People Engagement in a Lean Environment
2007 Alcoa Overview

2007 Revenues = $30.7 B

- Flat Rolled Products: $9.2
- Engineered Solutions: $6.6
- Primary Metals: $5.7
- Extruded & End Products: $3.3
- Packaging & Consumer: $3.2
- Alumina: $2.7

By Geographic Region

- U.S.: 57%
- Europe: 24%
- Pacific: 13%
- Other: 6%

Alcoa Worldwide
350 Operating Locations
44 Countries
123,000 Employees

Engineered Solutions BU
76 Operating Locations
17 Countries

Alcoa Power and Propulsion BU
- Alcoa Howmet
Alcoa Power and Propulsion Global Footprint

- Technology Leadership
- Integrated Supply Chain
- Operational Excellence
  - Alcoa Business Systems

- Global Footprint
  - 28 Mfg Facilities
  - 8 Countries
  - ~ 11,000 Employees
Alcoa Power and Propulsion
Alcoa Howmet Products

A Leading Manufacturer Of Airfoils, Structural Components and Specialty Products

Airfoil Castings

#1 in Aero Engine Airfoils

Structural Castings

# 2 in Aero Engine Structural Parts

IGT Airfoils

#1 IGT Airfoils

Specialty Products

Leading Supplier of Coating & Machining To OEM’s
Operations Overview

- Began Operations in 1949
- Our plant spans 112 acres of property
- 15 acres are under the roof – 500,000 Sq. ft.
- Adjacent to the Rockaway River
- $360,000 Annual Property Taxes
- Approximately 840 employees receiving $33.8 Million in payroll $’s
Howmet Dover Casting - Sales Trends

HDC Sales M$

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (M$)</th>
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<tbody>
<tr>
<td>1998</td>
<td>$162</td>
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<tr>
<td>2008</td>
<td>$178</td>
</tr>
<tr>
<td>2009</td>
<td>$184</td>
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Demonstrated Run Rate
Howmet Dover Alloy - Sales Trends

Sales (000,000)

<table>
<thead>
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<th>Sales (000,000)</th>
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<td>$151</td>
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<td>2007</td>
<td>$217</td>
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<tr>
<td>2008</td>
<td>$240 (Projected)</td>
</tr>
<tr>
<td>2009</td>
<td>$273 (Plan)</td>
</tr>
</tbody>
</table>

Pounds (000,000)

- 90% Internal supply
- 10% Medical Market (J&J/Depuy, Zimmer)
Howmet Dover Casting - Sales By Customer

Major OEM Customers

- GE Aircraft
- Pratt & Whitney
- Rolls-Royce
- Honeywell
- Alstom
- GE Energy
- Siemens
- Solar Turbines
- Nuovo Pignone

Source: HDC FCST June 2006
Alloy Capital Expansion

- 2-3 Year Project
- $20 M
- Includes building expansion and equipment from NJ base Company
- 8% increase in Employment

**Super Cleaning Furnace Chambers**

- Furnace Dome
- Hot Tundish Inserter
- Mold Chamber
Alcoa 2020 Sustainability Framework

Six Focus Areas

Environment
- Safe and Sustainable Products and Processes
- Meet the needs of current and future generations through efficient resource use

Social
- Respect and Protect People: Employees
- Respect and Protect People: Communities

Economic
- Economic Benefit
- Accountability and Governance
Lagging Indicator Performance Historical LWDR/TRIR

Alcoa Worldwide LWD Performance (real time rates)
88% Reduction - 1994 Compared to 2008

Alcoa Worldwide TR Performance (real time rates)
76% Reduction - 1994 Compared to 2008
Safety Performance

• 70% TRR Improvement since 2000 after implementation of Health & Safety Management System

• BLR Industry Average TRR for our SIC code is 9.5
Recent Environmental Achievements

- Received Morris County’s Utility Authority’s Business Waste Minimization Award

- Selected as a 2007 finalist for the New Jersey Business & Industry Association (NJBIA) Environmental Excellence Award based on achieving the following targets:
  - 50% Silver Reduction (Wastewater)
  - 50% Reduction in Water Use and Discharge (Water Conservation)
  - 25% Reduction in Generated Hazardous Waste
  - 25% Reduction in Generated Landfill Waste
  - 25% Reduction in Fugitive Air Emissions
Key Ingredient is …..

Leadership

What it means to be an Alcoa leader…
THE GOAL

To Keep As Many People **SAFELY** Employed As Possible
For As Long As Possible, And
Provide As Competitive A Compensation Package
As Possible For All Of Our Employees

OUR OBJECTIVE

Continuously Improve Our Competitive Position
And Become Our Customer’s
“Supplier Of Choice”

OUR STRATEGY

Adopt the Alcoa Business System (ABS)
Tools To Assure Future Growth Opportunities
Leaders in ABS
The Foundation Is People

Foundation of the house is People:

- Only element of the system that has the ability to solve problems
- Only element that has the ability to learn and remove waste

GOALS:
- Best Quality
- Lowest Cost
- Shortest Lead Time

JUST-IN-TIME
- Continuous Flow
- Pull System
- Takt Time

AUTONOMATION ("Jidoka")
- Stop and notify of Abnormalities.
- Separate Man’s Work and Machine’s Work.

Leveling ("Heijunka")
Standardized Work
Continuous Improvement ("Kaizen")

Stability
(e.g., Equipment Reliability; Stable Processes, Quality, Suppliers)

PEOPLE
ABS = Alcoa Business System

ABS is about finding problems (opportunities) that impact the business and allowing people to solve them

Leadership is key to doing ABS; coaching others and creating a culture and organizational structure within which they can succeed
7 Leadership Imperatives
- Coach and Develop for Results
- Drive Performance
- Inspire Loyalty and Trust
- Manage Work
- Partner within and Across Teams
- Influence through Personal Power
- Select Talent

Key Principles
- Maintain and enhance self esteem
- Listen and respond with empathy
- Ask for help and encourage involvement
- Share thoughts, feelings and rationale (to build trust)
- Provide support without removing responsibility (to build ownership)
Leader Standard Work/Gemba Walk

Wax Schedule Attainment

Supervisors Leader Standard Work

Tooling Status and Issues

Green Cards – Ok
Yellow Cards – Countermeasure Card Implemented
Red Card - Problem
Hazard Recognition Program Elements

Scheduled Mini-Injury Free Events

Safety Team and Executive Plant Safety Inspections

EHS Suggestion System

4-Prong Approach

Random continued Mini-IFE process
Alcoa Employee Engagement – “Mini” Injury Free Events (IFE) Process

- Objective
  - To encourage employees to identify and recognize physical workplace hazards
  - To encourage employees to fix identified hazards in the moment
  - Encourages employees to offer solutions to identified problems
  - Requires employees to actively participate in the Alcoa Safety value.
  - Increase Safety Awareness
Using Red Hazard Flags or similar tools, employees are required to comb the workplace looking for potential hazards.

Systems are established to ensure any hazard identified is closed in a timely manner and communicated to our people.

**Metrics**

<table>
<thead>
<tr>
<th>% Participation to Target</th>
<th>% “on time” closure rate to target</th>
</tr>
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<tbody>
<tr>
<td>570, 570, 570, 570</td>
<td>570</td>
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</tbody>
</table>

Graphs showing participation and on time closure rates.
Continued Mini-Injury Free Events (IFE) Process

- 2008 IFE Target: One (1) IFE for every shop floor employee per month.
- Injury Free Event Visual Accountability boards located in each manufacturing area.
EHS Suggestion System

- Electronic based system that Integrates ABS, Quality, Manufacturing, Engineering with EHS
- Kiosks located in strategically throughout the Dover Ops. Plants
- Employees enter their suggestions from the Kiosks and track the progress of their suggestions
- Action items are automatically electronically sent via Outlook e-mail system when assigned manager or supervisor.
- Automatically tracks status of rolling action items

Mini-IFE’s, Safety Suggestions, Safety Inspections, Early Interventions and Safety Team items are entered and tracked in this system
Senior Leadership Expectations of Line Leaders

- Facilitating more open communication on high risk issues;
- Promoting teamwork to eliminate error-likely situations and strengthen defenses;
- Seeking out and eliminating organizational and systems weaknesses;
- Reinforcing safe work methods and desired behaviors;
- Analyzing past experiences to identify applicable "learning";
- Taking action to prevent the "repeat events"; and
- Searching and testing against applicable experience before acting in the future
- Living up to our EHS value.
Our community is mirrored in our employee population. They are socially diverse comprising many different age groups as well as cultural and educational backgrounds.

- 840 Full Time Active Employees
- 15 Temporary Workers
- 12 Years – Average Seniority
- 16.5% of employees are eligible for retirement
- 37% of our employees are female
Employee Engagement

What is it?

Engagement is a combination of perceptions, including satisfaction, commitment, pride, loyalty, a strong sense of personal responsibility, and a willingness to be an advocate of the organization, that has a consistent and predictable impact on behavior.

✓ While the more traditional concept of employee satisfaction is important, it is not as critical to organizational effectiveness as is engagement.

✓ When individual employees are truly engaged, they can tolerate limited periods of lower work satisfaction and stay highly committed.

✓ When employees are fully engaged, they are more productive, committed, and conscientious.

✓ It is really about “Psychological Ownership.”
Global Voices
Survey Process and Employee Engagement Overview
The Alcoa “Global Voices, One Company” Employee Survey is designed to Drive Action

- Take the survey
- Review and analyze results
- Provide feedback and dialog with employees
- Develop workgroup action plan
- Take action and implement the workgroup action plan
- Follow-up with employees

Continuing cycle from year to year
Employee Engagement Index

Howmet Dover Results

Employee Engagement Index

- 2007 Dover Alloy
- APP
- EPS
- Alcoa Best in Class
- 2006 Dover Alloy
- 2007 Dover Casting
Sustainability at Alcoa

Our success will come from engaging our people to design for sustainability throughout all aspects of our business!

Alcoa’s sustainability tools:

• Entering the Alcoa Business System model through Environmental, Health and Safety

• Engaging our people in solving problems

• Leadership Standard Work