Inside AFS and the Revitalization of North American Metalcasting

Jeff Cook
President-American Foundry Society
Vice President, Sales and Marketing-Eagle Alloy
My story…

• Graduated Oakridge High School: June 1985 (didn’t know what I wanted to be but knew I liked interacting with people, I was reliable and I wasn’t afraid to work hard.)
• USMC Reserves: September 1985
• Joined Eagle Alloy as 3rd shift grinder: April 1986 (1 of 30 employees)
• Sales Technician: 1991
• Sales Manager: 1996
• VP Sales: 2015 (now ~200 employees)
Old Way…
New Way…
Sakthi Auto Breaks Ground on $31 M Casting Expansion in Detroit

Georg Fischer, Linamar to Build Caster in Southeast U.S.
Kamtek to Invest $80M in 148,000 sq ft Aluminum Casting Facility in Alabama

Omen USA to Build $16 Million Aluminum Diecaster in Indiana

Taurus 80 to Open $6.4 Million Zinc Diecaster in Illinois
Fritz Winter invests in new US plant
11 of December 2015
Stadtallendorf – The company Fritz Winter Eisengiesserei GmbH & Co. KG will invest more than 100 million € in the first phase of the new construction of a foundry and mechanical machining plant in Franklin, Kentucky in the coming years. After completion, the first phase of the new plant will dispose of an area and employ more than 200 persons on an area of approximately 25.000 m², intended in the plans of the company from Stadtallendorf.
“The installation of our new plant in Franklin is an important milestone in the history of Fritz Winter. The central position in the East of the US, the availability of highly skilled workers and the excellent infrastructure of Franklin, Kentucky as our new US headquarters”, reports Henning Knipper, Head of Corporate Development at Fritz Winter.

“With this step we continue to strengthen our position on one of the most promising markets in the world”, adds Henning Knipper, Head of Corporate Development at Fritz Winter. “We are setting up a new Premium-manufacturer for the new plant show strategy.”

Start of construction in Franklin will be beginning of the year to come. The first production phase is planned for 2017.
About Fritz Winter
The Fritz Winter Foundry is supplier and partner of the international automotive industry. For 64 years now, the family-owned enterprise has been developing and manufacturing components as well as complex system components for customers’ worldwide weight concepts by means of an optimal utilisation of the material chara 750 million € annual turnover the company from Stadtallendorf ranks among the top producers in the world.

MICHIGAN BRIEFS: Italian supplier Brembo accelerates Mich. brake biz

May 25, 2014 8:00 a.m.  UPDATED 5/25/2014

The Italian automotive supplier Brembo SpA announced last week the $115 million acquisition of its brake component plant in Homer, about 35 miles southeast of Battle Creek. Brembo — which makes brakes for Ferrari, Porsche and Formula One race cars — is developing a major presence in North America.

The Homer plant now can produce up to 12.5 million brake discs and 400,000 calipers and corner modules annually, up from 10 million discs and 300,000 calipers and corner modules last year.

In an interview with Automotive News, company executives predicted that North America will become Brembo’s biggest global market this year, as European markets continue to recover from stagnation.

In North America, Brembo does considerable business with Chrysler Group LLC — its biggest customer in the region — as well as Ford Motor Co. and General Motors Co., along with traditional European customers such as Germany’s luxury brands.
Waupaca Foundry sold to Hitachi Metals for $1.3 billion

By Rick Romell of the Journal Sentinel

Aug. 19, 2014

A global Japanese conglomerate seeking to bolster its iron casting business is buying Waupaca Foundry Inc. for $1.3 billion in cash.

Hitachi Metals Ltd. has agreed to purchase Waupaca, which operates four foundries in Wisconsin as well as two others, from KPS Capital Partners LP.

KPS bought Waupaca Foundry just two years ago. The New York private equity firm said it expanded production, increased employment by 400, and boosted profits by 40%.

Waupaca Foundry employs about 3,900 workers, including 1,600 at three foundries in Waupaca and about 700 at one in Marinette. The company also has foundries in Indiana and Tennessee.

Specializing in components for cars and other transportation equipment, Waupaca Foundry describes itself as the world’s largest supplier of iron castings. Each day, the firm melts more than 9,500 tons of gray and ductile iron and ships more than 5,500 tons of finished castings.
Warren Buffett does his biggest deal ever: $37.2 billion

by Chris Isidore, Ahiza Garcia and Jackie Wattles  @CNNMoneyInvest

August 8, 2015 / 7:36 AM ET

Even for Warren Buffett, this is a big deal.

Buffett’s Berkshire Hathaway said Monday it agreed to spend $37.2 billion for Precision Castparts -- the most it has ever paid for a company.

Precision Castparts (PCP) makes parts for aircraft makers, power companies and other industrial companies. Among its notable customers are General Electric (GE), Boeing (BA) and Airbus.

"I’ve admired [Precision Castparts'] operation for a long time. For good reasons, it is the supplier of choice for the world’s aerospace industry, one of the largest sources of American exports," Buffett said in a statement.

Berkshire’s (BERK) already held a 3% stake in the company, valued at more than $880 million. The $37 billion price tag includes assumption of Precision Castparts’ debt. Berkshire’s $235 a share price offer is a 27% premium.

Insert: "Warren Buffett in 90 seconds"

Social Surge - What's Trending

- Colin Kaepernick’s arrest is top seller after protest
- How this country has gone 26 years without a recession
- ‘Kabosco’ confirmed for two more seasons

Bitdefender BOX

Retirement Savings Calculator

Powered by SmartAsset.com
2014 Global
(metric tons)

1. China: 46.2 million—26,000 plants
2. U.S.: 10.47 million—1,978 plants
3. India: 10.02 million—4,500 plants
4. Japan: 5.54 million—2,085 plants
5. Germany: 5.25 million—595 plants
6. Russia: 4.2 million—1,200 plants
7. Brazil: 2.74 million—1,340 plants
8. Korea: 2.63 million—916 plants
9. Italy: 2.02 million—1,087 plants
10. Turkey: 1.75 million—919 plants
U.S. Metalcasting 2016

- 1,961 Metalcasters
- 700+ Ferrous; 1,300+ Nonferrous
- Employs More Than 200,000
- 80%+ Are Small Businesses (less than 100 employees)
- 1955: 6150 plants; 1991: 3200
- 2015 Shipments: $28.5 Billion
What Happens in the Future?
U.S. Metalcasting Forecast *

- 2010: $25.46 Billion
- 2012: $31.19 Billion
- 2014: $30.85 Billion
- 2015: $28.49 Billion
- 2016: $29.25 Billion
- 2017: $30.15 Billion
- 2018: $30.61 Billion

*Forecast based on GDP, housing starts, auto, railcar and truck production, construction activity, end-user and supplier interviews.
Continue to Push AFS Forward…
Ensuring Industry Longevity
The 3 Pillars of AFS

Advocate
Educate
Innovate
Ensuring Industry Longevity

Advocate
Advocate, Educate, Innovate

Foundry in a Box (K-12)
Foundry in a Box
Foundry in a Box
Foundry in a Box
Foundry in a Box
Foundry in a Box
Foundry in a Box
Foundry in a Box
Foundry in a Box
Advocate, Educate, Innovate

• (K-12)
  • Foundry in a Box
  • Career Days
  • Job Shadowing
  • Plant Tours
  • Student (Education) Night
Student Night (Muskegon Community College)
Student Night (Muskegon Community College)
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Student Night (Muskegon Community College)
Advocate, Educate, Innovate

- (K-12)
  - Foundry in a Box
  - Career Days
  - Job Shadowing
  - Plant Tours
  - Student (Education) Night
  - Teacher-Appreciation Night
- Government Affairs Committee
  - Stephanie Salmon
OSHA’s Final Rule on Crystalline Silica
OSHA’s Crystalline Silica Rule Overview

• **Final Rule: March 25, 2016 Federal Register**
  – Cuts the Permissible Exposure Level (PEL) in half from 100 µg/m³ (8 hour TWA) to **50 µg/m³**
  – Action Level of 25 µg/m³ (8 hour TWA)
  – Affects 2 million construction workers & 300,000 in general industry and maritime sectors, including hydraulic fracturing

• **Industry/Foundries must comply by June 23, 2018**
  – Medical surveillance - >PEL (30 days or more) – June 23, 2018
  – >AL (30 days or more) – June 23, 2020

• **Litigation has commenced!**
Silica Rule: Annualized Foundry Industry Costs for Reduction of PEL from 100 to 50 µg/m³

<table>
<thead>
<tr>
<th></th>
<th>OSHA Proposal</th>
<th>URS/Environomics*</th>
<th>OSHA Final</th>
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<tbody>
<tr>
<td>Annual Cost (incremental)</td>
<td>$41 million</td>
<td><strong>$2,188 million</strong></td>
<td>$47 million</td>
</tr>
<tr>
<td>Annual Cost as percent of revenue</td>
<td>0.15%</td>
<td><strong>9.9%</strong></td>
<td>0.19%</td>
</tr>
<tr>
<td>Annual Cost as percent of profit</td>
<td>3.7%</td>
<td>276%</td>
<td>4.4%</td>
</tr>
</tbody>
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Actual costs are **50 times** higher than OSHA estimates. OSHA’s annual cost estimate is $32,000 per establishment.
What’s Next on Silica Rule?

• Your foundry has less than 2 years to get ready
• Do not wait to get started
• Many requirements will not be affected by lawsuit including:
  – Monitoring, medical surveillance, training, records, respirators and vacuuming

• **AFS Hosting Silica Standard Compliance Seminar**
  – **November 9-10, 2016** – AFS Headquarters
AFS Government Affairs Conference - 2017
June 20-21, 2017
Hyatt Regency Capitol Hill
Ensuring Industry Longevity

Educate
Advocate, Educate, Innovate

• The AFS Institute (CMI)
  • Shelly Dutler, CMI Director of Education
  • Million-dollar pledge
  • E-learning (subscription)
AFS Institute
E-Learning Program

Program Requirements and Fees:
- Corporate membership must be maintained or established
- You will need to designate a training administrator
- Annual subscription fee based on number of employees PER FACILITY.
- A special introductory rate is being offered for the first year of this program.
  - $500 up to 100 employees (per facility)
  - $1,000 up to 250 employees (per facility)
  - $2,000 over 250 employees (per facility)

Benefits:
- Unlimited access to all available AFS Institute e-learning modules
- Covers various metalcasting processes, materials and disciplines
- Customize your training
- Staff can learn together
- Eliminates travel expenses and time out of office
- Unlimited access to the world’s largest collection of technical papers and industry articles
- More modules under development.
- Modules can be taken on computers AND tablets.
Learning Modules for 2016
Full eCourse: Introduction to Metalcasting
Casting Defect Analysis Modules
Introduction to Casting Defect Analysis
  Gas Related Defects
  Oxide Related Defects
  Sand Related Defects
  Shrink Related Defects
Casting Defect Analysis Practice and Conclusion
Cast Iron Modules
Introduction to Cast Iron
Introduction to Cast Iron Microstructure
Six Families of Cast Iron
Elements in Cast Iron
Introduction to Cast Iron Melting
Basic Melt Practices for Cast Iron
Introduction to Cast Iron Heat Treatments
Green Sand Casting Modules
  Green Sand Raw Materials
  Green Sand Preparation and Quality Control
  Green Sand Molding Equipment
  Green Sand Molding Process
  Green Sand Compaction
  Introduction to Green Sand Defects
More modules to come, focusing on sand testing, molding methods and alloys.
More information can be found at www.afsinc.org/elearning
Advocate, Educate, Innovate

• The AFS Institute (CMI)
  • Shelly Dutler, CMI Director of Education
  • Million-dollar pledge
  • E-learning (subscription)

• Student Chapters – AFS Liaison
  • 35 student chapters
  • Casting Competition
Casting Competition – Wisconsin Regional
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Advocate, **Educate**, Innovate

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  - Casting Competition
- FEF (Foundry Education Foundation)
Foundry Education Foundation (www.fefinc.org)
Ensuring Industry Longevity

Innovate
Advocate, Educate, Innovate

• Technical expertise within AFS
  • New Vice President / Technical Services: Zayna Connor
  • Division Council – Ron Walling, Chairman
Advocate, Educate, Innovate

- Technical expertise within AFS
  - Division Council – Ron Walling, Chairman
    - Division 1  Engineering
    - Division 2  Aluminum
    - Division 3  Copper
    - Division 4  Molding
    - Division 5  Cast Iron
    - Division 8  Melting
    - Division 9  Steel
    - Division 10 Environmental Health & Safety
    - Division 11 Lost Foam
    - Division 12 Government Affairs
    - Division 13 Human Resources
    - Division 14 Marketing
Advocate, Educate, Innovate

• Technical expertise within AFS
  • New Vice President / Technical Director: Zayna Connor
  • Division Council – Ron Walling, Chairman
  • Research Board – Doug Trinowski, Chairman
Future Leaders of Metalcasting

The Future Leaders of Metalcasting (formerly the Young Executives of Metalcasting) is sponsored by AFS to support and strengthen the network of metalcasting’s next generation of leadership through outreach and professional development.

- **Executive Development Program:** FLM members have access to a program focusing on strategic planning, human resources, finance, marketing, sales, technology, and personal and professional development.
  - Twice annual face to face meetings.
- **Student Outreach:** Every FLM meeting includes outreach to help recruit the next generation of talent to the industry.
  - Foundry in a box demonstrations.
  - College and high school tours.
- **Personal Networking:** The group offers the value of interaction with other like individuals working together to grow as executives. Your network to the next generation of metalcasting leaders.
- **Professional Networking:** As the saying goes, two heads are better than one. Working together, executives from metalcasting facilities across the U.S. provide an exchange of ideas and experiences as they work toward improving their metalcasting operation.

Interested in being involved with the Future Leaders of Metalcasting? Email Holly Brown, AFS marketing & communications department, at hbrown@afsinc.org or Cathy Rotts, AFS Director of Human Resources & Administrative Services, at crotts@afsinc.org for more information.
Women in Metalcasting

Women in Metalcasting is an AFS special interest group focused on providing a platform for women in the industry to develop avenues for networking, mentorship and the sharing of ideas, experiences, and best practices that will benefit members both professionally and personally.

Members benefit from access to regional and national programming, networking and mentoring opportunities, professional development webinars, online discussion communities and a robust searchable online directory.

**Programming:** Educational programming in conjunction with Metalcasting Congress/CastExpo is provided to promote diversity and the advancement of women in leadership positions.

**Networking & Mentoring:** Opportunities are available to come together for networking and mentorship. Meet-ups are organized in conjunction with AFS regional chapter meetings and conferences and industry-related events. A networking breakfast is held annually in conjunction with Metalcasting Congress/CastExpo.

**Professional Development:** Women in Metalcasting members are exposed to an assortment of opportunities that will further their expertise and knowledge on an array of subjects important to women in the metalcasting industry as well as enhance their leadership skills. The Women in Metalcasting webinars are loaded with timely content and virtual instruction by industry experts.

**Online Community and Member Directory:** Women in Metalcasting can connect online through CastingConnection, AFS’ private social network. The Women in Metalcasting network provides a discussion board, library and searchable member’s directory.

**Upcoming Events:**
- February 2016: (Milwaukee, WI) Women in Metalcasting Meet-up
- April 17, 2016: (CastExpo ’16, Minneapolis, MN) Third Annual Women in Metalcasting Breakfast, 7:30 a.m.-9 a.m. This event is open to members of the Women in Metalcasting group and features a continental breakfast and networking with women who work in all different facets of the metalcasting industry.
YOUR METALCASTING RESOURCE

ADVOCATE. EDUCATE. INNOVATE.

AND THE INSTITUTE

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