



# SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication  
serving SFSA steel casting industry Members

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## June — 2007

### Casteel Commentary Highlights:

The Casteel Commentary gives a checklist developed by large organizations to do a check evaluation of new suppliers. It is suggested that we self test to improve, examine our suppliers for their performance, and most importantly evaluate our customers and cultivate the most competitive.

### SFSA Annual Meeting

The program for the Annual Meeting on August 19-21 in Anchorage has been mailed out and is available here, <http://www.sfsa.org/sfsa/annmtg>. We have a great location, a fun meeting and an informative program. We start with a new feature, a roundtable discussion where members can share their thoughts and solutions to common problems Sunday Afternoon. Our Monday program includes a panel on raw materials covering scrap, ferroalloys and binders. We will get the SFSA forecast update after the panel. Our annual banquet is that evening. Tuesday morning includes two presentations from Washington D.C. one from the perspective of steel and the other a political analysis from Howard Fineman. Our final speaker will be from the energy sector and give us the voice of the customer. Details and registration materials are here, <http://www.sfsa.org/sfsa/annmtg>. It is a valuable meeting and I certainly hope someone from your plant will be able to attend.

### Research Review

The SFSA Annual Research Review will be in Chicago, July 18-19. This is a free meeting that allows members to get an up to date briefing on the latest technology, help guide the next steps, and meet and talk to other foundrymen. Details and registration information is included here, <http://www.sfsa.org/meetings/cla-rr.html>.

### Western Division

The SFSA Western Division is meeting July 12-13 and this includes a tour of Pacific Steel. All members are invited. Details and registration is provided here, <http://www.sfsa.org/meetings/western.html>.

### Eastern Division

The SFSA Eastern Division will meet August 8-9 at Sawbrook Steel in Cincinnati, OH.

### Safety Committee & Human Resources

The SFSA Safety Committee invites all SFSA Members to participate in their meetings. Their next meeting is scheduled for September 19 and 20 at Atchison Castings. The Safety Committee will meet in the Afternoon with a round table discussion. They will tour the plant on the morning of the 20th.

The success of the SFSA Safety Committee led to an interest in a possible Human Resources Committee. In order to explore this possibility, an initial meeting of the SFSA Human Resources group will meet just prior to the SFSA Safety Committee the morning of September 19. The topic will be

employee retention. All SFSA members are invited to come and to stay for the safety Committee and plant tour. Every member attending will be expected to participate in the roundtable discussion.

### **Work In Progress**

A short survey of members on costing and work in process (WIP) was conducted. Respondents got a complete compilation of responses. Four questions were included;

1. How do you value WIP? The answers generally were either some standard or estimated cost at their stage of production or some fraction of the selling price at certain gates. If valued at cost the most common value was the full cost of production to that point. Some valued materials and energy at full cost and other inputs at some fraction (85%) of cost or total of all direct costs. The other approach commonly placed a value of 50 to 70% of the selling price after casting in metal.

2. How do you value returns? Unfortunately some answered the question of the value of revert, others took the question as the value of customer returns. For the value of revert, it was common to value most revert at the current value of purchased scrap. For alloyed grades, the cost of expensive alloys is often valued at current market price. Some however valued alloys at the current scrap sales price for the grade. Others adjust the cost of materials by the credit for the revert. For customer returns, some fraction of production costs is commonly used for the value, 70-90%. The approach can be quite varied from a value of the full selling price to zero.

3. What is your cost system? Most used standard costs updated periodically, commonly once a year. This is supplemented by market prices for energy and raw materials and estimates.

4. What software do you use? Many used one of the programs available from B&L Systems. Many use custom or homegrown systems. Some use Mapics or SAP.

### **Innovation**

Six sigma quality is not possible in castings because our customer's requirements are not measurable. SFSA has been working for years using statistical tools to evaluate nondestructive evaluation or testing (NDE). The most common tool is gage R&R (measurement repeatability and reproducibility). If the same inspector using the same method looks at the same casting, how different of an answer could we expect to get. If a different inspector with the same method looks at the same casting, how close would his answer be to the first inspector? If a measurement system is capable, the difference should be far less than the specification range. If the variation exceeds the specification range, then it is not possible to meet the quality target. Rather than agree that castings are poor in quality, we need to question the use by customers of standards that are meaningless and unattainable. The problem is not with our ability to meet the requirements but with the requirements themselves.

### **Specification News**

The EU (European Union) has made an inquiry with ASTM about materials suitable for use in pressure containing systems. In the US (and most of the world) the ASME Boiler and Pressure Vessel Code is the basis for design and material selection. The Code uses ASTM materials that are tested for room temperature tensile properties and composition. The Code evaluates engineering data from representative heats and develops design allowables at temperature for commonly used materials. The EU has taken an approach that is different. In their Pressure Equipment Directive (PED), they require that the producer of the material guarantee longer term elevated temperature properties. This is done by the same type analysis as ASME but the burden rests not on the designer/user but the properties are guaranteed by the producer. EN (EuroNorm) standards have lower allowable

residual levels (sulfur, etc.) in these materials. Because of this tighter composition requirement, the EU is questioning the safety of the ASME Code and the use of ASTM materials. It is not clear how this conflict will be resolved. The ASME Code using ASTM materials is demonstrated by wide application to be safe and useable.

### **Market News**

SFSA trend cards show a continued stable demand for the first quarter of 2007. Production levels are only slightly ahead of a very strong last year. Backlogs for all

steel castings have continued to decline. Iron and steel castings tracked by Census show a continued downtrend. This is likely a result of the slowness in housing and consumer activity slowing demand for iron castings. Steel production is slower than last year but has rebounded sharply from the slow beginning of the year. The average for capital goods orders remains softer but the most recent month shows an increase. The slowdown should give way to improving demand for the second half of the year. More economic news is found in the SteelGuru document on the Casteel Reporter web page.

### **Casteel Commentary**

How do customers evaluate suppliers like steel foundries? If a large potential customer comes to your plant and is evaluating your capabilities, what kind of questions does he raise, what kind of issues does he evaluate, and what criteria does he use? It has become more common as an effort at supply chain management to standardize a supplier evaluation methodology. One assessment tool for supplier qualification is given below.

- Workplace design supports effective process flow
- A written Marketing Plan is being implemented
- Constraints are being managed in key processes
- Customer contact employees are empowered to resolve problems appropriately
- Work Cells are utilized where appropriate
- Customer satisfaction data guides the quality improvement efforts
- Customer satisfaction measures are well communicated across organization.
- Employees are empowered to take necessary action to improve processes
- Evidence exists that the company has or could obtain adequate capital when necessary
- Financial performance exceeds that of competitors
- Established vision, mission, values, goals, and objectives are understood at all levels
- Key processes are being continuously improved to meet stakeholders needs
- Leadership behavior is consistent with stated values
- Partner relationships are built with key suppliers and customers
- Process cycle time is being minimized in key business processes
- Relevant information is openly shared with key suppliers
- Safety is an obvious priority for the organization
- Simple statistical tools are used effectively across the organization to achieve performance improvement.
- The company has adequate Cash flow to sustain operations for at least one year
- The company has the ability to access the market of the proposed technology
- The entire Value Chain is managed as a key process
- The organization systematically benchmarks against its competition (or against best in class)
- The proposed technology fits with the current strategic plan of the organization
- The use of Lean tools is extensive
- Trained internal continuous improvement champions are working in the organization
- Data supports that a market exists for the proposed technology
- A Problem Solving methodology is actively used by all employees

This tool may not substantively provide a useful measure of your performance. In many ways it is a large organization (bureaucracy) method to minimize risk. On the other hand many of our customers and suppliers are large. In any case, this assessment can help us cram for the test when a large potential customer is considering us.

In the supplier evaluation, a team from the prospective customer comes and seeks to score a potential supplier against the criteria given. Each team member from the evaluation group tries to rate each of the 27 question areas from 1 to 5. Then these evaluations are totaled and compared. In any area where there is significant disagreement, the team meets to discuss and agree on the proper rating. As potential suppliers, steel foundries can use this list as a check and a preparation as they seek new customers.

Not only can steel foundries use this list to prepare for prospective customers, they can also use it to qualify their own suppliers. Plants can use this checklist when new suppliers propose new materials or alternate products. A steel foundry can assess the capability of their suppliers using this method.

Most importantly, a steel foundry needs to evaluate their customers using this method. More important than suppliers, choosing the right customers is critical for the business. In a globally competitive environment with enormous pressures on manufacturing, selecting the right customers to develop is necessary for future business. Gaining a customer that is compatible, profitable, and attractive is in vain if he fails in business. We need profitable competitive customers that are good at business. They will recognize the value of qualified suppliers who are profitable and capable.

I would propose that each plant evaluate themselves and their customers as a quick check on their business and future prospects.

**Raymond**

# STEEL FOUNDERS' SOCIETY OF AMERICA

## MEETINGS CALENDAR

### 2007

July

18-19 C&LA Research Review, Rosemont, IL

August

18/22 SFSA Annual Report, Alyeska Resort, AK

September

TBD High Alloy Product Group Meeting, Houston, TX

18-19 Safety Committee & Human Resources Meeting, Atchison, KS

November

13 Specifications Committee Meeting, Tampa, FL

December

12/15 National Technical & Operating Conference, The Drake Hotel, Chicago, IL

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

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

Shipments	10.1	6.1	1.4	-6.1
Bookings	9.2	-2.0	10.0	-23.0
Backlog (wks)	11.1	10.1	9.8	9.7

**High Alloy**

Shipments	5.0	0.0	-24.2	16.9
Bookings	0.6	4.3	-23.7	22.7
Backlog (wks)	11.2	11.3	10.8	11.5

**Department of Commerce  
Census Data**

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

Shipments	1,616.2	1,544	1,547	1,543
New Orders	1,621.3	1,521	1,535	1,513
Inventories	2,221.5	2,336	2,353	2,325

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

Shipments	66.5	65.3	65.5	64.9
New Orders	75.7	74.2	80.1	71.7
Inventories	113.1	116.7	117.0	116.5

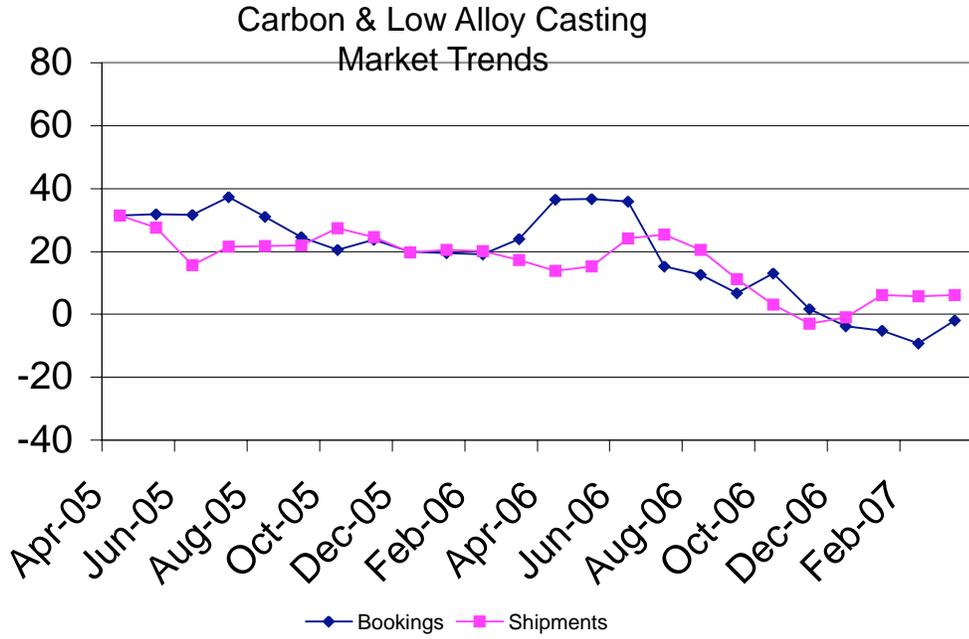
**Nondefense Capital Goods  
less Aircraft (billion \$)**

Shipments	61.3	60.2	60.3	59.9
New Orders	63.4	61.2	63.1	60.2
Inventories	94.7	97.5	97.3	97.5

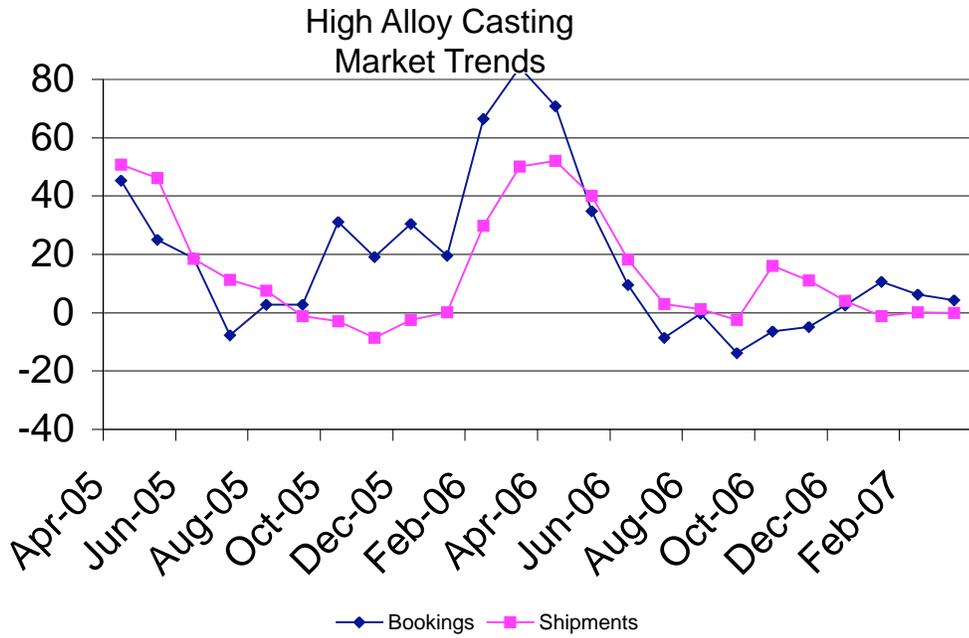
Inventory/Orders		1.59	1.54	1.62
Inventory/Shipments		1.62	1.61	1.63
Orders/Shipments		1.02	1.05	1.00

**American Iron and Steel Institute**

Raw Steel Shipments (million net tons)	8.9	8.8	9.3	8.4
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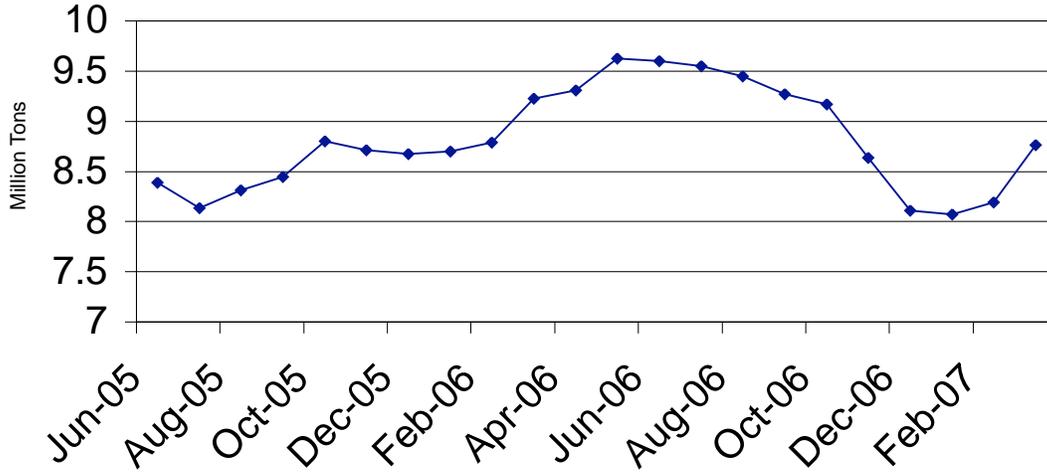
SFSA Postcards



SFSA Postcards

# Raw Steel Shipments

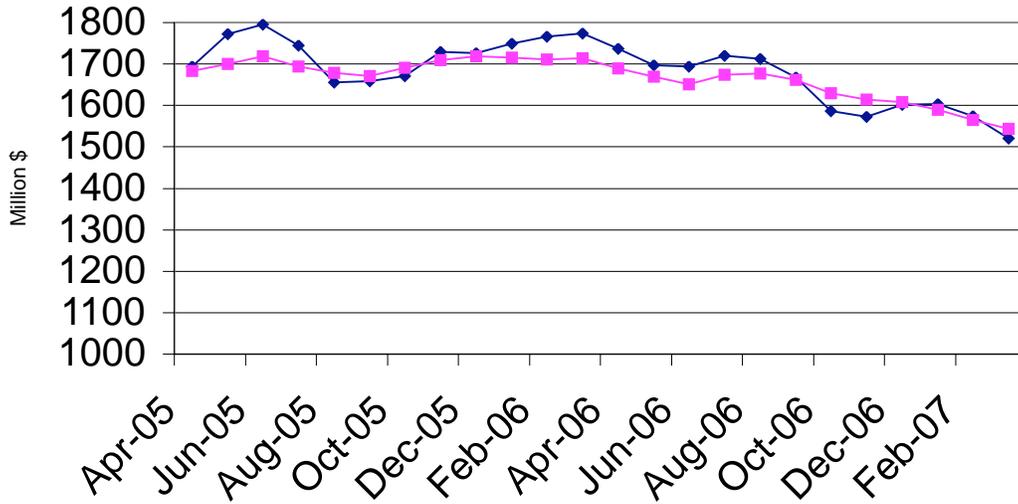
3 month average



AISI Data

# Iron and Steel Castings

3 month average

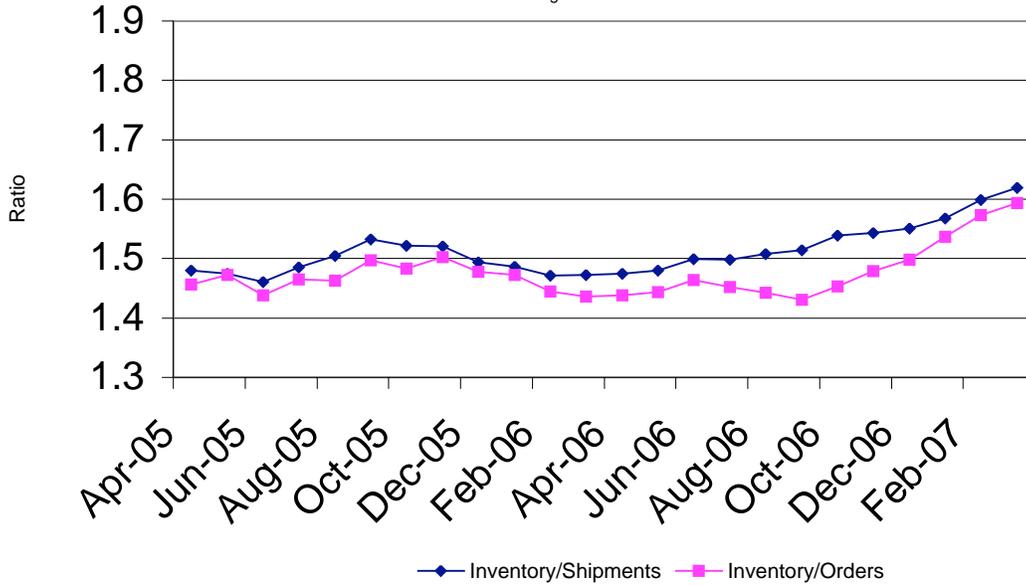


—◆— New Orders —■— Shipments

SFSA

### Nondefense Capital Goods less Aircraft

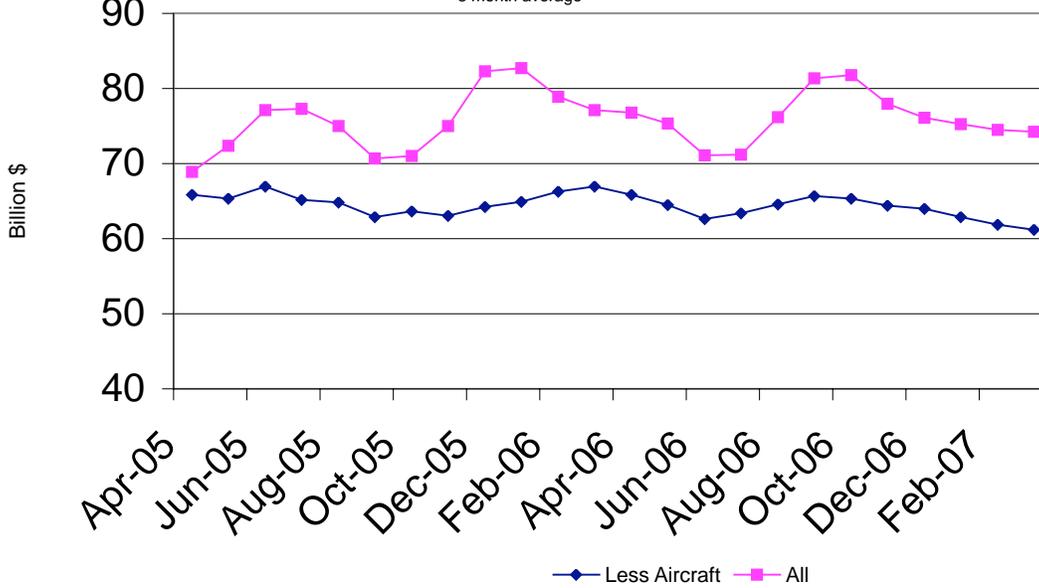
3 month average



Department of Commerce

### Nondefense Capital Goods New Orders

3 month average



Department of Commerce