



# SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication  
serving SFSA steel casting industry Members

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## September — 2009

### Casteel Commentary

The economy is in recovery but it is likely to be a slow improvement for the next year. It is important that we maintain our health as an industry as discussed in this month's Commentary.

### Technical & Operating Conference

The program for the 63<sup>rd</sup> Technical & Operating Conference features 41 papers and provides the most comprehensive and up-to-date reviews of SFSA members' experiences and the SFSA research program. The Conference is being held in Chicago, on December 10-12, with a member workshop on December 9. Registration information will be mailed to SFSA members this month.

### Slag and Dust

A member asked about disposing or selling furnace dust and slag. A good website for identifying possible customers for slag is: <http://www.nationalslag.org/slagsites.htm>. The main companies are IMS, Multiserve, Levi, Phoenix, and Stein. Dust is expensive to dispose of, \$100-115/ton, and is the largest industrial hazardous waste. If the zinc content is high, Horsehead or Zinc Nationale will process it.

### Specifications

When a test bar fails to meet the required properties, has the heat failed and must be reheat-treated or scrapped? It depends. The ASTM requirements allow the test bar to be discarded if the fracture surface contains a flaw, ASTM A703 7.6 or A370 3.3. This allows you to retest with another bar. The reason this is permitted is to evaluate the properties of the steel not the soundness of the test bar. If a sound test bar fails in is permissible to reheat-treat but not more than three times to achieve the required properties.

### Future Leaders

The next Future Leaders meeting is scheduled for October 14-15 in Milwaukee, WI. The meeting will include tours of Rexnord (Falk), Metaltek (Wisconsin Centrifugal), and Stainless Foundry and Engineering, along with discussions with industry experts from these facilities. If you have a future leader that is not participating in this activity, please contact David Poweleit ([poweleit@sfsa.org](mailto:poweleit@sfsa.org)) for additional details.

### Research & Experimentation Tax Credits

Attached to the PDF version of this newsletter is an article from MAGMA about a wage-based Federal tax credit, explaining that many previously ineligible businesses may now qualify for the credit. Although the article is centered on using the tax credit in connection with MAGMASOFT, it may also be applicable to other engineering work in the foundry.

### SFSA Bylaws Updated

The updated SFSA bylaws has been approved by the Board of Directors. A copy is available online at <http://www.sfsa.org/sfsa/sfsmemb.php>

### **Persons Available**

A1236 has fifteen years of hands-on foundry experience, including quality control and systems, inspection, cleaning room, heat treat, shipping and maintenance. Significant supervisory experience.

### **Market News**

Business continued to be down at low levels in June, off more than 50% from the prior year. Bookings were off about 60% from the prior year. Steel long products saw a small rise in shipments in June. Capital goods orders have stabilized at a lower level. Many economic signs point to a slower recovery but clearly a recovery that has started. Likely, June will mark the low point in demand.

### **Casteel Commentary**

The transition from rapidly growing markets straining existing capacity and the economic freefall that resulted from the collapse of the financial sector led to drastic action by most customers of steel castings. To preserve cash and prevent loss of value, companies rapidly reduced work force and orders for supplies. The inventory that had been building to handle record business levels was excessive for the much reduced demand. Customers stopped ordering even with continued sales to reduce the inventory. The inventory reduction appears to be now largely accomplished in most markets. This will lead to improved conditions as customers need castings to supply new orders.

Business should clearly continue to gradually improve for the balance of this year and into next year. Several dangers confront us even with this improvement. We could see another pull back, especially if commodity prices drop as a result of lower demand. We could see prices for castings collapse as desperate plants try to gain work. We could face new burdens as a result of changes in public policy.

Commodity prices briefly dropped to low levels but have since regained much of their loss. While the prices are nowhere near the peaks seen last year, the price of oil and copper both are well above the requirement to justify new investments. The long lead time items on order where by and large completed in the first half of this year. Uncertainty in the financial and political environment has made new investments difficult. This and the difficulty in financing the purchases are a drag on the market. Inventory levels for many energy or materials are high creating additional risk. On the other hand, economic growth in the developing world and some return to normal economic activity is likely to cause another boom in this equipment. This strong increase should arrive sometime late next year.

In the meantime, customers are looking at the fall in commodities and energy prices and demanding price concessions. Unlike long steel products that are sold at a small premium over the cost of scrap and energy, steel castings require more labor and have more value added. In the rapid escalation of commodity pricing, steel castings did not get the same increases and in this market cannot afford to give the same reductions. Inadequate pricing will damage not only the plant but our entire industry.

Finally, the biggest risk and uncertainty is the proposed changes in public policy. Cap and Trade in energy could become a serious new tax on our production. Employee card check could lead to many plants becoming union organized with contracts imposed by a federal arbitrator. Health care reform could significantly raise the cost of our employees. Increased tax rates even on the rich will be a drag on the economy. Without significant increases in taxes the federal deficit is scheduled to spiral out of control. Until there is some resolution to these uncertainties, investments will be postponed and this will remain a drag on the economy.

So the picture appears to be clarifying. A slow recovery for the next 12 months followed by a stronger period of three to four years if the business climate is not excessively damaged by public policy. Our industry needs to maintain its capability and financial viability to profit from the improvement.

*Raymond Monroe*

# STEEL FOUNDERS' SOCIETY OF AMERICA

## MEETINGS CALENDAR

**2009**

September 19-22	SFSA Annual Meeting	Sunriver, OR
November 10	Specifications Committee	Atlanta, GA
December 9-12	National T&O Conference	Chicago, IL

**STEEL FOUNDERS' SOCIETY OF AMERICA  
BUSINESS REPORT**

<b>SFSA Trend Cards</b> (%-12 mos. Ago)	12 Mo Avg	3 Mo Avg	Jun	May
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**Carbon & Low Alloy**

Shipments	-13.3	-56.0	-52.0	-52.0
Bookings	-22.6	-59.8	-59.2	-58.4
Backlog (wks)	8.2	4.5	5.0	4.0

**High Alloy**

Shipments	11.5	-61.4	-54.0	-78.0
Bookings	10.7	-59.6	-88.0	-28.0
Backlog (wks)	7.8	3.8	4.0	4.0

**Department of Commerce  
Census Data**

**Iron & Steel Foundries (million \$)**

Shipments	1,518.2	1,134.0	1,139	1,075
New Orders	1,449.9	1,081.7	1,152	1,005
Inventories	2,654.2	2,435.7	2,364	2,411

**Nondefense Capital Goods (billion \$)**

Shipments	61.9	56.2	56.1	56.0
New Orders	57.9	51.5	51.9	53.5
Inventories	142.5	141.4	140.0	141.4

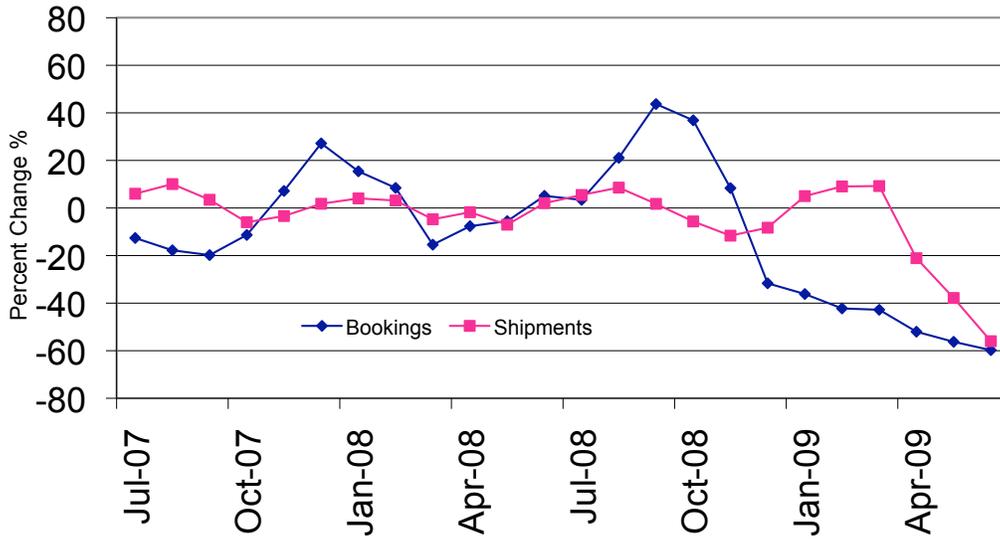
**Nondefense Capital Goods  
less Aircraft (billion \$)**

Shipments	58.2	52.3	52.4	52.1
New Orders	56.5	50.3	51.6	50.5
Inventories	107.1	103.7	101.9	103.9
Inventory/Orders		2.06	1.97	2.06
Inventory/Shipments		1.98	1.95	2.00
Orders/Shipments		0.96	0.99	0.97

**American Iron and Steel Institute**

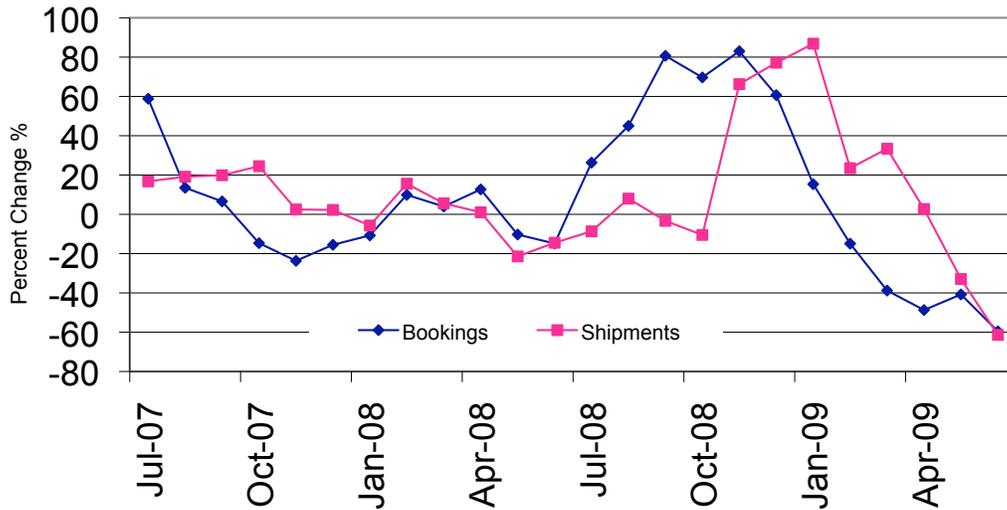
Raw Steel Shipments (million net tons)	5.7	4.4	4.8	4.3
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### Carbon & Low Alloy Casting Market Trends



SFSA Postcards

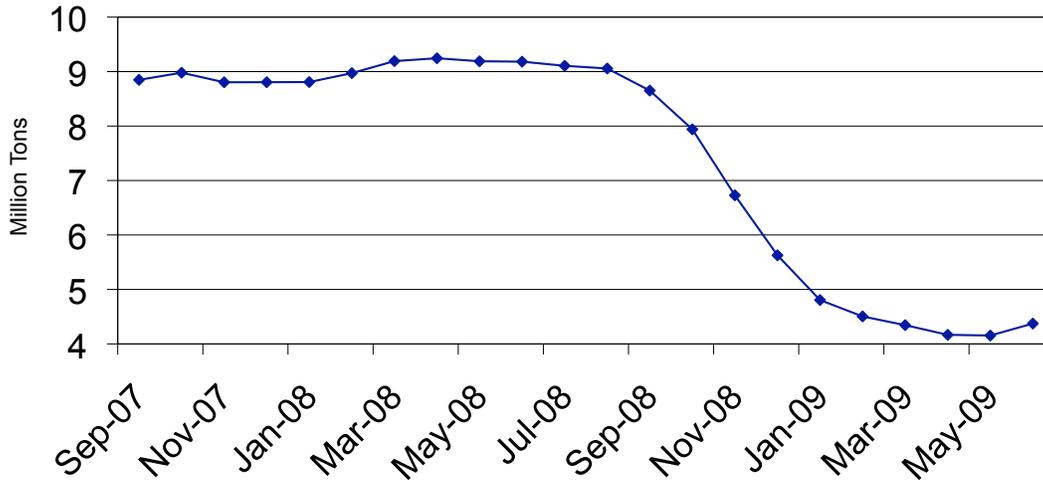
### High Alloy Casting Market Trends



SFSA Postcards

### Raw Steel Shipments

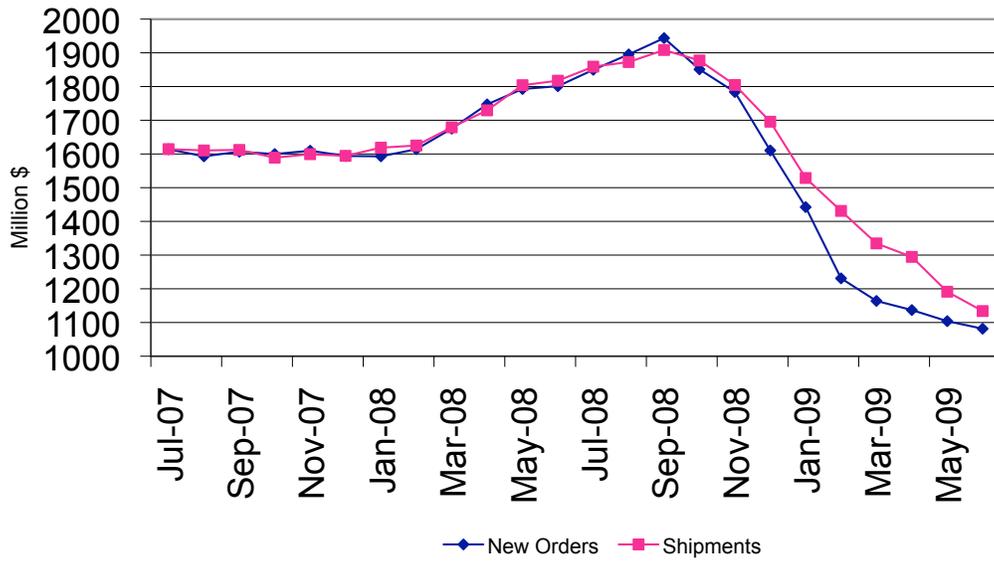
3 month average



AISI Data

### Iron and Steel Castings

3 month average

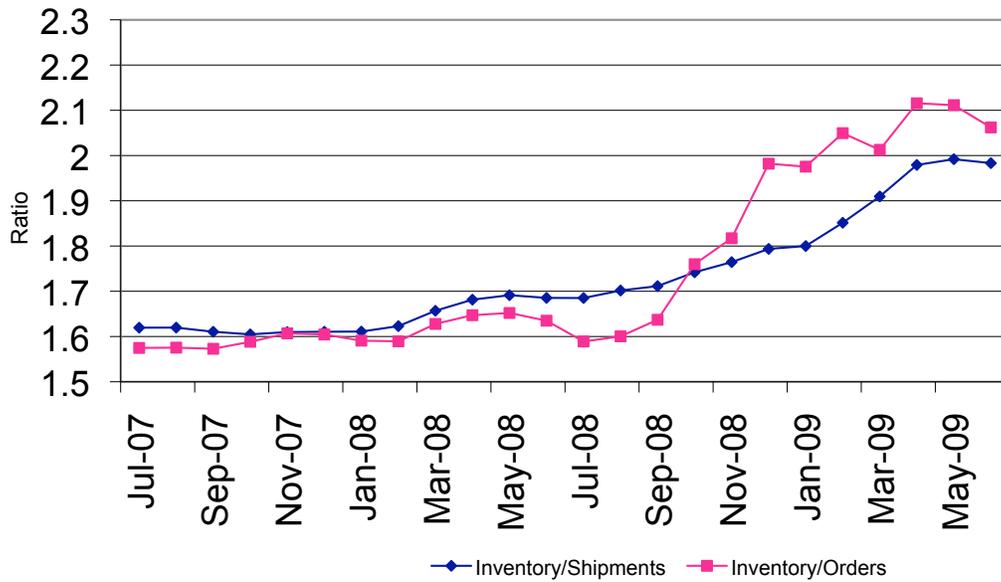


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### Nondefense Capital Goods less Aircraft

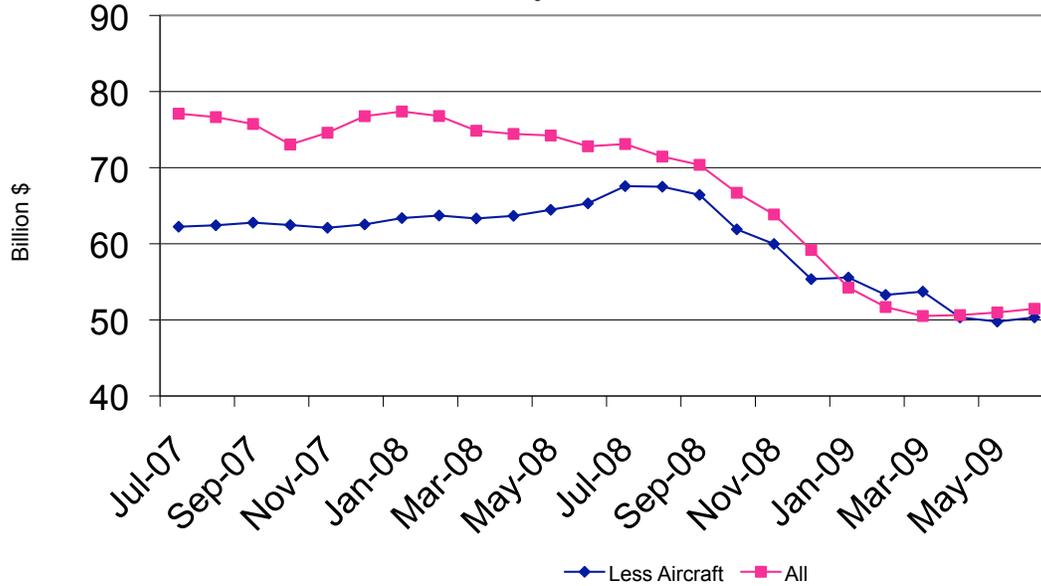
3 month average



Department of Commerce

### Nondefense Capital Goods New Orders

3 month average



Department of Commerce

# MAGMASOFT

# MATIMES

## Qualifying for Research & Experimentation TAX CREDITS with the use of MAGMASOFT®

As global competition continues to increase, metalcasters find the need to further reduce costs and improve efficiency by implementing various forms of technology into their day-to-day operations. Companies have taken steps to utilize MAGMASOFT® to aid in the development and improvement of part design, gating/riser layouts and casting process development, which results in cost savings and improves the relationship with their customers.

Companies have been able to utilize MAGMASOFT® by either purchasing the software or working with MAGMA's engineering service group. However, there are metalcasting companies that would like to be able to take advantage of this technology, but find it difficult at times when operating budgets are restricted.

For metalcasters who are facing such budget obstacles, the Research & Experimentation (R&E) Tax Credit may be a solution. The R&E Tax Credit was created to increase the competitiveness of the American manufacturing industry and can be a valuable resource to our nation's metalcasters. The R&E Tax Credit, available to all entities filing a federal tax return, is a wage-based credit. It has been in existence since 1981, but recent regulations have changed the definition of qualified research activities and the associated recordkeeping requirements. Many companies that were not previously eligible may now take advantage of this federal tax credit, which can be applied toward the purchase of MAGMASOFT software or toward working with MAGMA's engineering service group. In addition to the Federal credit, several states have their own credit programs.

### Qualifying for R&E Tax Credits through Engineering Contract Service

Engineering contract services usually consists of performing simulations in some of the following areas:

- Casting design improvements to reduce or eliminate stress and distortion
- Gating/riser layouts
- Yield improvements
- Correct water cooling line placements for high pressure die casting and permanent mold applications
- Cycle time reductions
- Mechanical property improvements

Potentially, up to 65% of the fees paid for engineering contract work, can be included in the calculation of the tax credit, plus the cost of the company's labor for the time spent developing the casting process or improving the process for an existing job.

### Qualify for R&E Tax Credits by utilizing MAGMASOFT®

Current MAGMASOFT® customers can apply the time that their employees spend utilizing the software. Every time that MAGMASOFT® is utilized, it is being implemented to eliminate technological uncertainty about the manufacturing process or the design of a particular casting. Simulations are carried out to consider multiple gating and risering solutions to improve the casting process.

For example, engineers that use MAGMASOFT® to design a new gating layout may consider the time spent for:

- Developing CAD models used for simulation
- Setting up a MAGMASOFT® simulation and interpreting the results
- Discussing the results with internal groups and customers to finalize design and/or process criteria or identify other options
- Tooling design changes based on simulation findings
- Casting trial runs based off of the simulation results
- Metallurgical tests performed on sample castings

It is important to note that the actual expenditure to purchase a casting process simulation package like MAGMASOFT® or a module upgrade would not qualify. It is the employees' time spent on some of the examples listed above that can be applied to tax credits, which could then be used to purchase MAGMASOFT®, carry out engineering contract service work, upgrade foundry equipment and so forth.

The tax credit was re-enacted recently, and now runs through December 31, 2009.

For further information on qualifying for R&E Tax Credit can be found out at [www.mppw.com](http://www.mppw.com) or contact Richard L. Wile at MPP&W P.C. at [rwile@mppw.com](mailto:rwile@mppw.com)

**MAGMA**

**COMMITTED TO CASTING EXCELLENCE**