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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) October 6, 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 October 6, 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 October 7, 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	October 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.

October 6, 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***

### ***October 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

# Overview

- **Company:** Brush Engineered Materials Inc.  
founded 1931, publicly traded since 1956
- **NYSE Ticker:** BW
- **Shares Outstanding:** Approximately 20.2 million at 9/30/09
- **Market Cap:** Approximately \$490 million at 9/30/09
- **Component of:** S&P Super Composite 1500, Russell 2000  
S&P Small Cap 600
- **Annual Revenue:** \$910 million @ 12/31/08

## BEM....*the transformation*

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



## **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 (cont.)**

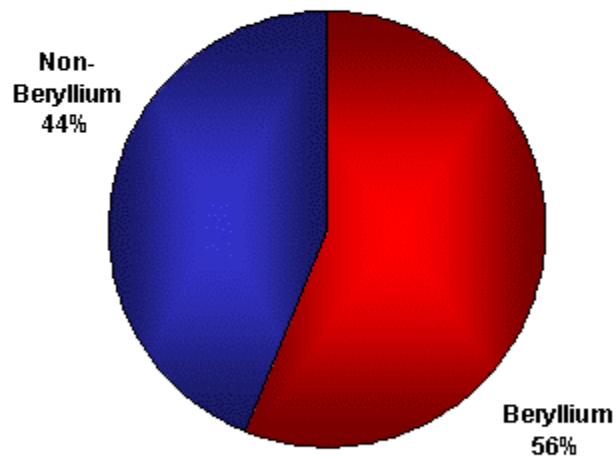
- Investments... prioritizing a targeted business model
  - low capital intensity...both working capital and reinvestment capital
  - high IP....technology driven business
  - non-commodity products...high margins
  - good growth potential in >> GDP opportunities
- Acquisition goals
  - Accretive within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

## Acquisitions

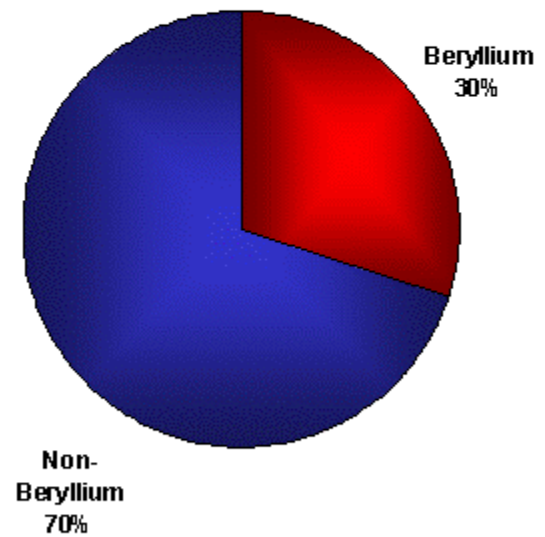
2005	OMC	Shield kit cleaning services (technology buy)
2006	CERAC	Inorganic chemicals ... powders and evaporative targets (optics, security, solar, semiconductor)
2007	TFT	Thin film vacuum sputtered coatings (medical and defense)
2008	Techni-Met	Thin film roll to roll flexible substrate vacuum sputtered coatings (medical)

## BEM....the transformation (cont.)

2001 Sales



2009 Sales Trend



## Brush Engineered Materials – Major Business Units

### YTD Q2-2009 Revenue

#### *Advanced Material Technologies and Services*

##### Williams Advanced Materials

PVD Targets  
Optical Coatings  
Refining  
Electronic Packaging  
**62%**

#### *Specialty Engineered Alloys*

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

Electronic Connectors  
Industrial Components  
**25%**

#### *Engineered Material Systems*

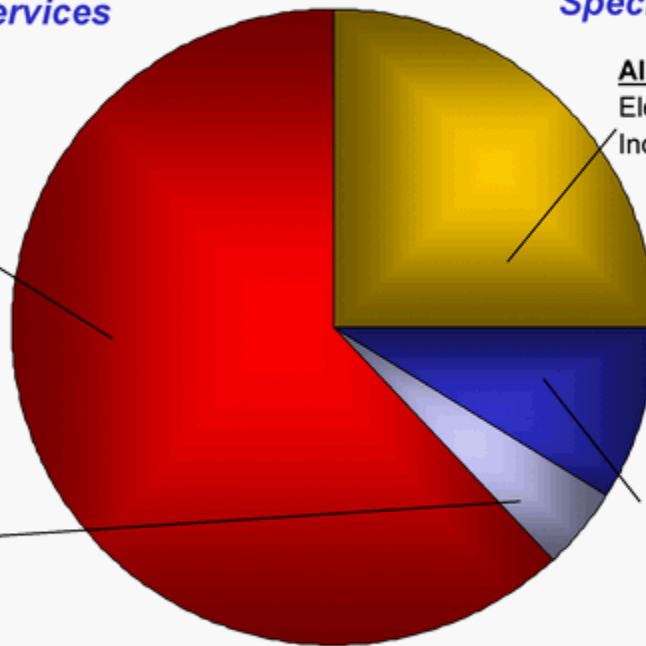
##### TMI (Specialty Clad and Plated Strip)

Automotive Connectors  
Telecommunications  
Consumer electronics  
**4%**

#### *Be and Be Composites*

##### Be Products

Defense/Aerospace  
Specialty Commercial Products  
**9%**

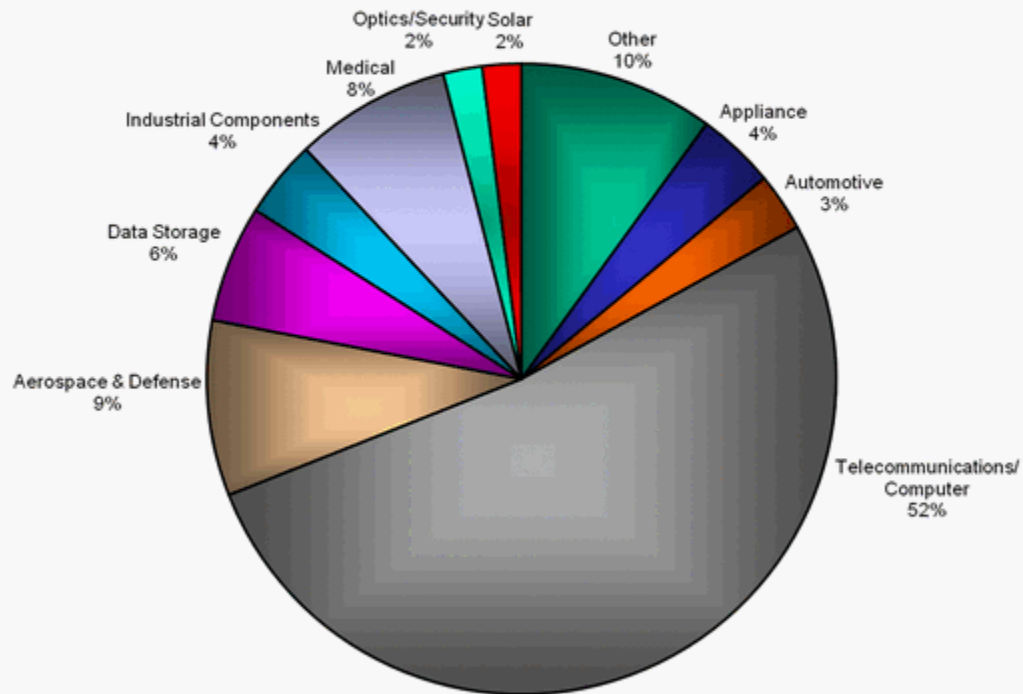


## Market Conditions - 2009

<u>Modest Weakening</u>	<u>Bottomed Out Strengthening</u>	<u>Still on the Mat</u>
Defense	Consumer Electronics	Oil & Gas
Medical	Telecom Infrastructure	Commercial Aerospace
	Semiconductor	Other Industrial
	Media	
	Auto	

# Global Leader in High Performance Engineered Materials

## Q2 2009 Revenue by Market



## Brush Engineered Materials ... core competency

### ***A common approach to markets and a common culture across our operating companies***

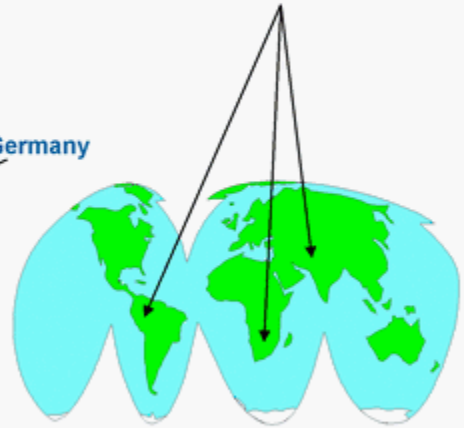
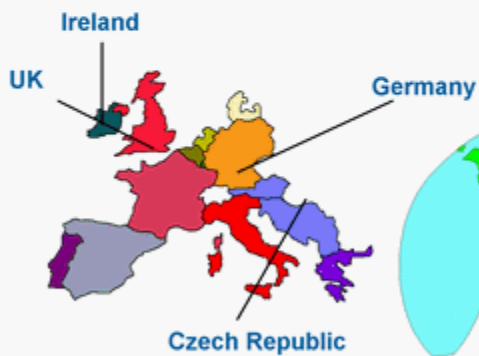
- Collaborating with customers worldwide to solve material application challenges ... *with a focus on enabling technology and services*
- "Own" a Niche orientation ... non-commodity
- Focus on global growth and service
- Constantly looking ahead to realign product and service portfolios toward favorable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



# Global Sales and Distribution Network

- Operations in the U.S. and eleven foreign countries
- International sales were about 33% of the Company
- Act globally ... service locally!

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



## 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

## Exciting Pipeline of New Growth Products

- **Solar Materials**
  - Thin film coatings and CPV applications
  - Interconnect technology
- **Lithium Ion batteries**
  - Interconnects
- **LED Technology**
  - Precious metals
  - Inorganic chemicals

## Exciting Pipeline of New Growth Products

- Medical
  - Glucose testing
  - Nitonal processing
    - Stents, valves, surgical devices
  - Pt/Ir rod, wire
    - Angioplasty (cardiac vascular)
- Space and Defense
  - Expanding optics applications for Beryllium (UAV)
  - Expanding optics applications for IR (night vision)
  - Orion ... replacement for space shuttle ... AlBeMet structures
  - New Navy “Rail Gun”

## Exciting Pipeline of New Growth Products

- **Natural Resource Development**
  - Enabling Oil & Gas directional drilling and deep sea completion
  - Rapidly expanding uses in heavy mining equipment
- **Commercial Transportation**
  - Enabling energy savings
  - Commercial aerospace and on-road heavy vehicles
- **Nuclear Power**
  - ITER ... fusion, beryllium lined reactor

# 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

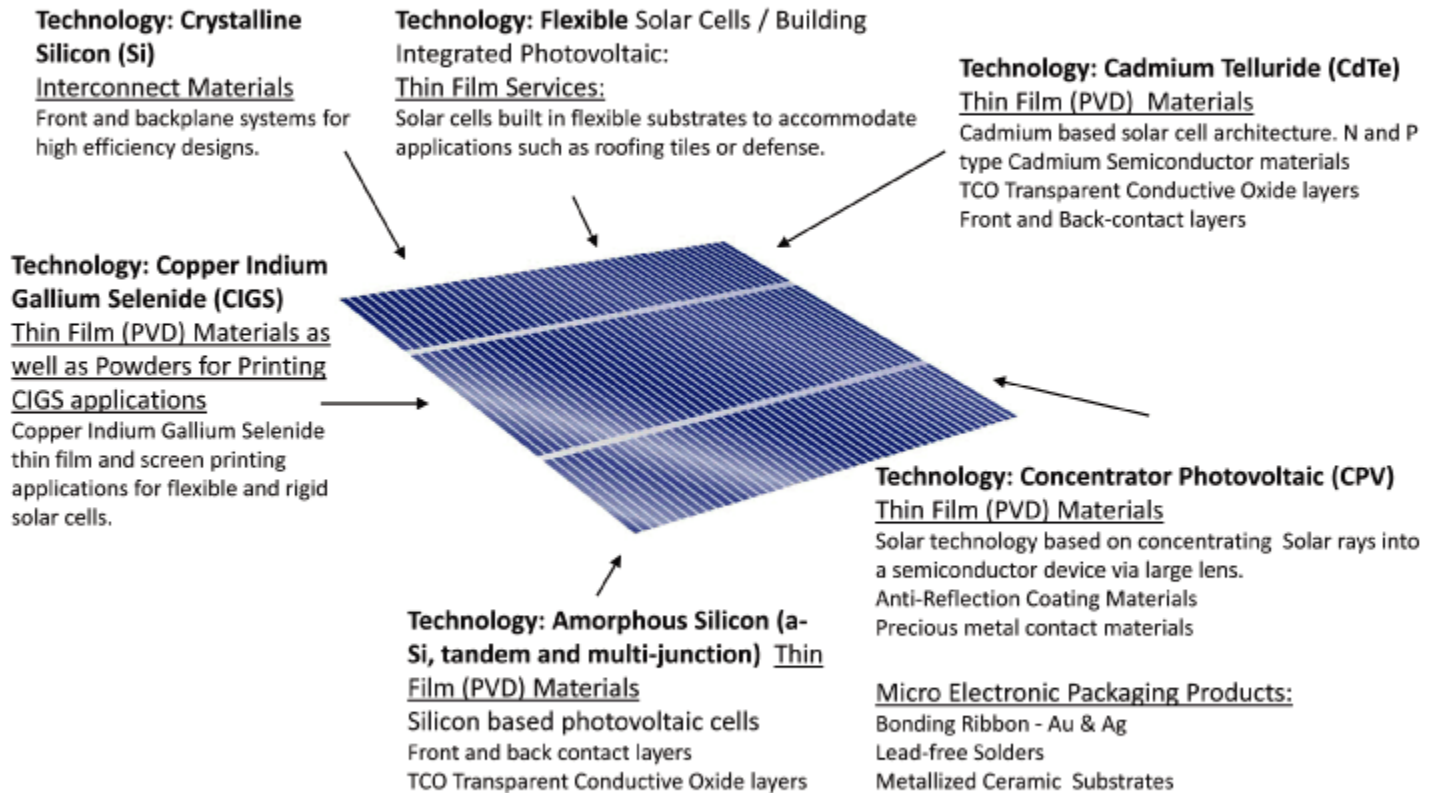
## I/O Connector Contacts (Alloy):

- 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)

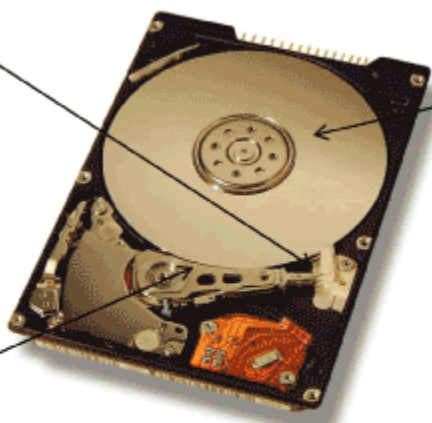
Thin film materials for the Disk Substrate (WAM)

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

Disk Drive Arm (TMI)

- Clad Materials (Aluminum and Stainless Alloys)

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



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 - 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):

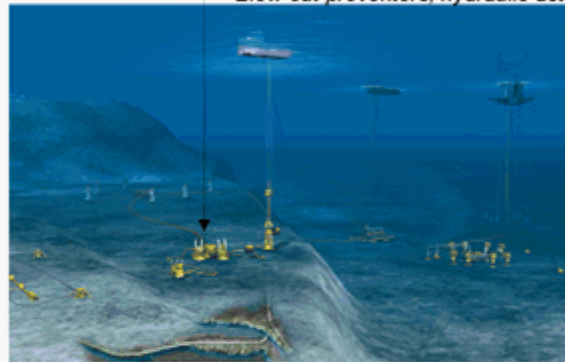
- Brush Alloy 25
- ToughMet® 3

MWD, LWD, MPT systems

## Under Water Wellhead Equipment (Alloy):

- Brush Alloy 25
- ToughMet® 3

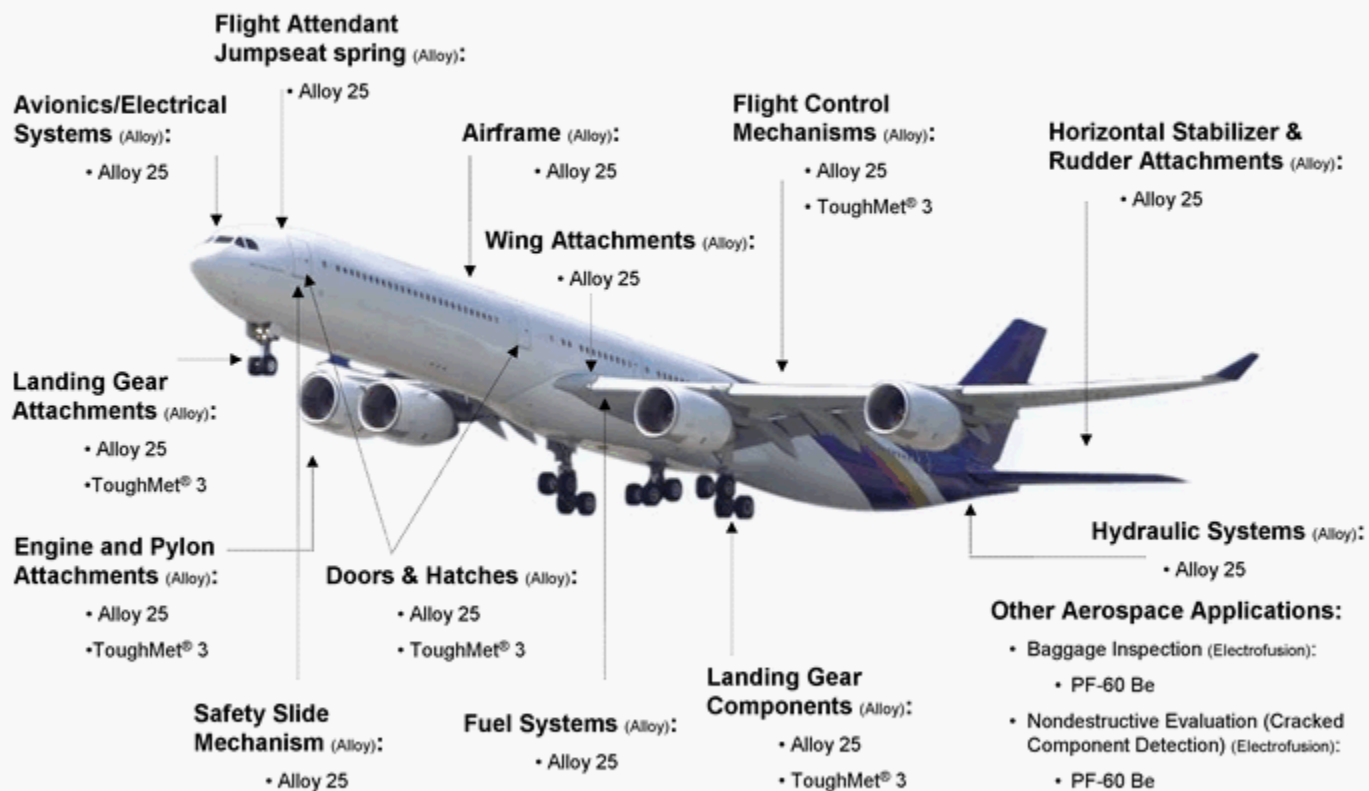
Blow out preventers, hydraulic actuators



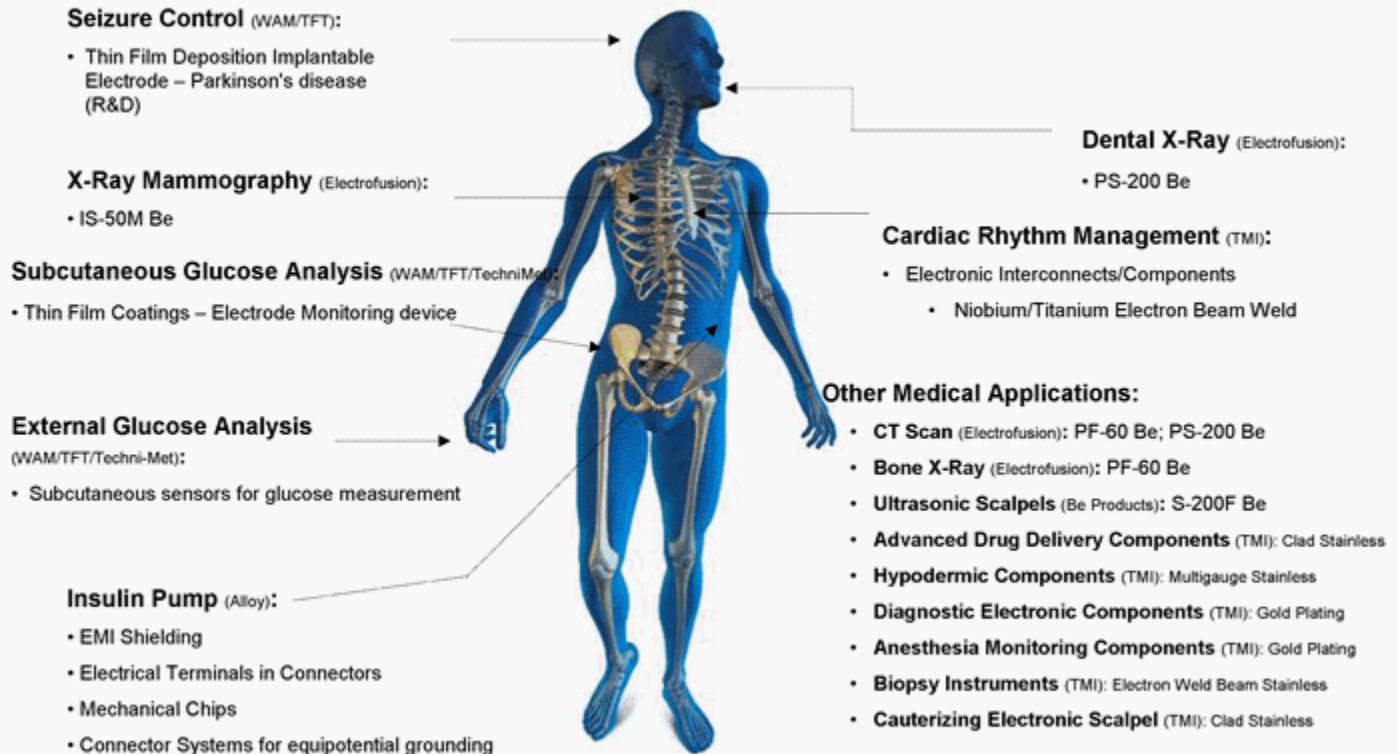
## Other Oil & Gas Applications:

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

# Applications – Aerospace

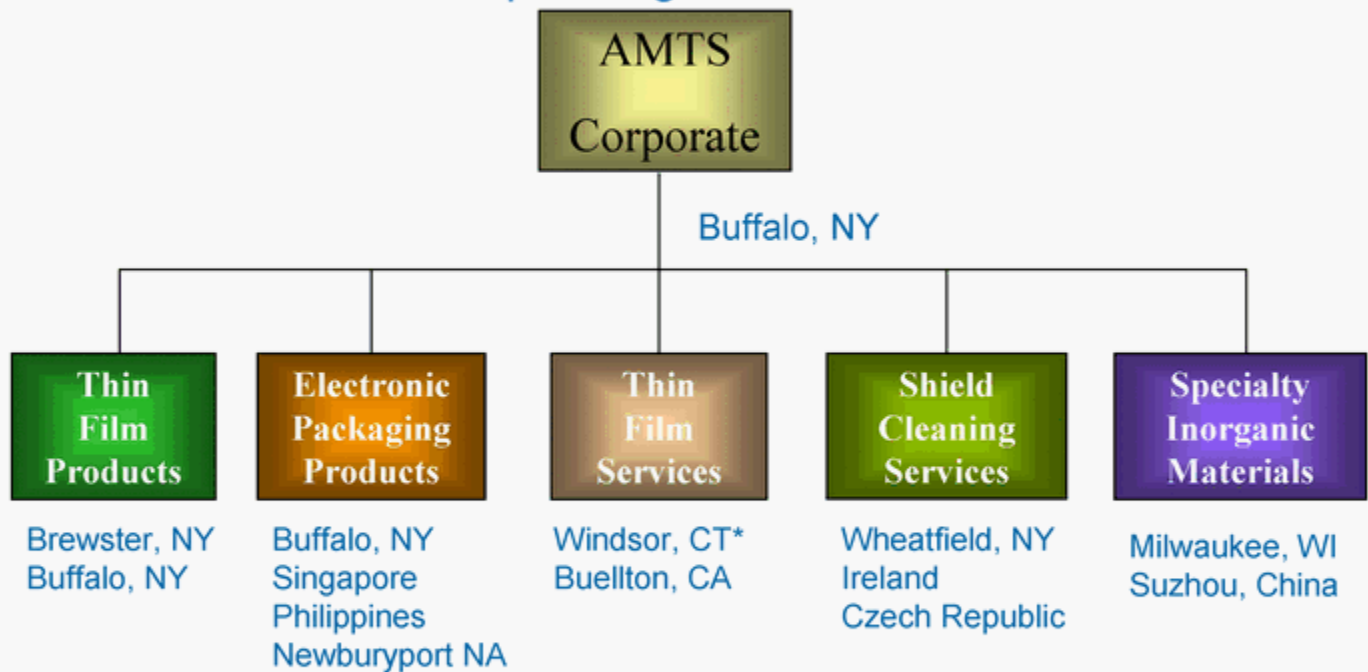


# Applications – Medical



## 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

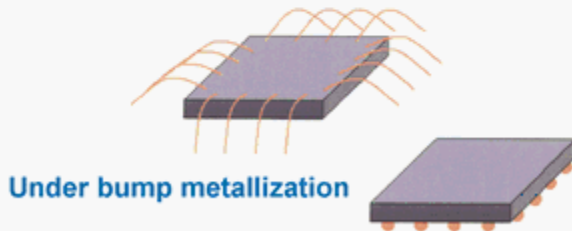
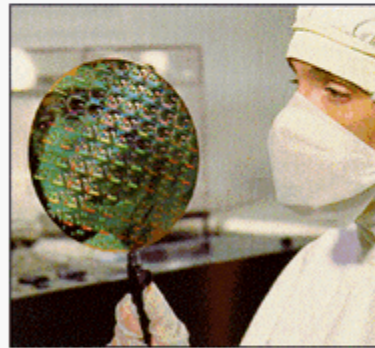
- Thin Film and Packaging materials for varied wireless and photonic applications including RF Power Amplifiers, HBT's, SAW Devices, Light Emitting Diodes (LEDs), Laser Recorders and Micro Electro Mechanical Systems (MEMS)





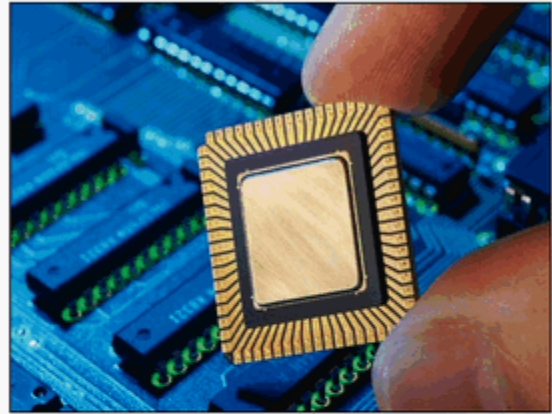
## Key Markets – Semiconductor Wafer Fabrication

- 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





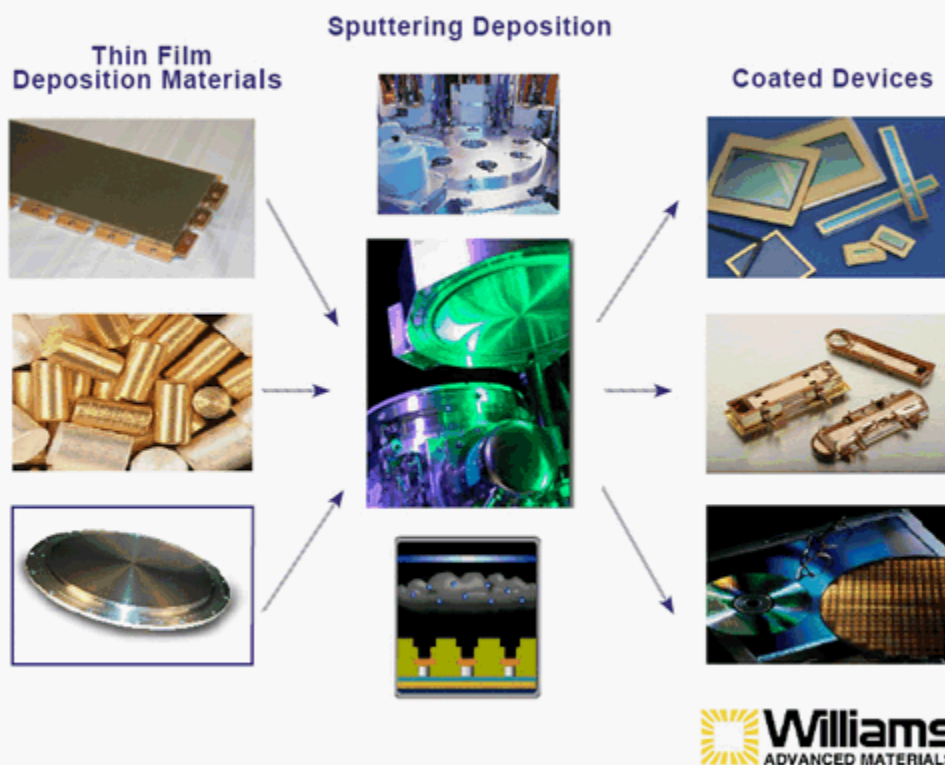
# ***New Product and Technology Development***

- **ADVANCED MATERIAL TECHNOLOGIES AND SERVICES**
  - Magnetic Media and Head Materials
  - Under Bump Metallization (UBM) for Flip Chip
  - FCCL Materials
  - 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
  - Eco-Ru™ Sputtering Target
  - Optical coating materials
  - Precious Metal Rod

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

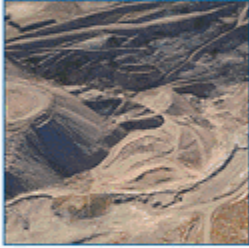
- **SPECIALTY ENGINEERED ALLOYS**
  - ToughMet® Alloy for High Volume Bearing Applications
  - Cupronickel alloy rod for offshore and marine seawater systems
  - 390E High Performance Copper Beryllium Strip Alloy for Burn in and Test Sockets (BiTS) applications
  - BrushForm 158 and BrushForm96 Copper Nickel Tin Strip alloys for electronics and mechanical spring
- **BE AND BE COMPOSITES**
  - High Purity Beryllium
  - Truextent™ speaker domes
- **ENGINEERED MATERIAL SYSTEMS**
  - Li Ion Battery Interconnects
  - Solar panel interconnects
  - Nitonal processing (medical)

# 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

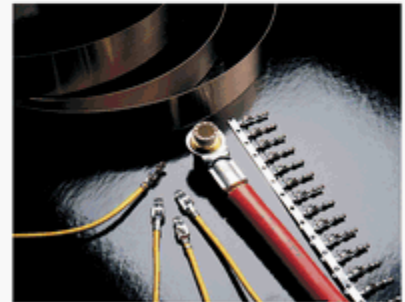
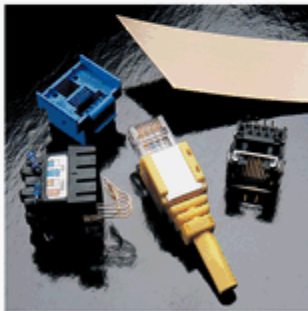
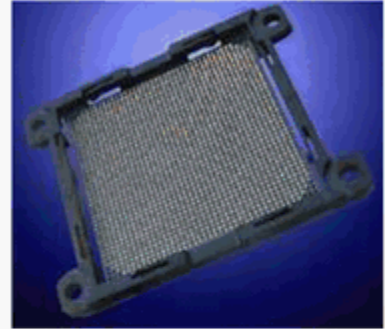
*New Beryllium Pebbles Plant underway with DOD Title III funding,  
targeted for completion in 2010*

# 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

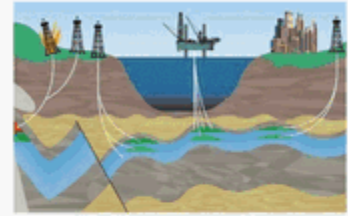
(strength, corrosion resistance, non-galling, conductivity ... typically 1% to 2% Beryllium)

- 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





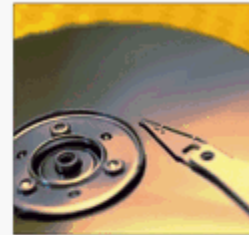
# Technical Materials, Inc. – solving customers' problems with engineered strip metals

## Mill Products

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

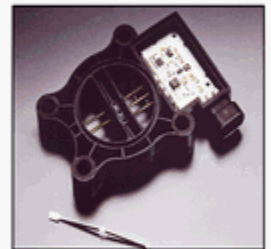
## Electroplating

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



**Disk  
Drive  
Arms**

**Automotive  
Control  
Components**



**Specialty  
Electronic  
Connectors**

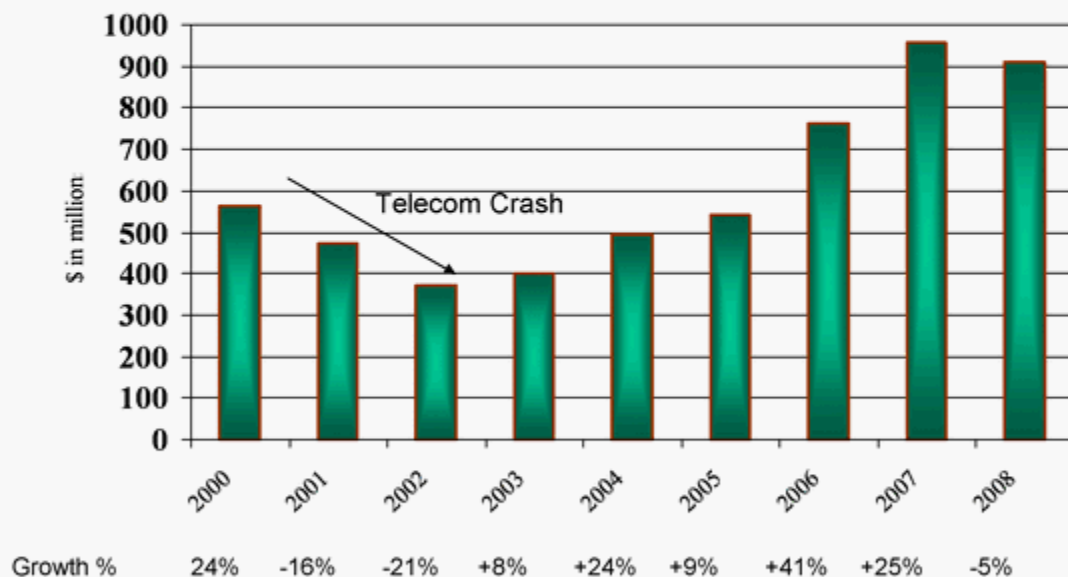
*Automotive, Telecom/Computer, Medical, Energy*

## 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

# 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