
**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) November 15, 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 Heights, 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 November 15, 2010, 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 November 17, 2010. 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	November 2010 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.

November 15, 2010

By: Michael C. Hasychak

Michael C. Hasychak

Vice President, Treasurer and Secretary

Brush Engineered Materials Inc.

Company Overview November 2010

... 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*



Transforming our World and Yours

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 and/or maintain 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.

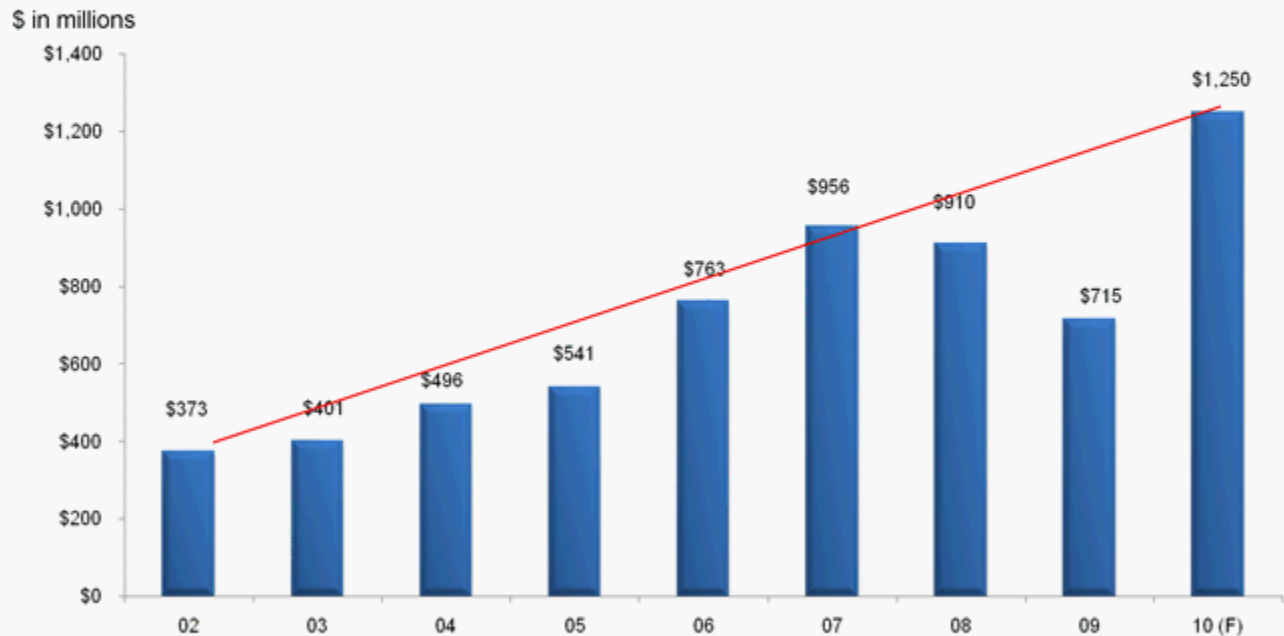
The Company does not undertake and specifically declines any obligation to publicly release the results of any revisions to these forward-looking statements that may be made to reflect any future events or circumstances after the date of such statements or to reflect the occurrence of anticipated or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

Why Brush

- Unique, rapidly growing, advanced materials company
- Serving leading edge, high-growth markets
- Entering a period of accelerated growth driven by secular trends from market and product positioning
 - Smart Mobile devices, 3G/4G, Commercial Aero, O&G, Alternative Energy, Optics, LED/LCD
- Sustainable long-term growth opportunities
- Diverse set of high-growth new products and services
- Expanding margins
- Strong balance sheet

The Transformation... Accelerated Growth

2002-2010 (F) Sales
17% CAGR
(13% w/o Acquisitions)



Transforming our World and Yours

Major Segments (YTD Q3-2010)

<u>Advanced Material Technologies & Services</u>	<u>Engineered Material Systems</u>	<u>Specialty Engineered Alloys</u>	<u>Beryllium and Beryllium Composites</u>
PVD Targets	Electronic Connectors	Electronic Connectors	Opti-Elec Mirrors & Sensors
Optical & Medical Coatings	Clad & Inlay Products	Integrated Circuitry	Satellite Structures
Refining	Electron Beam Welding	EMI Shielding	X-ray Windows
Electronic Packaging	Energy Management	Oil & Gas Drilling	Speaker Diaphragms
Advanced Chemicals		Heavy Equipment Bearings	Nuclear Components
67%	5%	23%	5%
<u>Advanced Materials</u>		<u>Integrated Metals</u>	
72%		28%	

Note: %'s are of sales

The Transformation ... Shifting the Business Model to Higher Margins and Higher Value

Measuring Value Add 2010 (F)

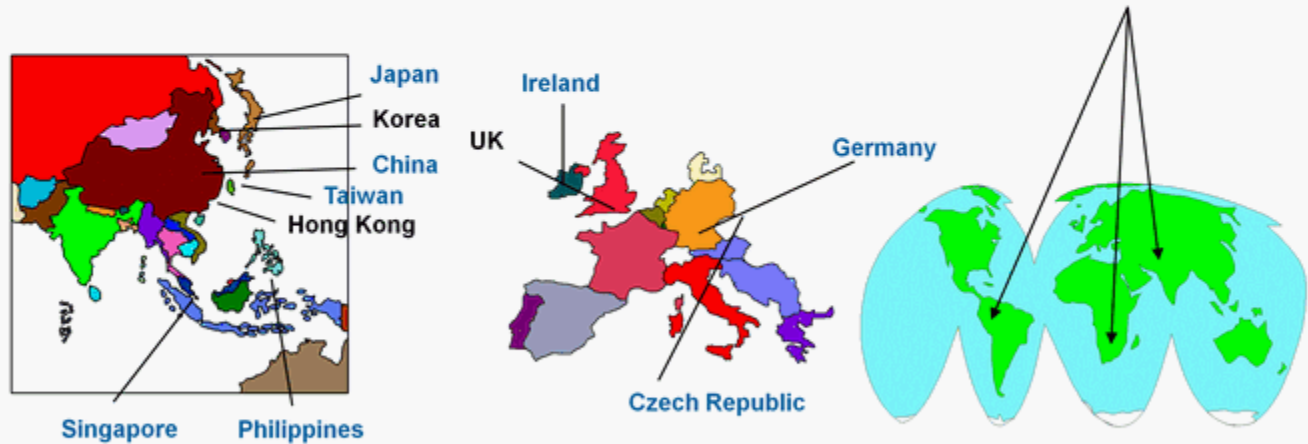
	OP%	OP%/VA*
Integrated Metals	10.0% - 10.5%	14.0% - 16.0%
Advanced Materials	5.5% - 6.0%	21.0% - 23.0%
Company	5.5% - 6.5%	13.0% - 15.0%

* % of value added revenue which excludes high value metals

Global Sales and Distribution Network

- Operations in the U.S. and eleven foreign countries
- International direct sales are approximately 30% of the Company (YTD Q3 2010) ... actual much higher

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



Advancing the World's Technologies

- Customer collaboration ... providing solutions
- Engineered materials that solve many design challenges
 - Strength
 - Reliability
 - Electrical conductivity
 - Miniaturization
 - Weight reduction
 - Corrosion resistance
 - Light management
 - Thermal conductivity
 - Lubricity
- Targeting profitable growth applications in growing markets

Distinctive Competencies

- Precious metal refining and management – Au, Ag, Pd
- PVD materials and services
- Melting, powder metallurgy , forming technologies
- Specialty inorganic chemical powders and evaporative materials
 - Sizing, purification, synthesis
- Large and small area thin film deposition and design
 - Magnatron, Ion beam, IAD, evaporation
- Electronic packing materials, fabrication and assembly
- Shield cleaning and bonding services

Distinctive Competencies

- Production of CuBe and specialty CuNi-based alloys
 - Strip, bar, tube, plate, wire
- Production of pure Be and Be Ceramic materials
 - All product forms
- Beryllium mining and extraction
- Selective plating and metal cladding
 - Strip
- Processing hazardous chemicals and metals

Typical End Uses



Notebook computers
and network servers

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



Defense



Electronic components
in cars and trucks



Commercial
Aerospace

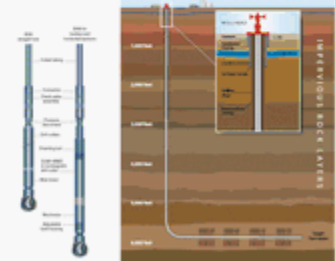


Industrial products for
Oil & Gas and Mining

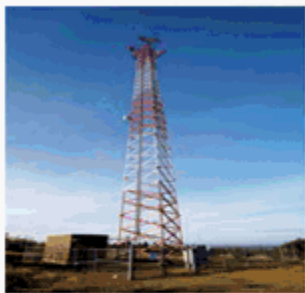


Disk Drives

Medical
Devices

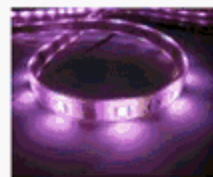


Typical End Uses

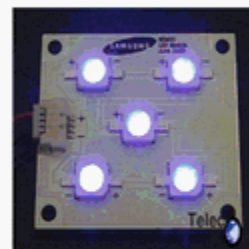


Telecom
Infrastructure

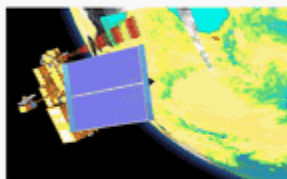
LED's



LCD



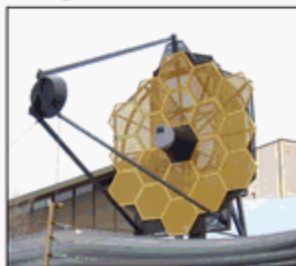
Optics



Alternative
Energy



Space/Science

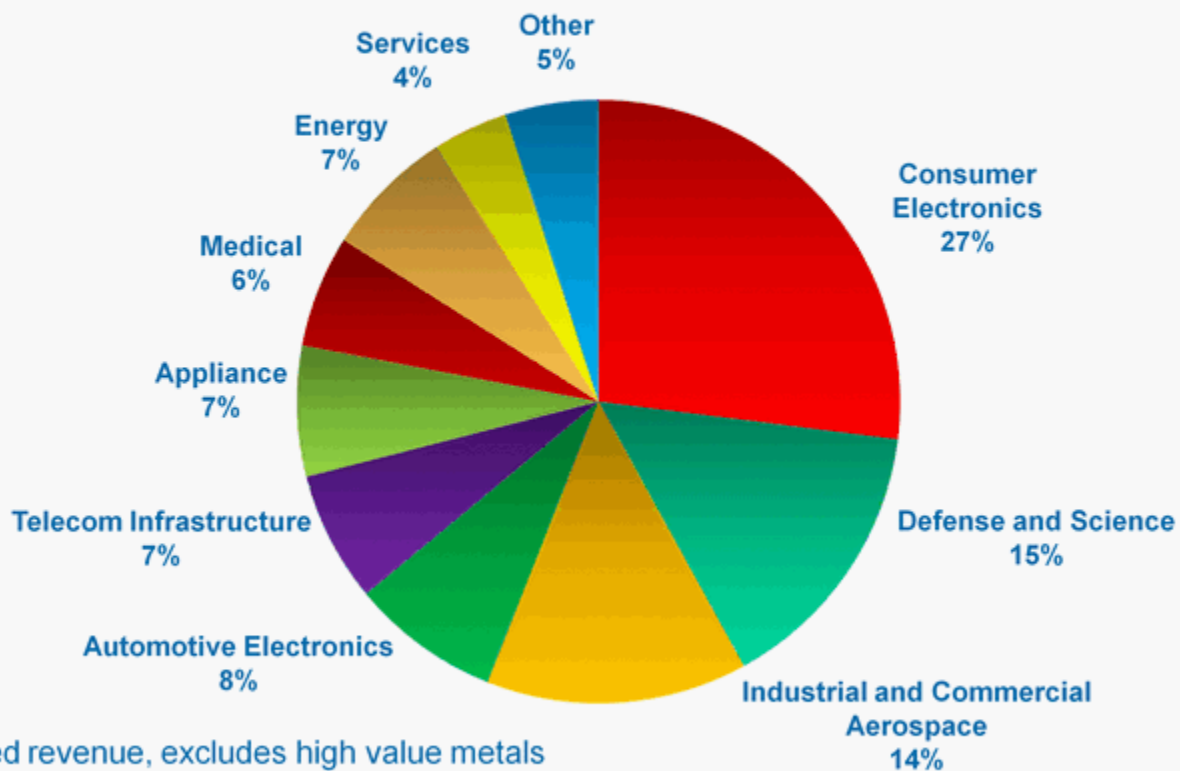


Heavy Equipment



Diverse Set of High Growth Markets

YTD Q3 2010 Revenue*



*Value-added revenue, excludes high value metals

Key Application Examples by Market

Consumer Electronics

- Cell Phones
 - I/O Connector Contacts
 - Battery Contacts
 - Internal Antenna Contacts
 - LED Backlight Applications
 - Power amplification, SAW and BAW devices
- Computers
 - Board-to-Board Connectors
 - Processor Socket Connectors
 - Electronic Shielding
 - Hard Disk Drive Read/Write Head
 - Disk Drive Arm

Telecom Infrastructure

- Base Stations
 - Coaxial Connectors and High Power Amplifiers
- Shielding for Servers
- Undersea Repeater Housings

Defense & Science

- Infrared Sensors for Fighter Jet and UAV Optical Targeting
- Structural and Electronic Components for Satellites
- X-ray Windows in Security and Commercial Imaging Systems
- Laser Protection Optical Coatings
- Night Vision System Optics

Industrial & Commercial

Aerospace

- Heavy Off-Highway Equipment Bushings
- Plastic Tooling
- Landing Gear Bushings
- Wing Attachments
- Flight Control Mechanisms
- Fire Protection Sprinkler Head Washers

Key Application Examples by Market

Medical

- Glucose Analysis Test Strips
- Implantables for Seizure Control and Glucose Analysis
- X-ray Mammography
- Radiation Therapy – Neutron Reflectors
- DNA Sequencing Optics

Automotive Electronics

- High Temperature Connectors, Switches, Relays, Sensors
- Leadframes for Power Steering , Power Brakes, and Engine Control
- Air Bag Sensors
- Telematics

Energy

- Oil & Gas
 - Directional Drilling Equipment (ToughMet)
 - Drill Bits (ToughMet Bearings)
 - Wellhead Control Equipment (ToughMet)
- Solar
 - Flexible Solar Cell TCO Layers
 - Concentrator Photovoltaic
 - CIGS Powders
 - Solar Power Interconnects
- Battery
 - Li-ion Battery Power Interconnects
- High Brightness LED Materials

Appliance

- Connectors
- Switches, Relays and Springs

YTD Q3 - 2010

- Markets have responded and business is growing with significantly higher sales and profit levels
- Initial growth led by electronics, followed by industrial and commercial aerospace markets
- Sales now at record levels
- Margins are up significantly
- Recent acquisitions are on track
- Cost controls are working well

YTD Q3 – 2010 ... Reported Results

\$ in millions
(except per share amounts)

	Q-3 2009	Q-1	2010 Q-2	Q-3
Sales	\$ 190.5	\$ 295.1	\$ 325.9	\$ 325.3
EBIT	(.6)	13.2	20.5	20.1
EPS	.01	.33	.67	.65
GP%	13.2%	16.7%	17.1%	17.9%
OP%	—	4.5%	6.3%	6.4%
OP%/VA	—	11.2%	15.0%	15.6%

Note: Q-1 2010 included \$.12 per share of charges, \$1.3 million in EBIT. OP%/VA excludes high value metals

Outlook

- Normal seasonality of lower sales is expected in 4th quarter
- 2010 sales are expected to be approximately \$1.24 to \$1.26 billion
- 2010 expected profit in the range of \$2.00 to \$2.10 per share, diluted
- Solid balance sheet is expected to be even more attractive by year end 2010

Outlook ... Other Considerations

- High end more sophisticated electronics are expanding ... although subject to inventory swings
- Metal prices, raw material prices are a pass through and thus not a significant risk to performance
- Application base in Specialty Engineered Alloys business continues to grow
- Specialty Engineered Alloys is less cyclical and margins are higher due to actions taken
- Acquisitions and Advanced Materials segment markets offer additional near term upside

Outlook ... Other Considerations

- New equipment for the medical market is installed and operating
- Cost management initiatives are working well and we expect the benefits to continue well into the future
- Investments in purchasing, marketing and pricing initiatives should add to margins going forward
- Acquisitions/augmentation opportunities continue to present themselves

The Transformation ... Overview

- From Metals & Mining through Specialty Metals to Advanced Materials
 - Beryllium Businesses.....Metals and Mining
 - Expansion of WAM.....Specialty Metals
 - Acquisitions..... Advanced Materials
- While increasing value add in all business units
- From single digit to long-term sustainable double digit growth
- To trading multiples of 9-11x from historic 6-8x EBITDA

The Transformation ... Strategy

Fundamental Principles Driving Our Transformation

- Create sustainable market advantage and value to customers through unique technological capabilities and innovation
- Decrease dependency on the Integrated Metals businesses while improving their performance
- Create the corporate critical mass to perform better in significant downturns should they arise
- While building and maintaining a strong balance sheet through a higher cash generating business model
- Lower the company's "BETA"

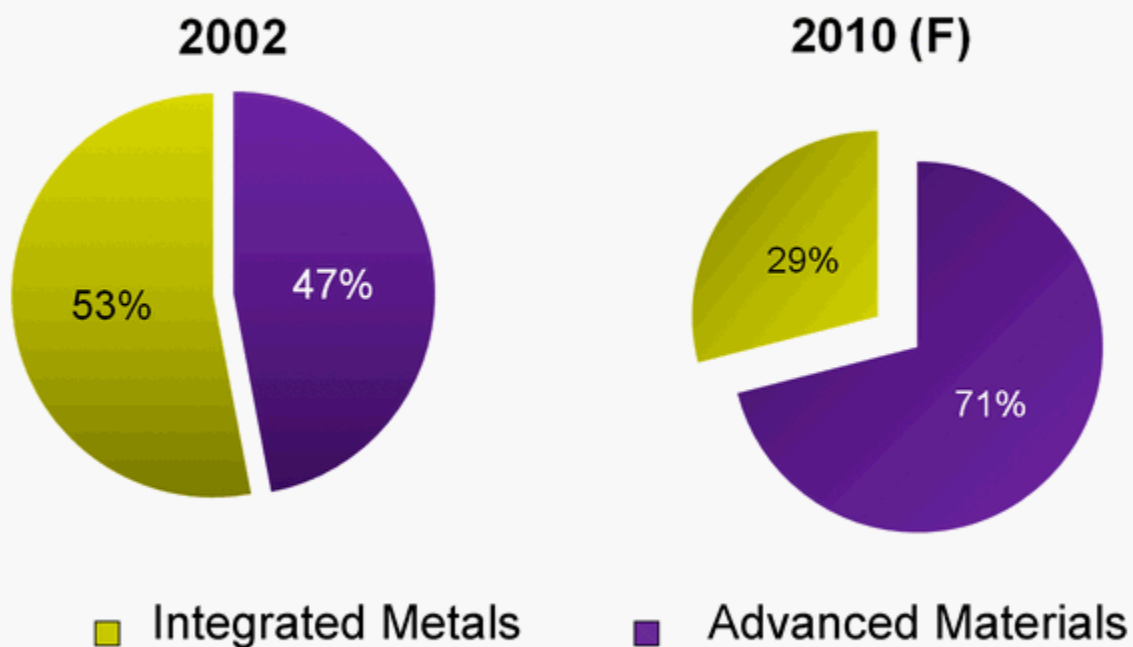
The Transformation ... Tactics

- Create a broader, more diversified base ... focused on greater than GDP opportunities
 - New Technologies
 - New Products
 - New Markets
 - Expanded Geography
- Target fastest growing segments of fast growing markets
 - Grow faster than the markets
 - Achieve double digit growth over time
- First Priority.....organic growth
- Second Priority....“manageable” acquisitions

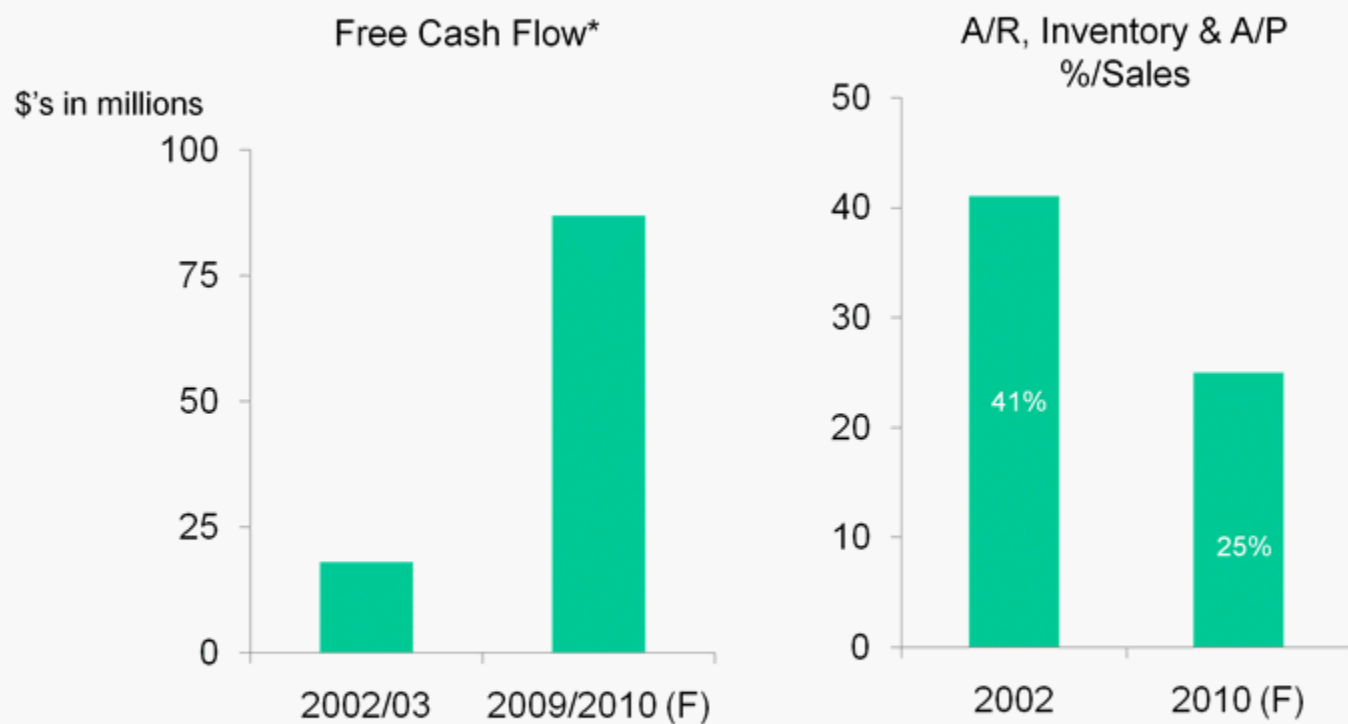
The Transformation ... Tactics

- Investments...prioritizing a targeted business model
 - Faster cash to cash cycle
 - 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
- Acquisitions....accretive within 12 months
 - Augmentation of technology, markets and opportunities
 - \$50 million invested per year from cash flow
 - Use debt and equity when appropriate while maintaining quality of balance sheet and financial flexibility

Advanced Materials, a Higher Share of Total Sales



The Transformation ... Faster Cash to Cash Cycle



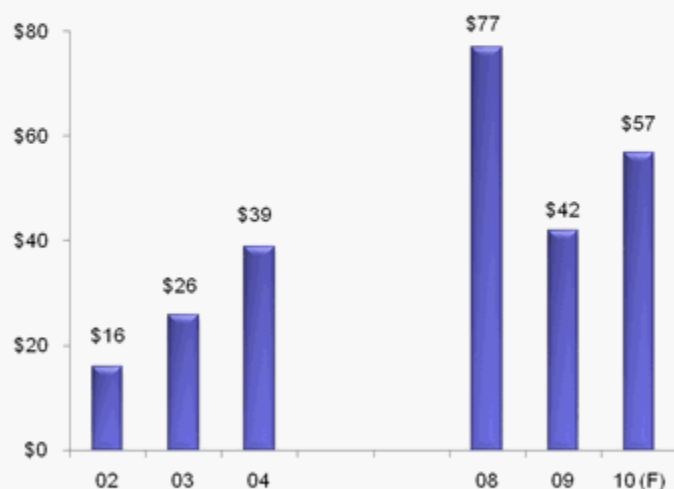
*Net income + Depr & Amort – change in working capital - Capex

The Transformation ... Faster Cash to Cash Cycle

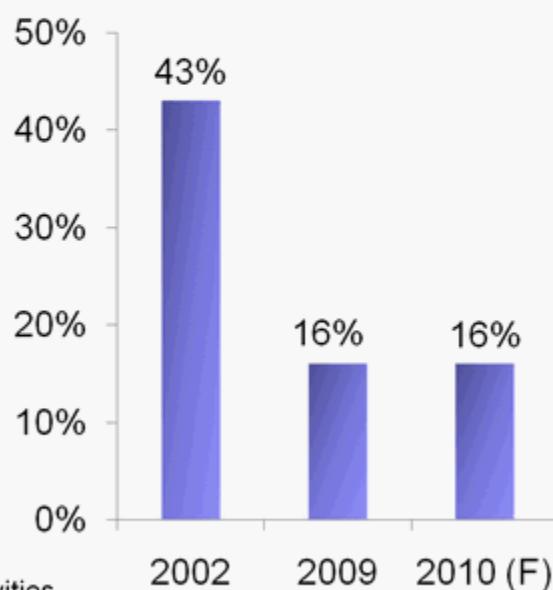
The Balance Sheet

Net Cash Provided from Operating Activities*

(in millions)



Debt to Total Capital



*Change in cash, excluding the effect of investing and financing activities

The Transformation ... Key Results

A Faster Recovery in a Much Tougher Environment

	Last Recession		This Recession		
	2002	2003	2009	2010 (F) Range	
EPS	\$ (.91)	\$(.25)	\$(.38)	\$2.00	\$2.10
EPS (2 yr cum)		\$(1.16)		\$1.62	\$1.72

Advanced Materials growth, market diversification, and Specialty Engineered Alloys improvements

Note: Excludes non-operating charges

(see GAAP reconciliation in Exhibit A)



Transforming our World and Yours 28

The Transformation ... Financial Goals/Objectives

Goals, next 3-5 years

- Organic growth ... double digit over time
- Value add margins in mid to high teens (OP% of VA)
- Acquisitions/augmentations at \$50.0 to \$75.0 million/yr
- Drive A/R, inventory and A/P % of sales below 20%
- Capital spending below depreciation
- Keep debt to total cap below 30% at peaks
- ROIC to mid teens

Brush Engineered Materials ... Transformed !

- A Leaner, Faster Growing, More Diversified & Resilient Company
 - More diversified, market and product basket
 - Broader market reach, geography
 - Growing faster, growth more sustainable
 - Growth and higher margin contributions from acquisitions
 - Less cyclical
 - Lower infrastructure costs, lower capital costs
 - Expanding margins
 - Stronger cash flow

Key Customers and Examples of Detail Applications by Key Markets

Well Recognized Key Customers & Demand Generators

Consumer Electronics

- Western Digital
- RFMD
- Skyworks
- Seagate
- Apple
- Motorola
- Cree
- TriQuint
- HTC

Telecom Infrastructure

- Cisco
- NXP
- Tyco
- JDSU
- NEC

Defense & Science

- Northrup Grumman
- DRS
- Lockheed Martin
- Raytheon
- BAE
- Goodrich
- General Dynamics

Industrial & Commercial

Aerospace

- Boeing
- Goodrich
- Caterpillar
- Joy
- Airbus
- Bucyrus

Well Recognized Key Customers & Demand Generators

Medical

- Roche
- Medtronic
- Varian Medical
- Siemens
- Agilent
- Applied Biosciences
- Nipro Diagnostics

Appliance

- Honeywell
- Bosch
- Siemens
- Hotpoint

Energy

- Schlumberger
- Baker Hughes
- Halliburton
- Weatherford
- GE
- First Solar
- MiaSolé
- AMAT
- Primestar
- Nanosolar
- Adhesives Research

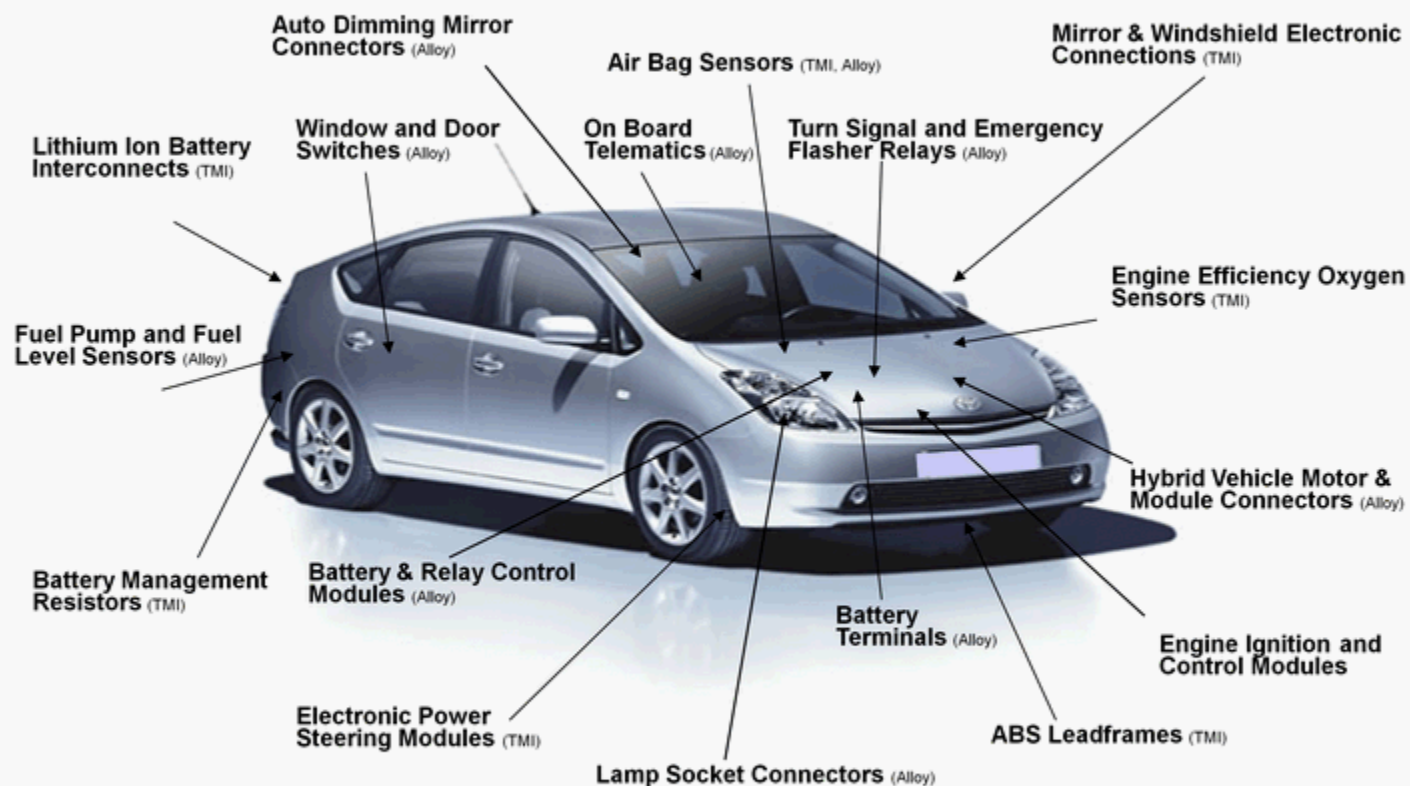
Automotive Electronics

- Delphi
- Kostal
- Johnson Electric
- Yasaki
- TRW
- Visteon

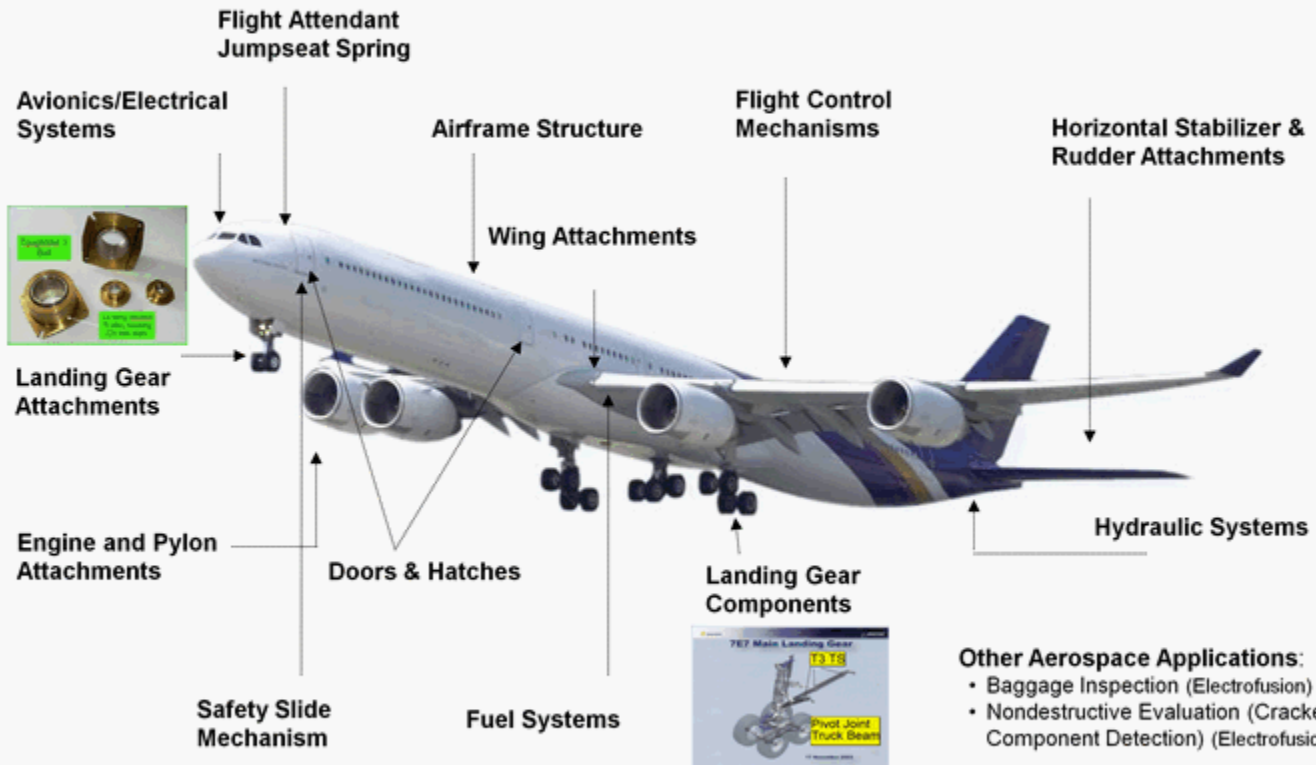
Applications - Cell Phones



Applications – Automotive Electronics



Applications – Aerospace



Applications - Oil & Gas

Wellhead Control Equipment (Alloy)

Structural Rig Components (Alloy)



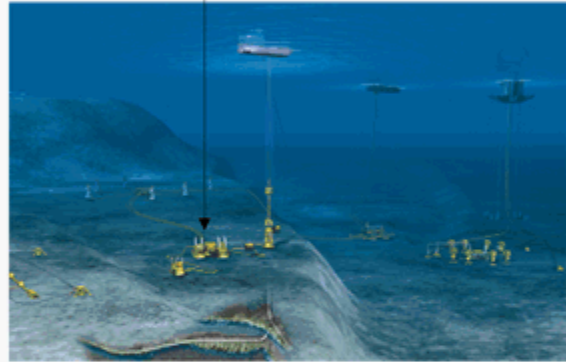
Drill Bits (Alloy)

Directional Drilling Equipment (Alloy)

MWD, LWD, MPT systems

Under Water Wellhead Equipment (Alloy)

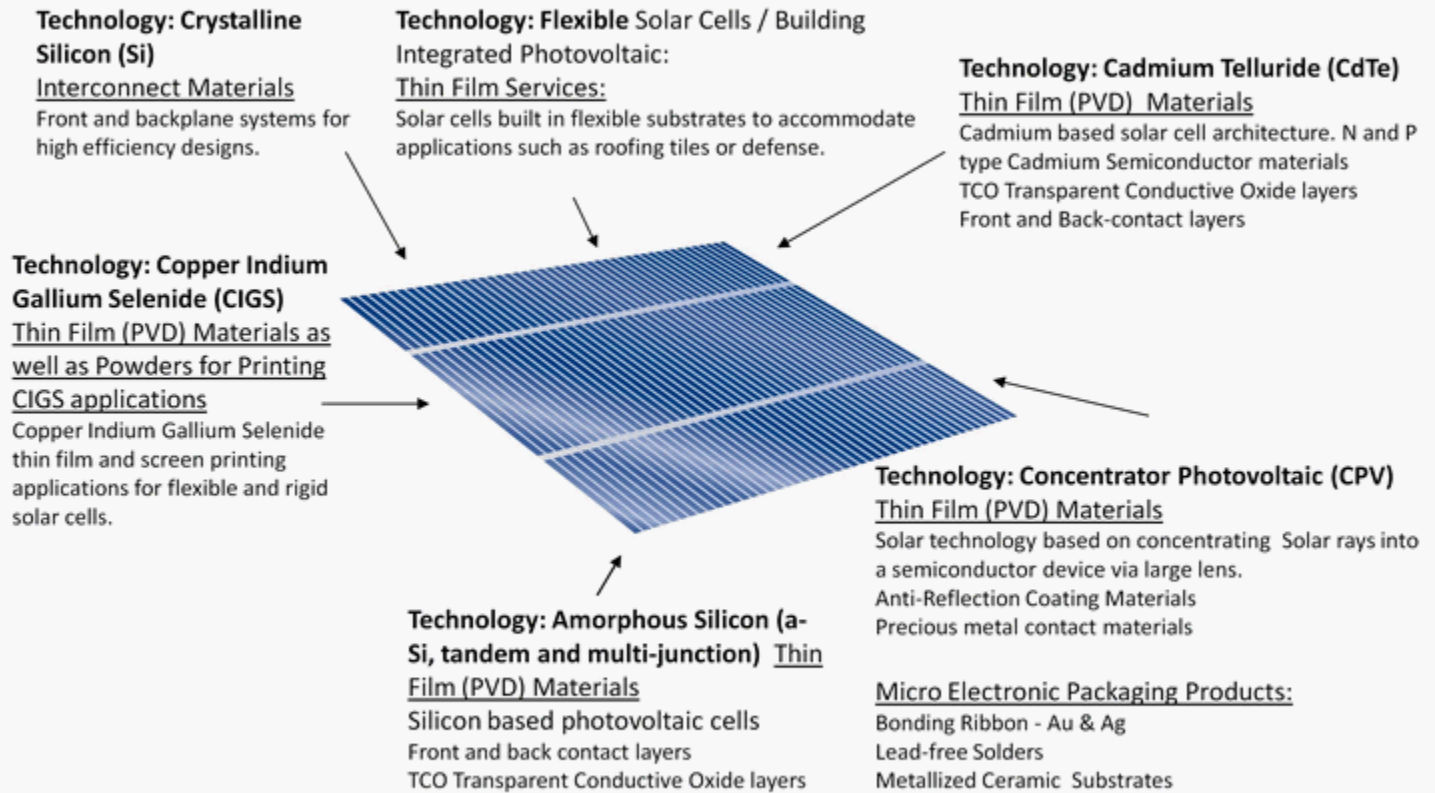
Blow out preventers, hydraulic actuators



Other Oil & Gas Applications:

- **Elemental Analysis** (Electrofusion)
- **Down Hole X-Ray Inspection** (Electrofusion)

Applications – Photovoltaic (Solar)



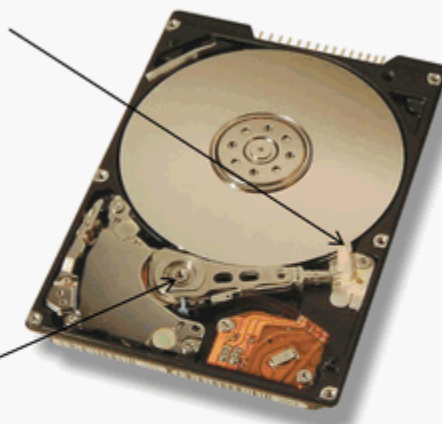
Applications – Hard Disk Drives

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.*



Applications – Medical

Seizure Control (WAM/TFT):

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

X-Ray Mammography (Electrofusion)

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 and Grounding
- Electrical Terminals in Connectors

Radiation Therapy – Neutron Reflectors

Cardiac Rhythm Management (TMI):

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

Other Medical Applications:

- CT Scan (Electrofusion)
- Diagnostic X-Rays (Electrofusion)
- Advanced Drug Delivery Components (TMI)
- Diagnostic Electronic Components (TMI)
- Anesthesia Monitoring Components (TMI)
- Operating Instruments (TMI)

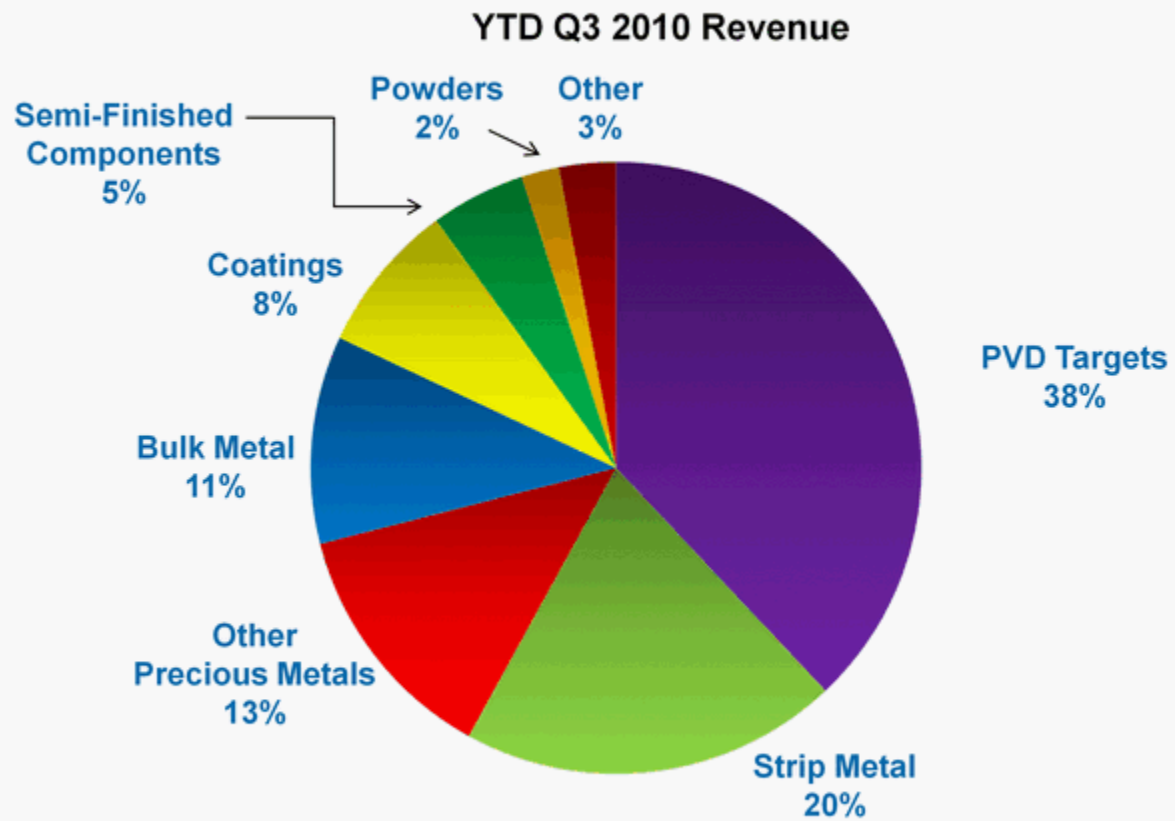


The Transformation ... Acquisitions

2005	OMC	Shield kit cleaning services (technology service buy)
2005	TFT	Thin film vacuum sputtered coatings
2006	CERAC	Inorganic chemicals ... powders and evaporative targets (optics, security, solar, semiconductor)
2008	Techni-Met	Thin film roll to roll flexible substrate vacuum sputtered coatings (medical)
2009	Barr	Thin film vacuum sputtered coatings
2010	Academy	Precious metal (Ag/Au) products and refining

Approximately \$175 M invested at EBITDA multiples of 5-7

Major Product Forms



Company Overview

- Review our two largest segments
- Growth drivers, future initiatives, sustainability

Profile

Unique Advanced Materials Company

- 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 high-tech consumer electronics to heavy industrial equipment

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 market and technology trends ... targeted to achieve strong profitable growth

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

Specialty Engineered Alloys



Transforming our World and Yours

Specialty Engineered Alloys - Overview

World's Leader in Copper Beryllium

- North America's only Bertrandite Ore Mine
- Only Fully Integrated Copper Beryllium Business
(mine – manufacture – sales – distribution - technical support)
- 848 Employees at 8 Locations
- Growing Non-Beryllium Product Family of High Performance Alloys
(Toughmet, Cupro-Nickel, Leadless CuNi wire, Moldmax V)
- Third Party Distribution is above 40% and Growing
- Sales are 55% outside North America and Growing

Operations and Distribution

Operation	Location	Products
Mine Chemical Mill	Delta, UT	Bertrandite Ore Be Hydroxide
Primary Operations Strip Mill Bulk Mill	Elmore, OH	Cast Billets Strip Coils Rod, Bar, Tube and Plate
Finishing Operations	Reading, PA	Finished Strip and R&W
Non-Be Casting	Lorain, OH	Cast Billets and Shapes
Distribution	Chicago, IL Detroit, MI Stuttgart, Germany Fukaya, Japan	Finished Strip Finished Bulk Finished Strip Finished Strip

Independent Distributors

Americas

- Admiral Metals
- Bohler Uddeholm
- Busby Metals
- EJ Brooks
- Farmers
- Mead Metals
- Schmoltz & Bickenback
- Southern Copper & Supply
- Thyssen Krupp
- Trident

Europe

- Bohler Uddeholm
- Busby Metals
- Laminaries Matthey
- Stainless
- Thyssen Krupp

Asia Pacific

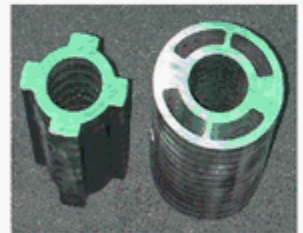
- ASSAB Pacific
- ATP
- James Coppel Lee
- Oristar
- Tai Mao
- Yamato Miyoshi
- Yee Chong

Why use Copper Beryllium and our other Alloys?

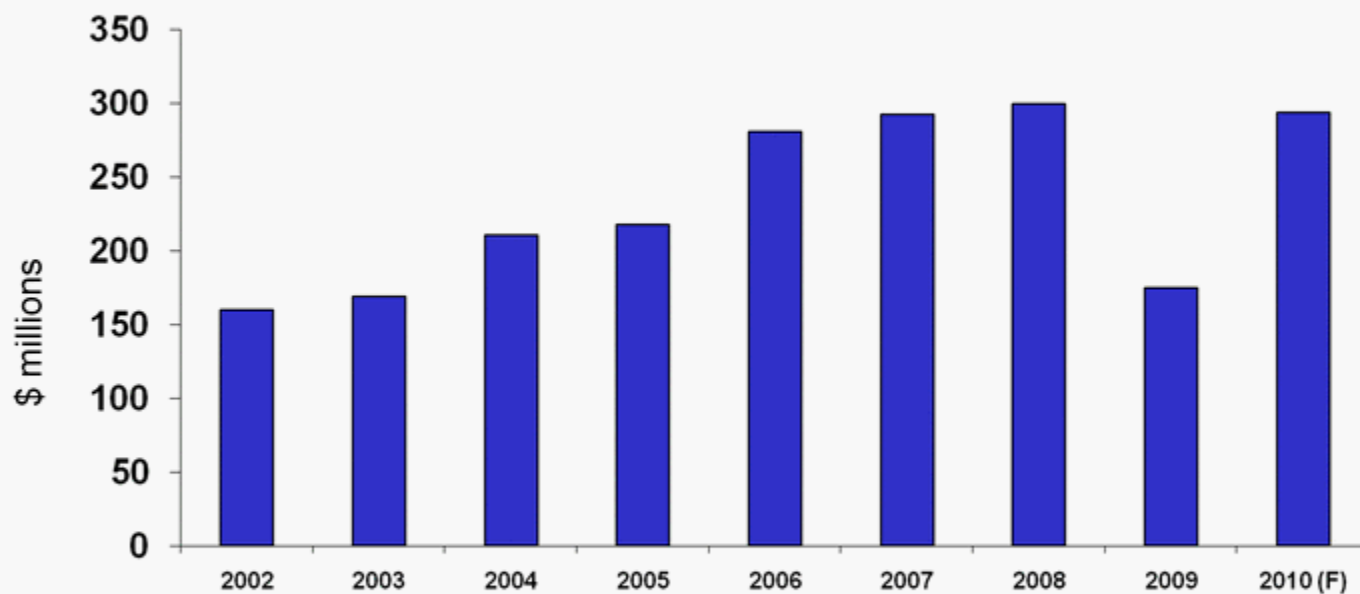
- High Strength and Hardness
- High Thermal Conductivity
- High Thermal Stability
- High Electrical Conductivity
- Miniaturization
- Anti-Microbial
- Non-Biofouling
- Non-Magnetic
- Non-Sparking
- Anti-Galling
- Corrosion Resistant
- Good Machinability
- Good Castability
- Good Formability
- Good Tribology
- Age Hardening
- Stress Relaxation Resistant

Major Product Forms

- Strip
- Rod
- Wire
- Plate
- Bar
- Tube
- Billet
- Casting Alloys
- Mainly CuBe and other Specialty CuNi based products



Specialty Engineered Alloys - Annual Sales



Specialty Engineered Alloys – Transformation

Lower Breakeven to Reduce the Impact of Business Cycles and Grow the Top Line

Lower Breakeven

- Reduce Overhead
- Improve Margins
 - Attack Costs
 - Increase Prices

Faster Growth

- Establish Growth Teams
- New Alloys
- New Applications
- New Geographies
- Higher Margin Products

Transformation – Lower Overhead

- 2009 OH Reduction (23%) \$25 M
 - Headcount Reduction
 - Transition to 3rd Party Distribution
- More to Come (2010 to 2013) \$6-8 M
 - Depreciation Reduction
 - Operating Efficiencies
 - Lean Sigma Initiatives

Transformation – Attack Costs

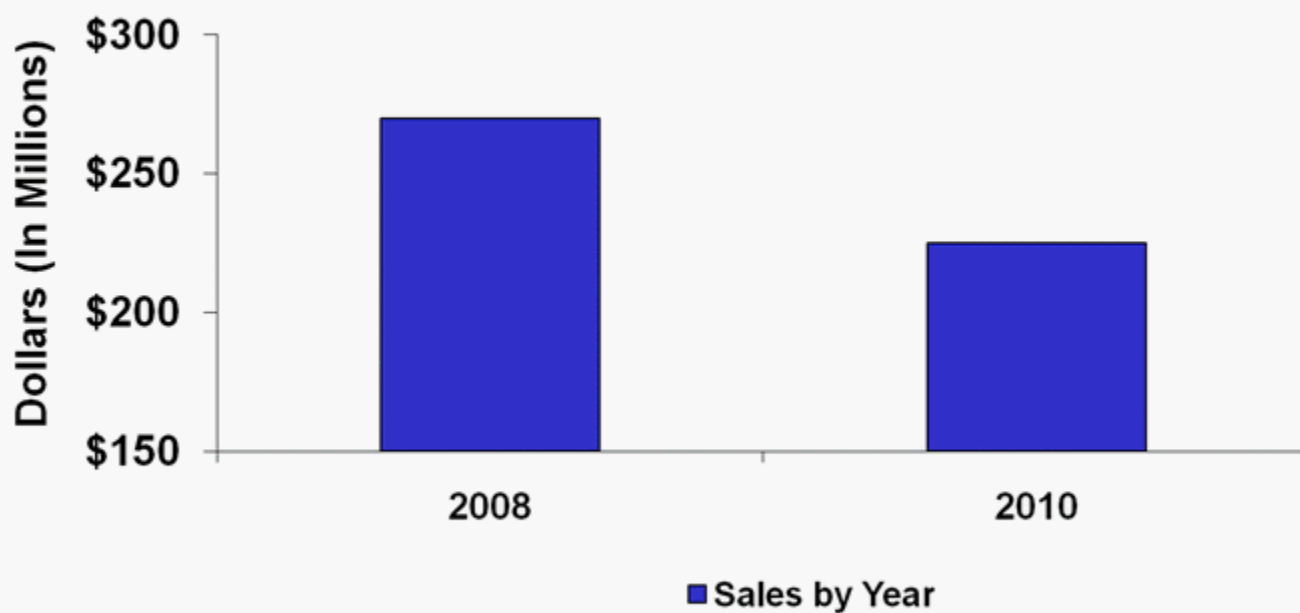
- 2009 Variable Cost Reductions \$5-7 M
 - Labor Cost and Utilization
 - Purchasing Initiatives
 - Lean Sigma Savings
- More to Come 2010 – 2013 \$2-4 M

Transformation – Pricing Actions

- 2009 - Hired Pricing Consultant
- 2009 Theme – “*Capture the Value of Brush*”
 - Freight Charge
 - Expedite Fees
 - Fabrication Increases
 - Price Setting

Breakeven Reduction - Complete

Breakeven Sales



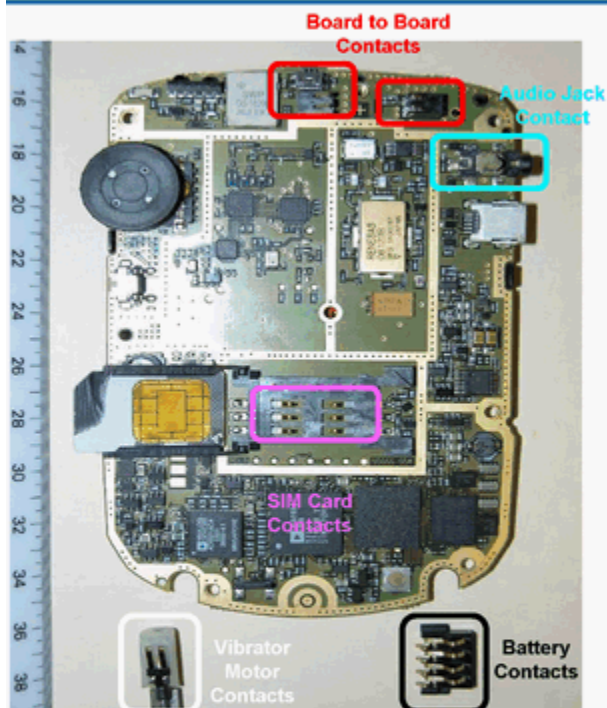
Key Customers and Demand Generators by Market

Market	% of Revenue	Customers and Demand Generators	
<i>Consumer Electronics</i>	28%	Hon Hai (FoxConn) Tyco Johnson Electric Apple	Motorola RIM Tec-Brite 3M
<i>Industrial & Comm Aero</i>	19%	Boeing Air Bus Goodrich Messier	PMP Amphenol Aerospace Deutsch Engineered Honeywell Controls
<i>Other (appl/ctrls,hyd)</i>	19%	Caterpillar Inc. Joy Mining Bucyrus America	P & H Mining Hitachi Construction John Deere
<i>Auto Electronics</i>	12%	Delphi Kostal Omron	Daesung JST Corporation
<i>Telecom Infrastructure</i>	10%	Tyco Undersea NEC Prevco	Samtec/Ditron FCI Laird
<i>Energy</i>	10%	Schlumberger Baker Hughes Halliburton Energy Services	Weatherford FMC Aker Solutions
<i>Medical, Defense & Science</i>	2%	Laird General Atomics	Tyco Electronics Electric Boat Corporation

Growth – Alloys/Processes Recently Developed for:

- Strip
 - Backplane Connectors, Processor Sockets, BITS and Modular Jacks
 - Non-Be for micro motors and voice coil motors
- Bulk
 - Non-Be Aerospace Bearings and Rub Strips
 - Non-Be Oil & Gas Housings and Drilling Tools
 - Non-Be Fittings for the Marine Market
 - Non-Be Larger Diam. Bearings for Heavy Equipment
- Rod and Wire
 - Electrical Connectors for Transportation Market

Applications – Smart Phones



OEMs are seeing the value of using high performance alloys to make more reliable connectors

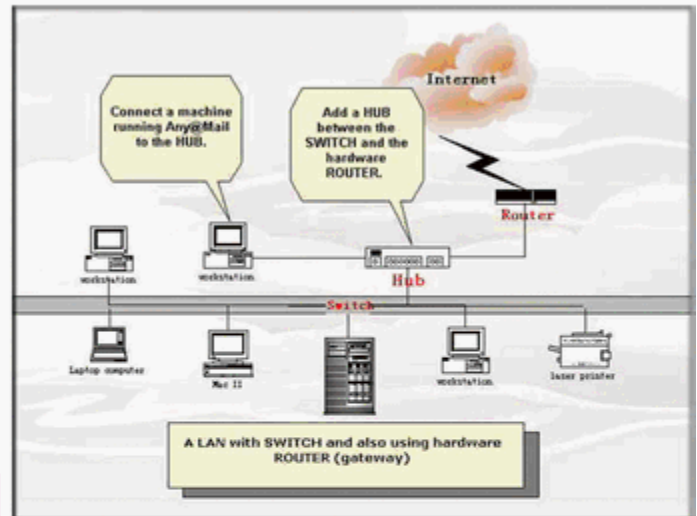
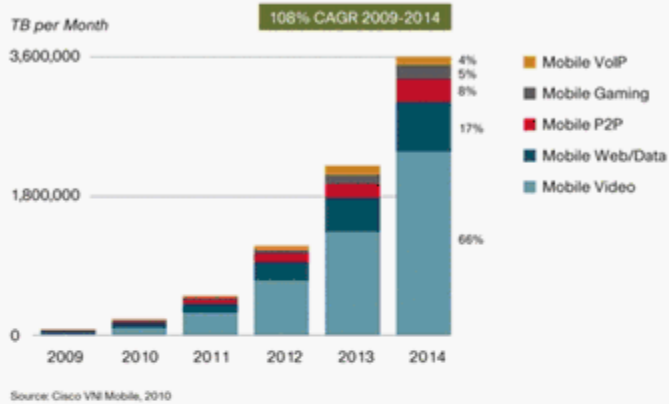
Smart Phone Shipments (millions of units)

	2008	2009	2010	2011	2012	2013
Total	139	190	251	321	398	479

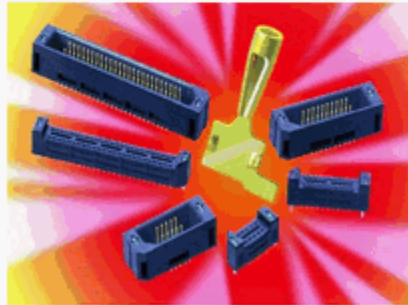
Source: Frost and Sullivan

- Typical Contact Applications
 - Battery Contacts
 - Audio Jacks
 - SIM Card Contact
 - Board to Board Contacts
 - Vibrator Motor Contacts

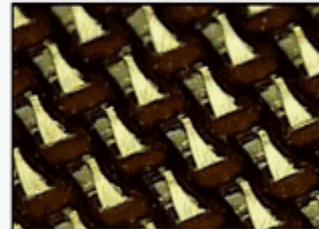
Applications – Infrastructure (Local Area Networks)



Modular Jacks



PCB Sockets



Processor Sockets



Shielding

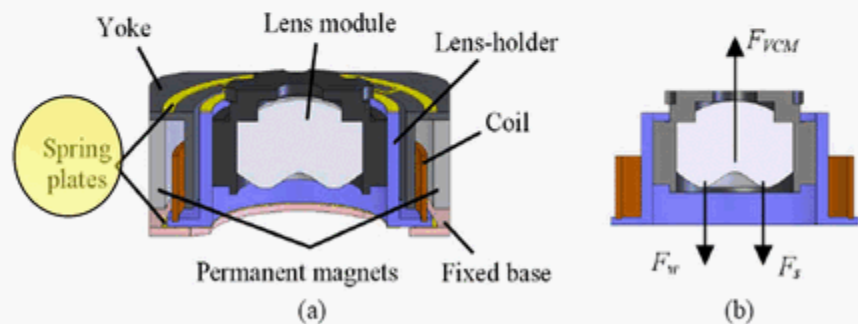
Applications – Voice Coil Motors

- BF158 was developed and launched in 2009 and is currently used to make VCM spring plates.
- During 2010, 93.4% of U.S. mobile phone sales will be camera phones.

	No. Units Sold (000)		Unit Growth
	2010E	2014E	
Worldwide Mobile PC Sales	170	264	94
Handsets	1267	1516	249
Digital Cameras	119	165	46
Total	1555	1945	390

Applications:

- Cell Phones
- Computers
- Digital Cameras



Applications – Micromotors

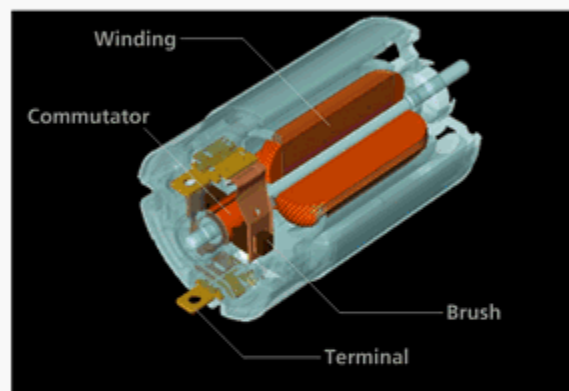
Brush springs are made using Alloy 25. Two new products have been developed for commutator applications and are currently being evaluated by potential new customers.



Commutator



Brush



Applications:

- Automotive
- Home Electronics
- Appliance
- Power tools
- Optical & Precision Instruments
- HVAC

Bulk Products - Revenue Growth

	<u>2000</u>	<u>2010 (F)</u>
Oil & Gas Exploration and Production	14%	27%
Aerospace	14%	24%
Automotive	37%	23%
Consumer	6%	16%
Const & Mining Equip	2%	7%
Undersea Telecom	19%	2%
Electric Power	2%	1%
Sales	\$50M	\$100M

Applications - Oil & Gas

Wellhead Control Equipment

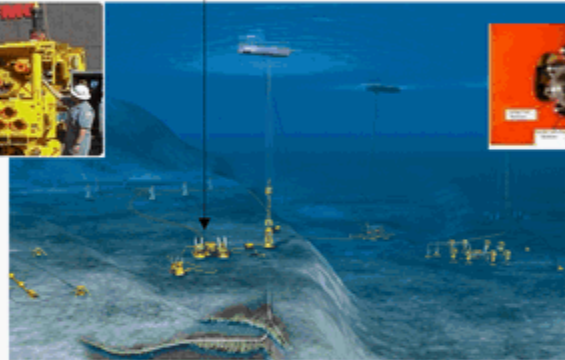


Structural Rig Components



Under Water Wellhead Equipment

ROV's, blow out preventers, hydraulic actuators, control fluid couplings



Directional Drilling Equipment

MWD, LWD, MPT systems

Drill Bits

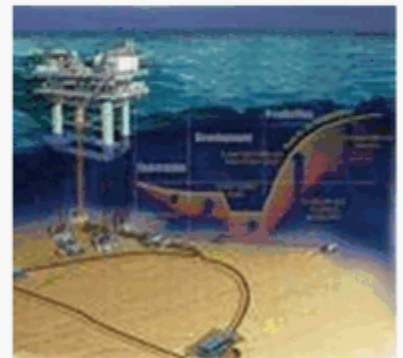
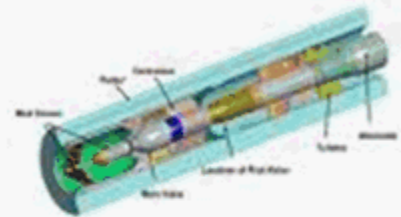
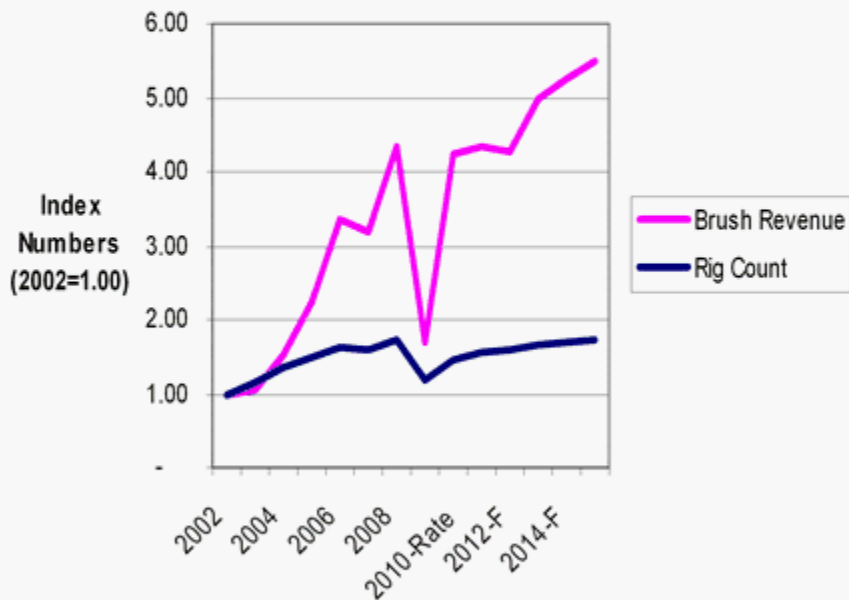


Artificial Lift Equipment

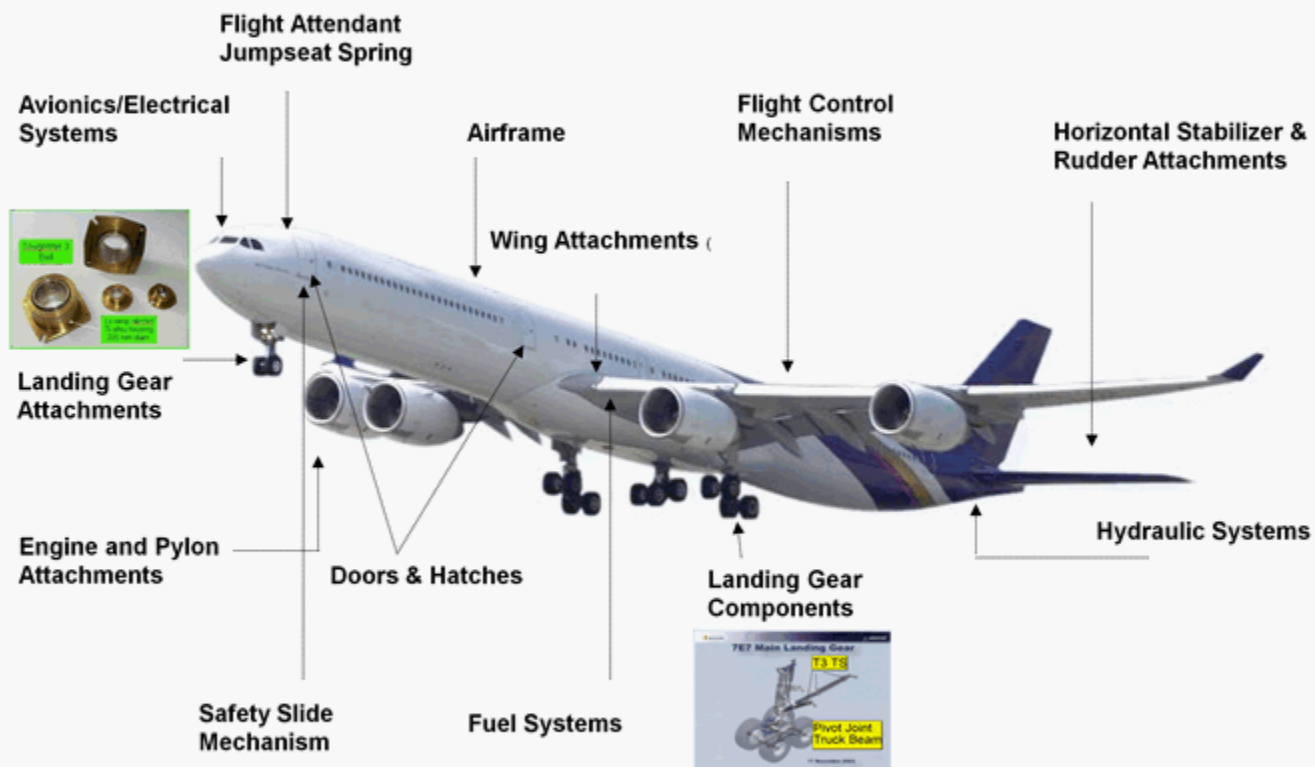
ToughMet bearings in Electric Submersible Pumps

Energy Growth (Oil & Gas)

Annual Growth of Brush Bulk Products Oil and Gas Sales
versus
Annual Growth of the Underlying Market

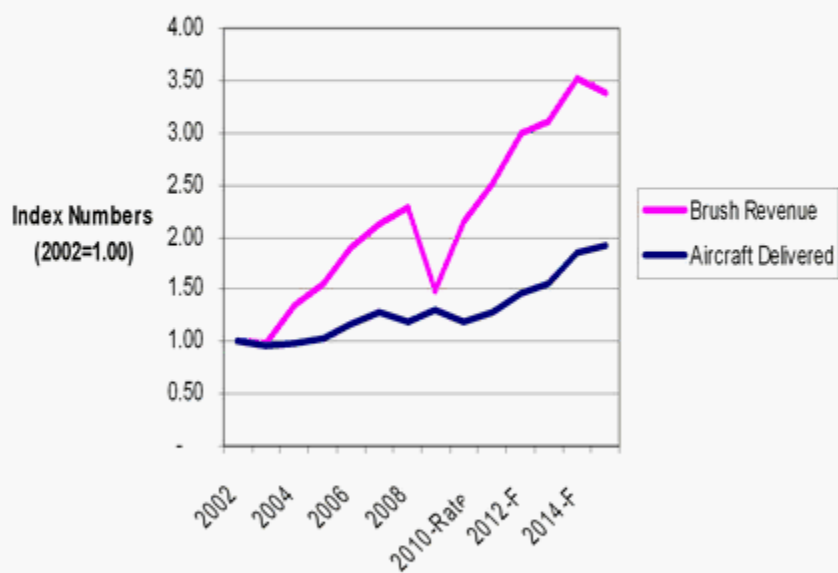


Applications – Aerospace



Aerospace Growth

Annual Growth of Brush Bulk Products Aerospace Sales
versus
Annual Growth of the Underlying Market



"Aircraft Delivered" - JPMorgan forecast



Applications – Mining Equipment



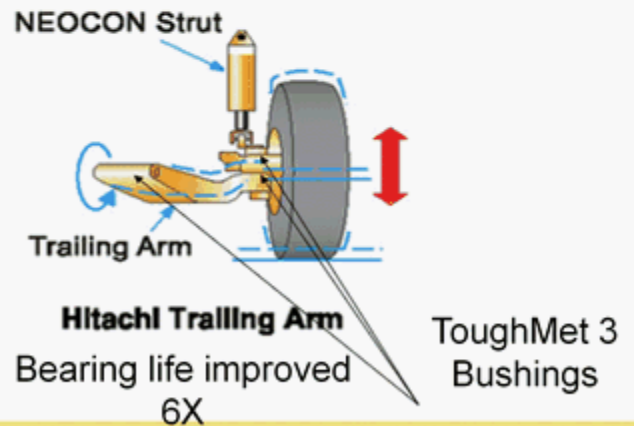
Non-galling: dynamic bushings on 16 high-stress positions in all models. ToughMet 3 Replaces carburized 8620.

- Corrosion resistance: all salt and potash miners specified with 100% ToughMet 3 bushings.

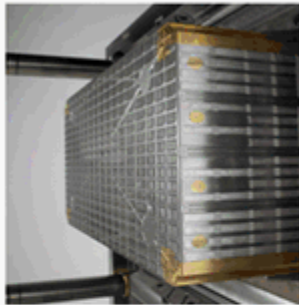


EH5000: high P, low V

ToughMet



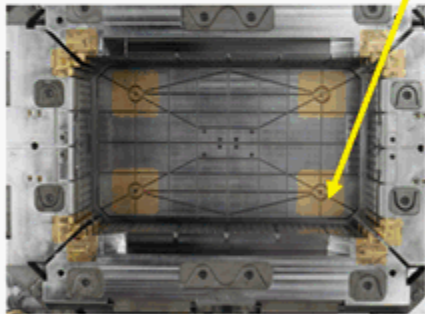
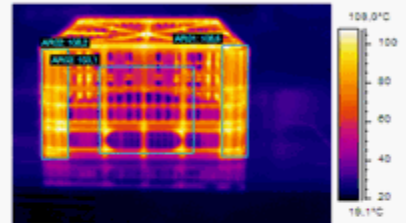
Applications – Injection Mold Tooling (Consumer)



MoldMAX mold core and cavity tooling inserts at all the hot spots

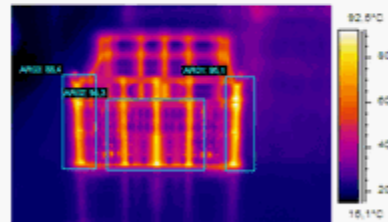
Steel Tool

Cycle time : 16,6 sec
Max temp: 108,2°C



Modified tool With MOLDMAX HH

Cycle time: 11,6 sec
Max temp: 95,1°C

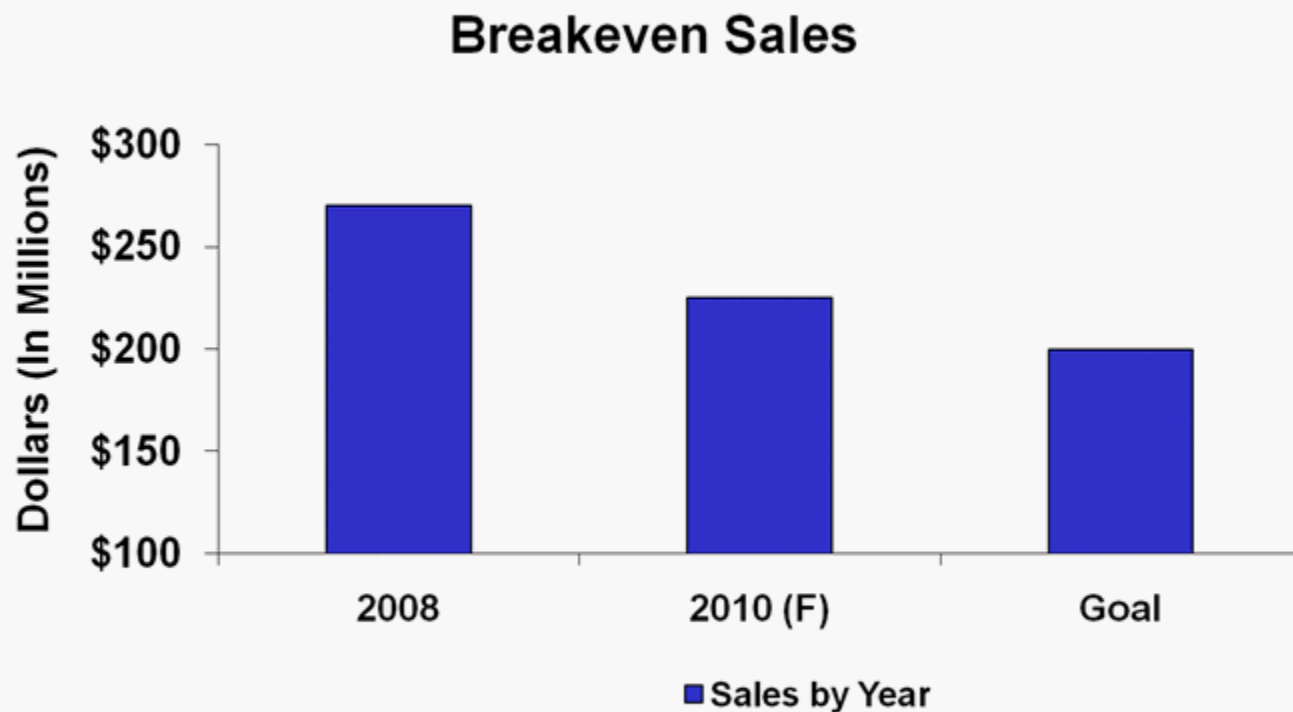


Cycle time reduced 30%.
Scrap rate reduced to zero.
One less molding machine required
to meet demand growth.

New Geographies

- Focus on Brazil, Russia, India and China
 - Expanding Footprint in China
 - New Distributors Growing Plastics Business in Asia
 - Added Sales, Distribution and Slitting in India
 - Developing Oil & Gas Business in Russia
- Increased Market Share in UK with Distribution Partner

Breakeven Reduction – Goal



What are the key points today?

- Overhead has Dropped and Margins have Improved
- Breakeven has Significantly Improved
- Better Positioned for Business Cycles
- Breakeven will Further Improve
- Robust New Product Development
- Growing Internationally
- Markets being Served are Robust (> GDP)
- Gaining Share in Growing Markets

“Our Customers’ First Choice!”

Advanced Material Technologies and Services



Transforming our World and Yours

Strategic Augmentation

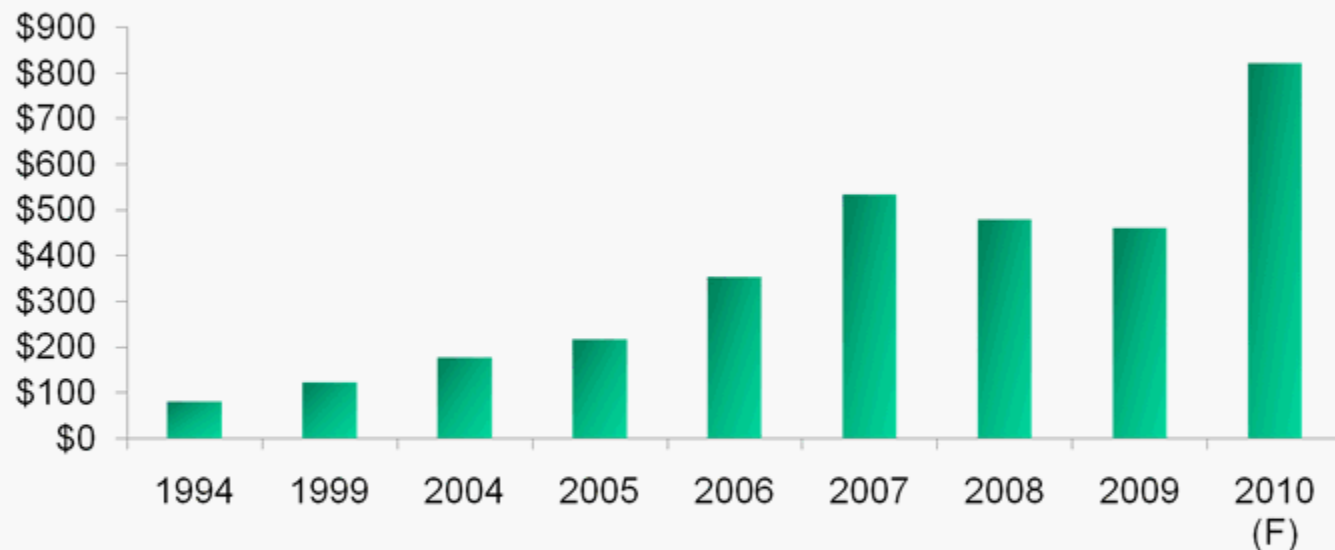
"Our Customers' First Choice!"

• Williams Precious Metals Acquired	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	2005
• Thin Film Technology	2005
• CERAC inc.	2006
• Suzhou, China (Greenfield)	2007
• Louny, Czech Republic (Greenfield)	2007
• Techni-Met	2008
• Barr Associates	2009
• Academy Corporation	2010

Sales History

"Our Customers' First Choice!"

\$'s in millions

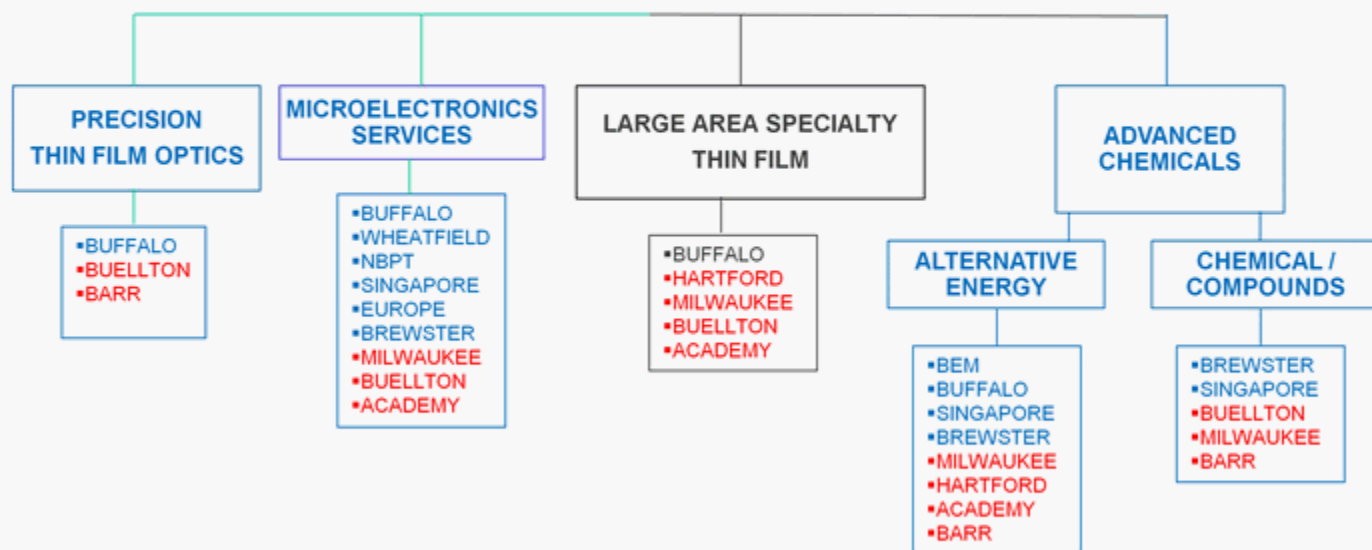


Transformation Elements

"Our Customers' First Choice!"

- Customer Centricity
- Sustain the "Base"
- Quality as the Differentiator
- Leading Edge Technologies
 - Niche Markets / Applications*
- Focus on Innovation
- The "Right" Organization / People
- Global Manufacturing Capabilities

SBU's / BUSINESS SEGMENTS



■ Recent acquisitions

- Global Presence: Advanced Materials Technologies
- 1,100 Employees
- 15 Asset Locations
- Strategic Business Units - Organization
- Support Functions
 - Sales
 - Administration
 - Technology / new product development
- Virtual new product development
 - i-Flow Stage-Gate
 - Technology Experts

Distinctive Competencies

"Our Customers' First Choice!"

- Precious Metal Refining and Management – Au, Ag Pd
- PVD Materials and Services
- Melt and Powder Metallurgy
- Shield Cleaning and Bonding
- Large and Small Area Thin Film Deposition and Design
- Hazardous Chemical Processing
- Electronic Packing Materials, Fabrication and Assembly
- Global Presence
- Marketing and Sales Depth
- Track Record of Success – Strong Long – Term Growth
- Customer Relationships
- Williams Brand Recognition
- Barr – Recognized Leader Precision Thin Film Optical Coatings
- Academy – Leader in Ag PVD for Architectural Glass Industry

Core Technologies

"Our Customers' First Choice!"

- PM Casting / Rolling
- Non PM Casting
- Investment Casting
- High Volume Casting
- PM Refining (Au/Pd)
- Component Machining
- Assembly Welding
- Wire Fabrication
- Rod / Turb Head
- Hot Pressing (Induction)
- Hot Pressing (Resistive)
- Au/Ni Plating
- Thermal Arc Spray
- Selective Plating
- Thick Film Printing
- GDMS / ICP / Wet Chem
- Powder Metallurgy
- Powder Sizing
- Large Area Machine
- Grinding / Polishing
- Shield Kit Chemistry
- Backing Plate Design
- Direct Bond Copper
- Plastic Component Process
- Component Design
- Brazing High Temp
- Component Assembly
- Chemical / Synthesis
- Bonding
- Enhanced Target Design
- Magnetron Sputtering
- IBS Evaporation
- LA Thin Film Coating
- Photo Lithography
- Reel-to-Reel PVD

Microelectronics & Services

"Our Customers' First Choice!"

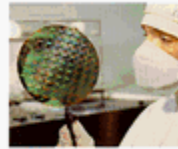
Key Markets



Wireless
Application



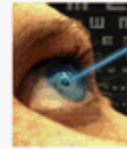
Photonic & Optical
Applications (LED)



Semiconductor



Defense



Medical



Products



- Semi PVD Targets
- Precious Metal Targets
- Evaporation Materials
- Architectural Glass Targets
- Vacuum Grade Joining Materials

- High Reliability Microelectronic Materials
- Hermetic Covers
- Precious Metal Stamped Products
- Precious Metal Fine Wire
- High Power RF Packages
- Vacuum Grade Joining Materials

- Precious Metal Management
- Precision Parts Cleaning
- Precious Metal Refining Services
- Precious Metal Grain
- Dental Alloys

Core Technology



- Vacuum Melting
- Metal Rolling, Annealing,
- Forging, & Extrusion
- Precious Metal Management
- Sputtering Target Bonding
- High Volume Stamping
- Precision Machining
- Refining
- Tooling Design
- Powder Metallurgy

- Refining
- Brazing
- Precious Metal Wire Fabrication
- High Temp Braze
- Twin Wire Arc Spray
- Atomization
- Precision Cleaning & Chemical Removal
- Selective Precious Metal Plating
- Target Enhancements
- Purity Control
- Joining Technology

- Solder Material Fabrication
- Thermal Management Design
- Thick Film Printing
- Cladding
- Wire EDM
- Direct Bond Copper
- Turb Head
- Coatings
- Stamping
- Assembly



Transforming our World and Yours 83

Precision Optics

"Our Customers' First Choice!"

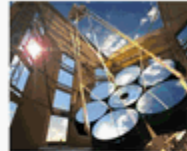
Key Markets



Defense Applications



Commercial Application



Space, Science & Astronomy



Thermal Imaging

Products



- Linear Variable Filters
- High Value Coatings
- Non-optical Coatings
- Hybrid Circuits

- Flex Sensors
- Visi-Lids®
- Filter Sets

Core Technology



- Magnetron Sputter
- Ion Beam Sputter
- Thermal Evaporation

- Ion Assisted Deposition
- Precision Patterning
- Singulation

- Sub Assembly/Potting
- Solder Assembly
- Optical Design



Transforming our World and Yours 84

Advanced Chemicals

"Our Customers' First Choice!"

Key Markets



Hi B LED's Applications



Security Application



Alternative Energy



Specialty Inorganic Chemicals

Products



- Optic Materials
- LED
 - Phosphor Additives
- Specialty Chemicals
 - Thermal Management
 - Specialty Battery
 - GaAs Precursors
- Solar
 - PVD Targets
 - Thin Film PV (CdTe, CIGS)
 - Thermal Reflector, Mirrors
 - High Purity Chemicals
 - Evaporants (CdTe, CdS)
 - Links

Core Technology



- Hot Pressing (Induction)
- Hot Pressing (Resistive)
- Powder Sizing
- High Purity Chemicals
- Low Oxygen/Moisture
- Chemical Synthesis
 - Solid State
 - Precipitation reactions
- E-beam Materials
- EH&S Safety – Haz Materials
- Customizable, Flexible Niche Producer



Transforming our World and Yours 85

Large Area Specialty Coatings

"Our Customers' First Choice!"

Key Markets



Medical Applications



Alternative Energy



Display Technologies

Products



- Thin Film Stack with Custom Optical and/or Electrical Properties
- Precision Slit Base film and Coated Webs
- Au and Pd Coated Flexible Substrates
- Non Precious Metal Coated Flexible Substrates

Core Technology



- Engineered Thin Film New Product Development Services
- Sputtering
- Converting



Transforming our World and Yours 86

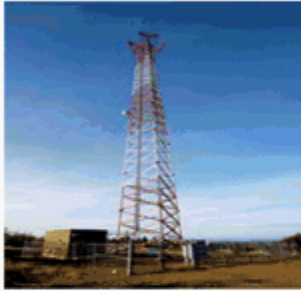
End Use Markets

"Our Customers' First Choice!"

<u>Market</u>	<u>Growth</u>	<u>Market</u>	<u>Growth</u>
• Wireless	12-20%	• Defense	Flat
• LED's	20-30%	• Semiconductor	6%
• Precision Optics	12%	• Data Storage	10-12%
• Photovoltaic	30%	• PM Services	10+%
• Medical	8-12%		

Wireless/Photonics

"Our Customers' First Choice!"



Technology: Infrastructure Components

High power thermal materials and products serving wireless communications, high power transmission

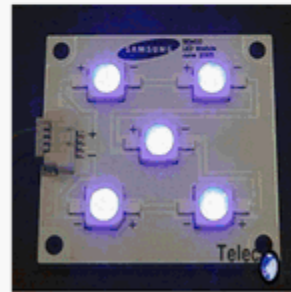


Technology: Gallium Arsenide devices (GaAs)

Cellphones, PDA's, wireless devices requiring pre-amplifiers, power amplifiers, oscillators, surface acoustical wave devices,

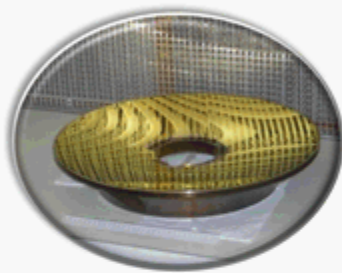
Technology: Specialty Inorganic Compounds, and High Purity NPM/PM (Au)

TFT LCD backlights, Monitor lighting, signage displays, billboards, traffic lights conventional lighting



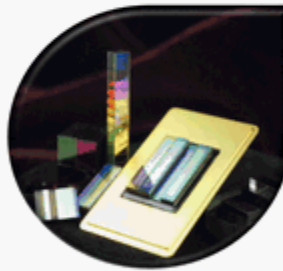
Precision Optics

"Our Customers' First Choice!"



Technology: NIR and IR Lenses

Thin Film (PVD) Deposition Process
Multi-layer filters for Thermal weapon sites,
laser protection, automotive pedestrian
protection, security camera, commercial thermal
meters, UAV applications



Technology: High Value Coatings

Identified as the "Go to" Precision coater of sophisticated high value components including mirrors and lenses used in a number of government /commercial space ,science and astronomy applications through the world -US, Europe and Asia

Technology: Filter Arrays

Satellite imaging filters, Medical /DNA
sensors, filters Color matching food
processing ,Gas analysis ,Laser ,
communications

Applications – Photovoltaic

“Our Customers’ First Choice!”

Technology: Flexible Solar Cells Building Integrated Photovoltaic

Thin Film Services

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

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: Cadmium Telluride (CdTe)

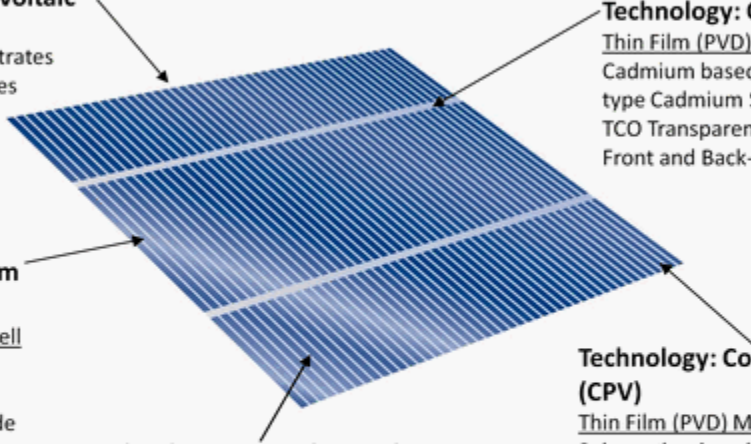
Thin Film (PVD) Materials

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

Technology: 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
Metalized Ceramic Substrates



Other Segments Key Initiatives

Beryllium and Beryllium Composites – Applications

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

- Infrared sensors for fighter jet and UAV 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
- Optical mirrors for NASA space-based telescopes
- Diaphragms for commercial and concert quality speaker systems



Beryllium and Beryllium Composites – Applications

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

Platforms for Sustainable Growth

- Optical data collection and targeting systems – vision and sensors
- Fabricated parts up x3 since 2009
- Energy
 - ITER (International Fusion Reactor)
 - Nuclear fission reactors (test, small scale, fuel additive)
- Commercial
 - “Truextent” speaker diaphragms
 - Semi-conductor equipment – wafer fab and test structural components
- Investment casting to expand AlBe application base
- Expanding materials technology beyond Be – using our manufacturing base
 - Solar
 - Defense

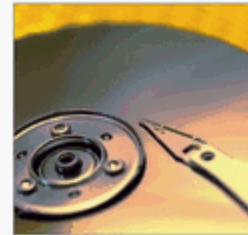
Engineered Material Systems – solving customers' problems with engineered strip metals

Mill Products

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

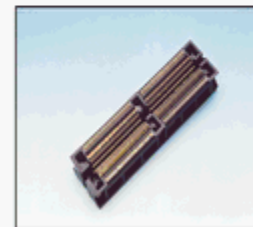
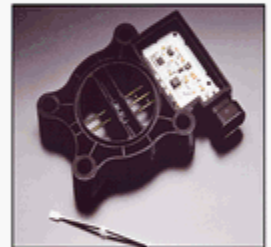
Electroplating

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



**Disk
Drive
Arms**

**Automotive
Control
Components**

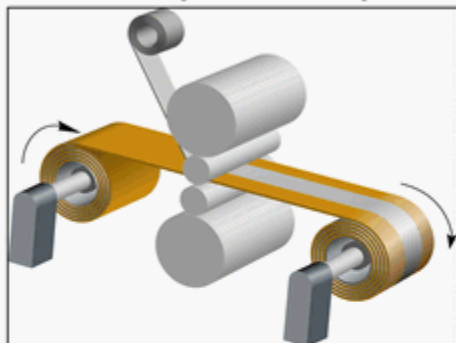


**Specialty
Electronic
Connectors**

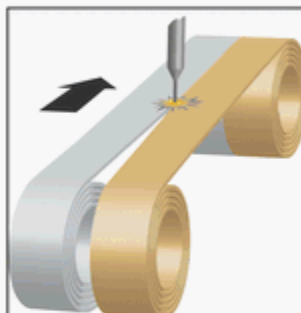
Automotive, Telecom/Computer, Medical, Energy

TMI Core Technologies

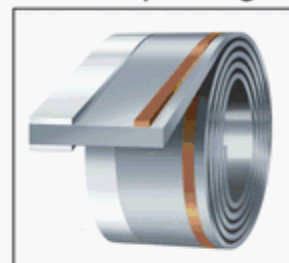
Clad Inlays, Overlays



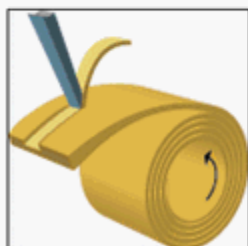
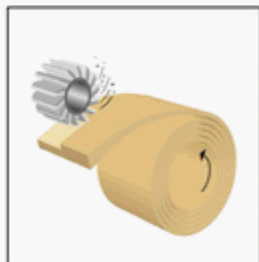
Electron Beam Welding



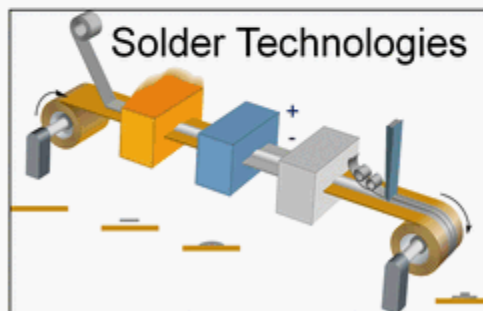
Electroplating



Profiled Machining



Solder Technologies



Platforms for Sustainable Growth

- Li-ion battery power interconnect solutions
- Solar power interconnect clad foil solutions
- Medical – reroll and specialty applications
- High power specialty electronics products – global automotive
- Continue to expand international footprint
- Increase value add with “total” component supply

Reconciliation of Non-GAAP Financial Measures

	2002	2003	2009	2010 (F) Range*
GAAP diluted EPS	\$ (2.15)	\$ (.80)	\$ (.61)	\$ 2.00 - \$ 2.10
Derivative ineffectiveness			.16	
Financing costs and deferred tax valuation allowances		.55		
Deferred tax valuation allowances	1.20			
Severance and restructuring costs			.07	
Pension curtailment			(.04)	
Other	.04		.04	
Non-GAAP operating run rate	\$ (.91)	\$ (.25)	\$ (.38)	\$ 2.00 - \$ 2.10

*Reconciliation of 2010 Forecast information: expected earnings per diluted share for the 2010 full year excludes special items. It is not possible at this time to identify the potential amount or significance of these special items. Accordingly, a detailed reconciliation of earnings per diluted share for 2010 is impracticable.