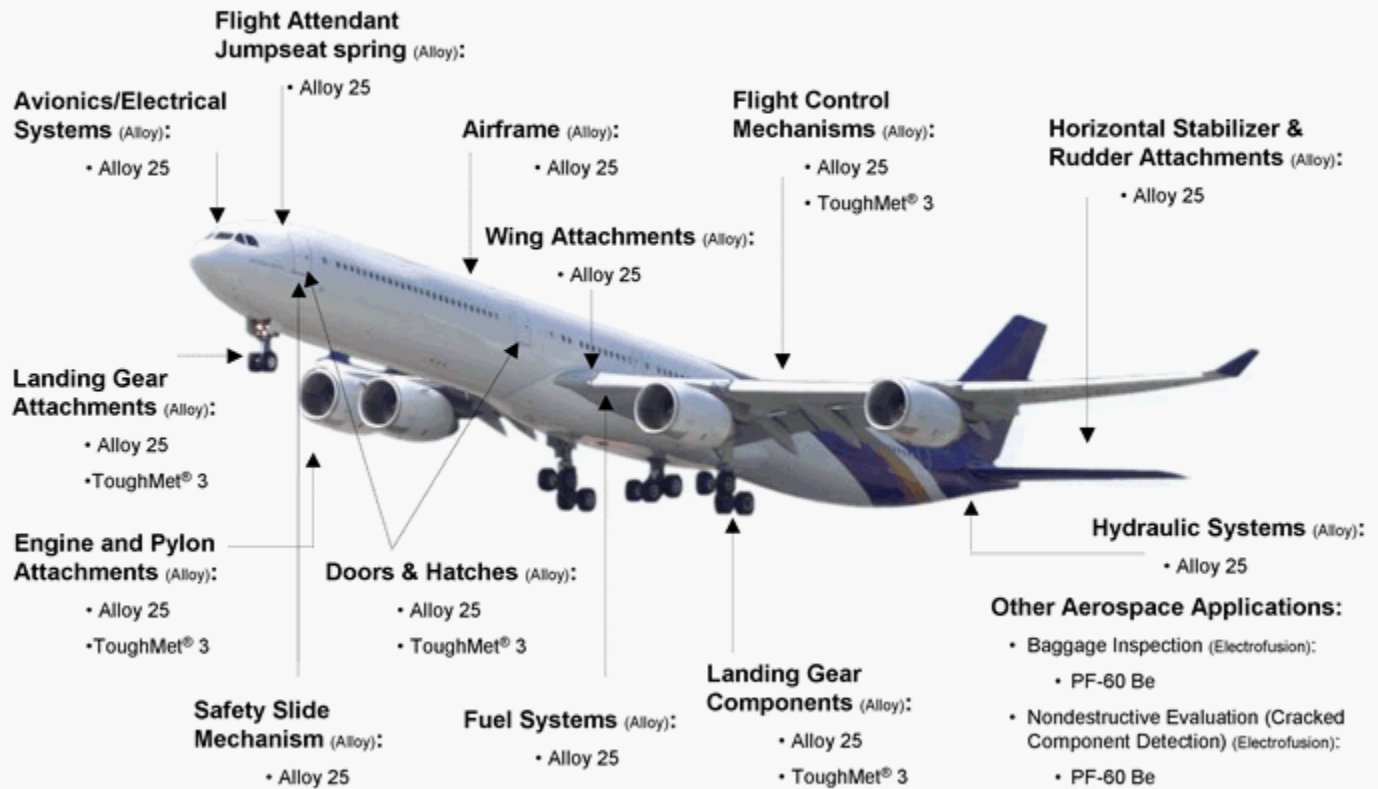
•Sputtering targets (Precious Metals, Alloys, Non-Precious Metals, Alloys, Magnetic Materials, Oxides)



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 – 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):

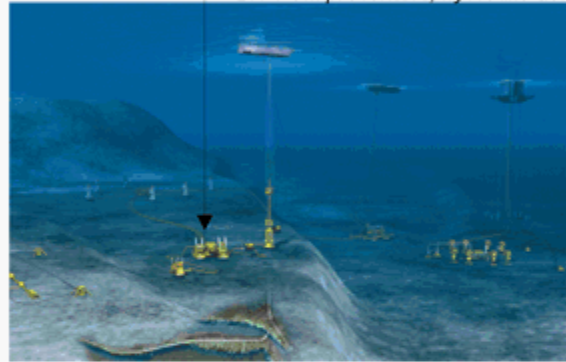
- Brush Alloy 25
- ToughMet® 3

MWD, LWD, MPT systems

## Under Water Wellhead Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3

Blow out preventers, hydraulic actuators



## Other Oil & Gas Applications:

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

# Applications – Medical

## Seizure Control (WAM/TFT):

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

## X-Ray Mammography (Electrofusion):

- IS-50M Be

## Implantable Glucose Analysis (WAM/TFT):

- Thin Film Coatings – Electrode Monitoring device

## External Glucose Analysis

(WAM/TFT/Techni-Met):

- Thin Film Materials – One-time use
- Refining & Recycling – Metal recovery services

## Insulin Pump (Alloy):

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

## Vision (WAM/TFT):

- Ocular Implantable Hybrid Circuit

## 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): Stainless Electron Weld Beam
- Cauterizing Electronic Scalpel (TMI): Clad Stainless



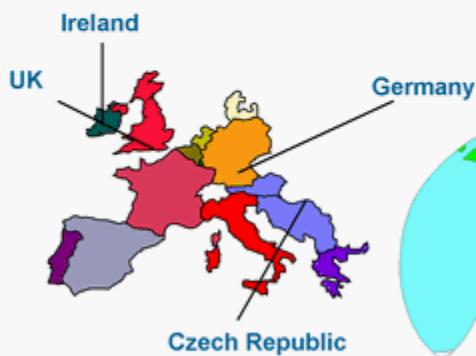
# Global Sales and Distribution Network

- Operations in the U.S. and eleven foreign countries
- Q-1 2008 International sales were \$77 million
- Act globally ... service locally!

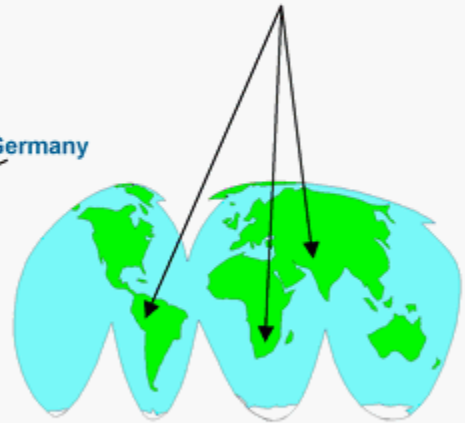
◀ ----- Asia / Pacific ----- ▶



◀ ----- Europe ----- ▶

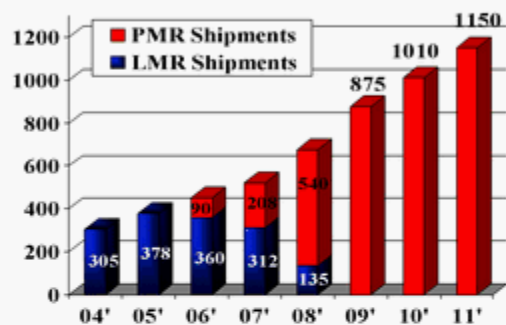


◀ - Exports from USA - ▶

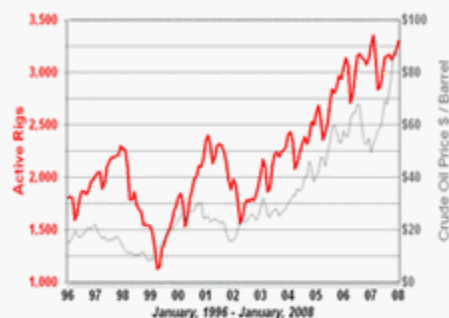


## BEM – Targeting Growth Applications in Growing Markets

**Disk Drive Head Demand**



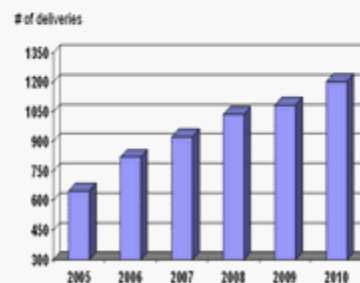
**O&G - Rotary Rig Count**



**Mobile Telecommunications**

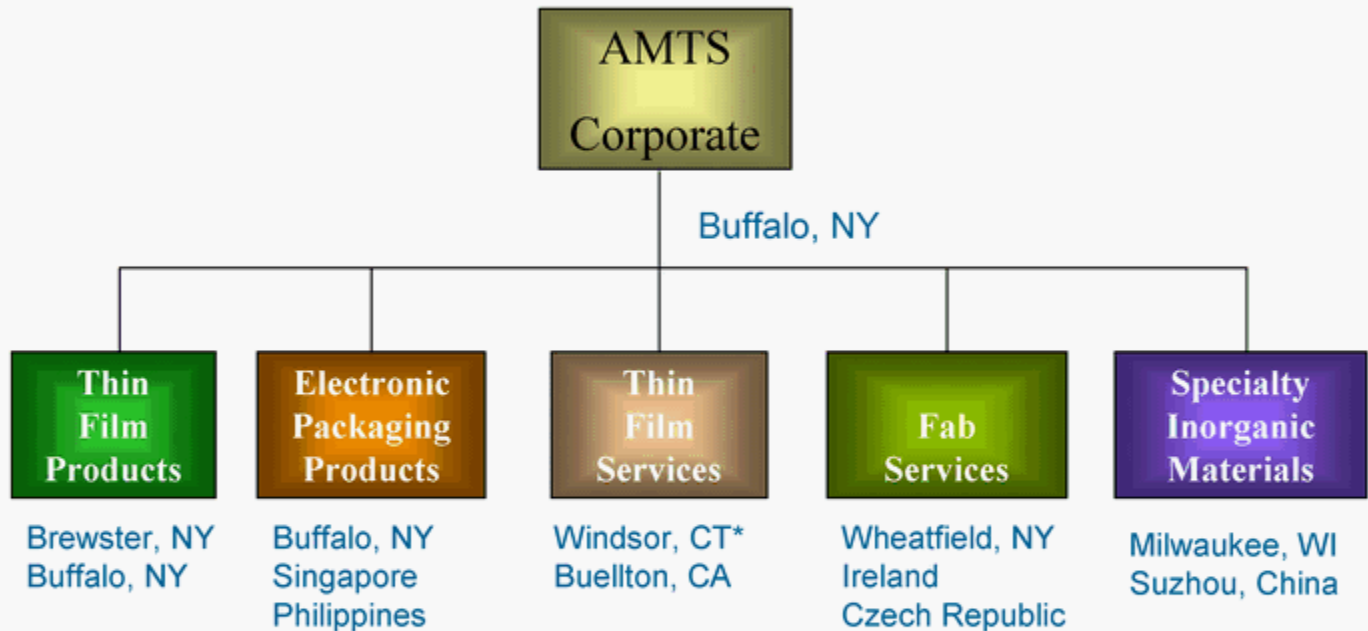


**Build Schedule for Boeing/Airbus**



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

### Operating Locations



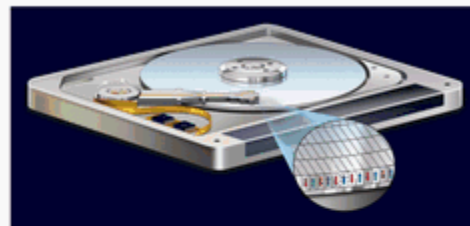
Additional Service Operations: Taiwan, Suzhou, Ireland, Singapore, California

\*acquired 2-4-08



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

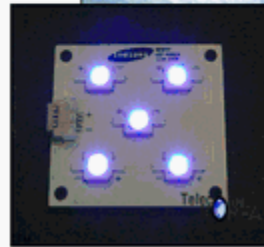
- **Comprehensive product line**
  - High purity / proprietary PVD targets
  - Micro-electronic packaging materials
  - Specialty inorganic chemicals
- **Strong end use markets**
  - Data storage
  - Wireless/handsets
  - Semiconductor
  - Optical media
  - Photonics
  - Optics
  - Medical
- **Industry 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





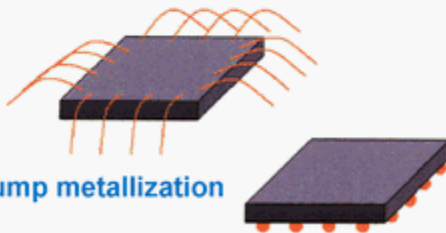
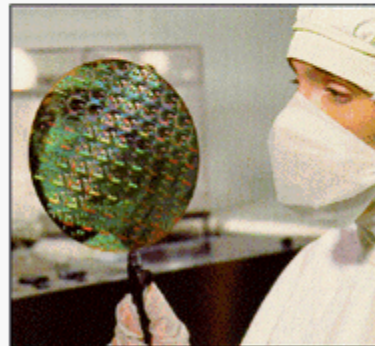
## ***Key Markets – Wireless and Photonics***

- **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

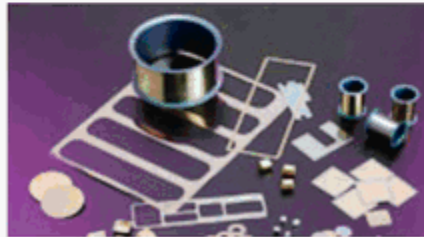
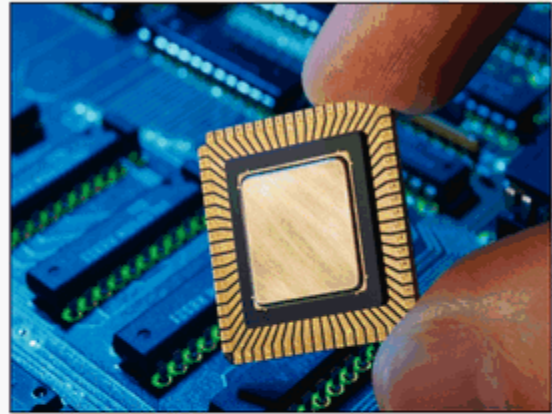
- Thin film materials and chamber services for silicon wafer and UBM (Under Bump Metallization) technologies.
- Numerous commercial and military microelectronic applications.



Under bump metallization

# Key Markets – Semiconductor Packaging

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



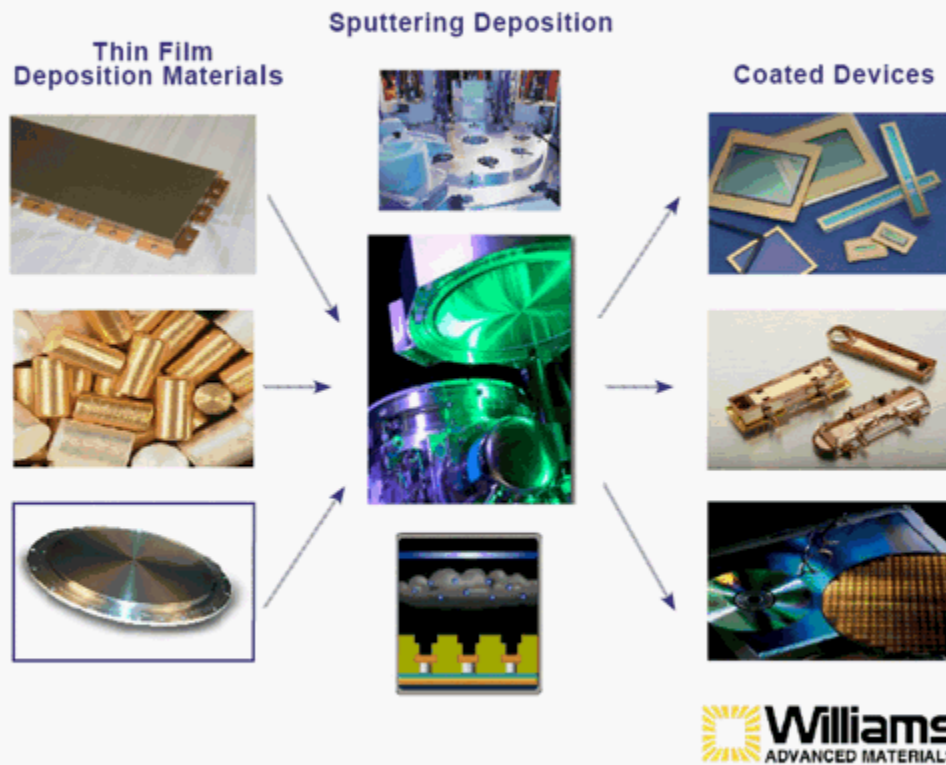
Solder preforms and clad materials



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

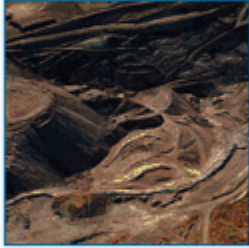
- **Magnetic Media and Head Materials**
- **Under Bump Metallization (UBM) for Flip Chip**
- **FCCL Materials**
- **Wireless and Photonics**
- **Visi-Lid™ - A transparent lid for New Photonics applications**
- **Expanded refining/chamber services supporting the thin film materials business**
- **Silver Alloys for HD-DVD and Blue Ray Disc manufacturing**
- **Solar Panel Thin Film Materials**
- **MEMS and Photovoltaic Packaging Materials**
- **Nanotechnology Materials**
- **LED Lighting Materials**

# 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**

*Also, new High Be Pebbles Plant underway with DOD Title III funding*

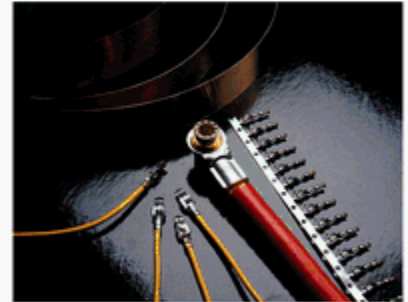
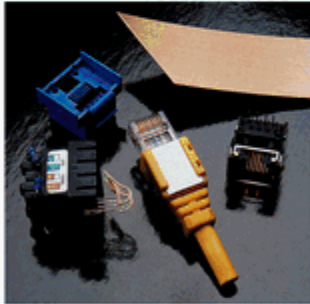
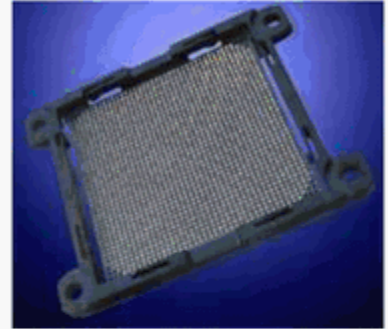


# Strip Alloy Applications

(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



# Bulk Alloy Applications

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

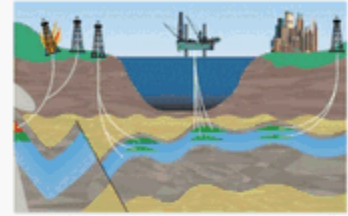
- Aircraft Bushings
- Heavy Equipment Bearing and Wear Applications
- Oilfield well drilling, completion and production equipment
- Plastic Injection & Blow Molds
- Power Generation
- Undersea/Marine Housings for Telecom & Instrumentation
- Welding Electrodes & Dies





# 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

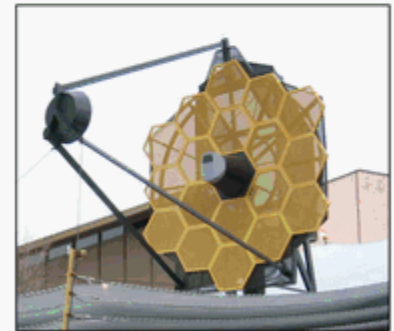


*Replacing bronze, stainless, and nickel alloys ... strength, lubricity, and wear resistance*

# 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



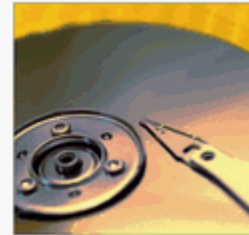
# Technical Materials, Inc. – solving customers' problems with engineered strip metals

## Mill Products

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

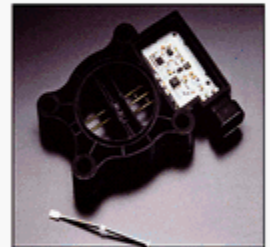
## Electroplating

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



Disk  
Drive  
Arms

Automotive  
Control  
Components



Specialty  
Electronic  
Connectors

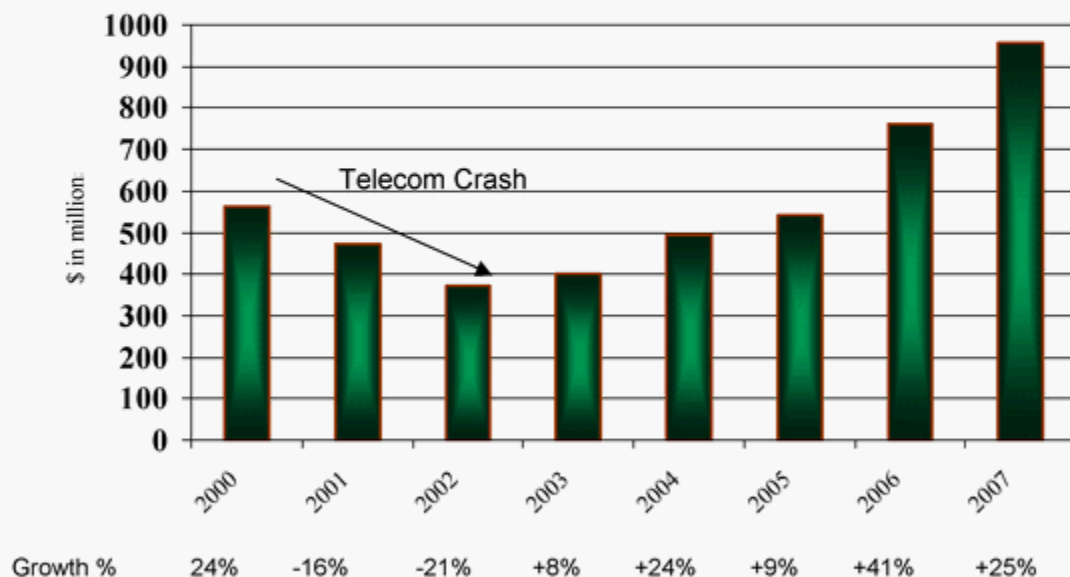
*Automotive, Telecom/Computer, Medical, Energy*

## 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 shareholder 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

# Strategic Highlights

- 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
- Strong balance sheet provides liquidity to support growth



# Brush Engineered Materials – Material Solutions for the World's Leading Companies

