



# SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication  
serving SFSA steel casting industry Members

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## April — 2006

### Casteel Commentary Highlights:

Higher energy prices are likely to remain for some time. This is a challenge to our business in pricing and cost control. On the other hand, this stimulates the need for capital equipment and increases the demand for steel castings. The Casteel Commentary discusses the energy situation and includes a report on the near term and long term situation.

### AFS Casting Congress

On April 19th at 3:00 p.m. at the AFS Casting Congress, R. Monroe will be available for answering questions at the Ask an Expert session. M. Blair and R. Monroe are presenting investment opportunities in steel casting technology on April 20th at 1:45 p.m. at the Congress in Columbus, OH. If you are interested in meeting with us during other times just shoot us an email or call.

### Spring Technical Meeting

The Spring Technical Meeting will be held on May 9-10 in Muskegon, MI. Details of the meeting and registration information are attached to this newsletter. There will be a technical session on the afternoon of May 9th followed by a special dinner. The technical session will include a talk of the use of solidification simulation in specification, the future for ferroalloys, and an update on safety. There will be tours of Eagle Alloy and Michigan Steel on the morning of May 10th. The Marketing Committee will also meet on May 9th. The SFSA Board of Directors will meet on May 11th.

### ISO

SFSA is hosting the ISO TC 17/SC11 meeting on steel casting specification development in Washington, D.C. on April 24-25.

### ASTM

The ASTM meeting on steel castings will be held on May 16th in Toronto. The SFSA Specifications Committee will meet following the ASTM meeting.

### Heavy Section

The SFSA Heavy Section Meeting will be held in Carlisle, PA, on June 21-22. The meeting will include a tour of Frog Switch.

### L.O. Sturkie

A great friend of SFSA and the steel casting industry passed away, L.O. Sturkie of Quality Steel in Houston Texas. LLOYD OLEN STURKIE was born January 18, 1913 in Comanche, Texas, and passed away March 24, 2006. He attended college at John Tarleton in Stephenville, Texas. In 1948 Lloyd had a vision to create a steel Casting foundry in Houston, and with the help of other Houstonian investors, Quality Electric Steel Casings was created, and is still in operation today, run by his son John. With his many years at Quality, L.O. also served on 3 bank boards, and was Chairman of the Steel Founders Society of America. In 1964, Lloyd and his brother Ira purchased a ranch in Oklahoma, which became one of his passions later in life, and offered him countless hours of enjoyment and memories. He will be fondly remembered, and greatly missed. Honorary

Pallbearers will be employees of Quality Electric Steel Castings. In lieu of flowers, Please make donations to: American Cancer Society, P.O. Box 22718, Oklahoma City, OK 73123-1718, [www.cancer.org](http://www.cancer.org).  
*Published in the Houston Chronicle from 3/26/2006 - 3/27/2006.*

### **Spring Management Meeting**

SFSA sponsored a Spring Management meeting on March 9, in Chicago. We had 7 member companies in attendance. The program was on an economic assessment for the coming year. Bernie Lashinsky presented data showing that the near future trends are all positive and projects that we are early in the economic upturn for our industry. Raymond Monroe presented capacity and productivity trends in the industry. These presentations are available for download on the Casteel Reporter page on the SFSA website.

### **The Steel Foundryman**

A man owned a small foundry in Ohio. The Ohio Wage & Hour Dept claimed he was not paying proper wages to his help and sent an agent out to interview him. "I need a list of your employees and how much you pay them," demanded the agent.

"Well" replied the owner; "There's my molder who's been with me for 3 years. I pay him \$12/hr plus benefits. The melter has been here for 18 months, and I pay him \$10/hour and some limited benefits. The two part time workers in finishing that I pay \$7.50. Then there's the half-wit who works here about 18 hours every day and does about 90% of all the work around here. He makes \$10 per week, and I buy him a bottle of bourbon every Saturday night."

"That's the guy I want to talk to -- the half-wit," says the agent.

"That would be me," replied the owner.

### **Environmental and Safety Challenges**

The SFSA Safety Meeting was held on March 22 at SWSCC. The meeting was attended by 13 people from 8 companies. Each company made a presentation outlining their safety programs and

experiences they have had in improving safety performance in the steel casting industry. Two major points came out of the meeting;

1. The doctors companies use are paid by the company and their performance should be judged in the same way any supplier of a service is judged.
2. Safety is a top down management process. If management do not support or think it does not apply to them then the Safety professionals will struggle to be effective. High levels of safety produced by effective safety programs pay for themselves.

The members attending would like to schedule another meeting and begin organizing an SFSA Safety Committee. Contact us if you are interested.

The new standard for hexavalent chrome has been issued by OSHA and is available here:

[http://www.osha.gov/FedReg\\_osha\\_pdf/FE D20060228.pdf](http://www.osha.gov/FedReg_osha_pdf/FE D20060228.pdf)

Steel foundries will need to comply and the new standard level of exposure is one tenth of the old standard. It will likely to require respirators or air supply helmets in welding especially with stick. It is not clear what exposures are present at melting and pouring or elsewhere in the shop While the agency will be sued, compliance is required by November 2006. One source of testing that has been widely used by others is Scientific Control Laboratories, Joeline Zak, joeliezak@sclweb.com, 773-254-2406.

The Agency is also interested in developing a newer limit on crystalline silica. Both these standards contain language developed for lead and are onerous and unreasonable. It is important to review your conformance to these requirements.

AFS and EPA have developed a guide to aid foundries in their compliance efforts.

This guide is available here:

<http://www.epa.gov/sectors/metalcasting/em s.html>. It may provide some useful guidance for your operation.

The latest news on the Iron & Steel Area Source rule for HAPs can be reviewed in AreaSourceUpdate.pdf, (available for download on the Casteel Reporter page on the SFSA website) prepared by KERAMIDA Environmental, Inc. If you have any questions on how the rule may impact your facility, you can contact Jim Schifo or Tom Rarick of Keramida at 317/685-6600. SFSA is on the Committee with AFS and will also be providing input and information.

### **Technical Innovation**

As solidification modeling has become more capable, the use in qualifying casting design has become more prevalent. Individual users are either doing their own modeling or requiring it from suppliers. The lack of repeatability, the lack of meaningful performance relevance, and the limits on resolution have led many to conclude that simulation is a better standard than radiography. SFSA has shown that the repeatability and reproducibility of radiographic ratings is poor even when done by a single most qualified person. The radiographic standards are workmanship standards and do not predict or necessarily correlate with performance. In fluid systems radiography is unable to see the microshrinkage that leads to systemic leaking. One possible outcome of this problematic is to adopt simulation as the primary standard. It is important that steel foundries remain up to date on the developments in this area.

### **Recruiting the Next Generation**



**Frank Peters**  
Iowa State  
University

The steel casting industry recognizes that it needs to hire new engineering talent as they continue to push to produce more highly engineered materials and products from more efficient production systems. To attract this talent, the industry needs to do a better job at recruiting. When it comes to recruiting and attracting a student, a foundry is likely not to be competing against another foundry, but against Caterpillar, Intel, General Mills, Deere, or a host of other companies that have inherent recruiting advantages. The

biggest of which is visibility. The foundry needs to communicate the advantages of working at their company in terms of benefits, flexibility, promotions, job security, as well as salary. The company needs to be creative to dispel the 'stodgy' image of the company. Innovative solutions such as a web-video or CD, or an up to date website, discussing the engineering advancements (materials, products, and processes) that the company is embarking upon could be one method. Be creative, because your recruiting competition is making several trips to the college campus (career fairs, recruiting trips, workshops) to get their name in front of students. One great way of attracting full time talent (and increasing visibility) is by hiring internships. The most popular intern/co-op arrangement, for both students and companies, is an eight-month internship, which includes a summer and an adjoining semester (January – August or May – December). This allows the student to be involved in larger projects and see some more of their efforts through to fruition. Making some arrangements toward housing could be a valuable recruiting tool. One of the most critical keys for a successful internship is adequate preparation by the company prior to the arrival of the student. On their first day, the student should arrive to a desk, a computer or at least access, a computer account, and a stack of data and information to get them running on their first projects. While a good engineering intern will be a self-starter, they do not have the luxury of seeing the big picture and impetus behind the project. Having some of that initial legwork done, will allow the student to jump in without spinning their wheels for the first week or so. The intern should also be provided with a mentor so they have someone who is **available** that they can turn to ask questions. Once this initial groundwork is provided, another critical key to success is to give at least one or two significant project that will really challenge the students. Students complain about a lack of a challenge during an internship, but rarely the opposite. Since there will be some downtime between project

milestones, the intern should have a few projects to work on. While some mundane tasks may be appropriate, try to not make this a focus of the internship. Remember, that one of the main long-term advantages of the internship is to attract future talent.

Finally, a few words on the final recruiting process. In strong job markets, such as today, the recruiting process for May graduates starts in August and winds down by February for most students, with many accepting offers by December. Much of the best talent is gone by March. The majority of internships starting in May are accepted before the middle of March. A few weeks will significantly shrink the quality and size of the available talent pool. Once a student is identified, an offer should be made expeditiously. Because they do not recruit engineers as often as their recruiting competition, steel foundries often move slower with offers which put them at risk for not even being able to compete.

### **Specifications Note**

SFSA holds the Secretariat for ISO TC17/SC11 developing ISO steel casting standards. We are hosting the next meeting April 24-25 in Washington, DC. As a result of Malcolm's involvement in standards he has prepared the following explanation of the value of US participation in ISO standards.

Involvement in international standards such as ISO is of significant importance to commercial interests in the USA as well as North America in general. There are several reasons why active participation in ISO is so important

1. If the US is to ensure that it can continue to trade effectively, both domestically and internationally, with minor disruptions to the manufacturing process and minimal changes to chemical compositions and practices, international standards must reflect US manufacturing practices and these critical issues must not be allowed to be determined solely by foreign interests. Without US involvement, European dominance of ISO activity will ensure that their practices are adopted as world

standards. CEN, the European standards body, has and continues to adopt ISO standards without modification.

2. International standards are frequently being adopted by emerging countries as their national standards both as an economic alternative to developing their own as well as to comply with their governmental obligations to eliminate non-tariff barriers to trade. If the US is to be competitive in these growing and emerging markets, international standards need to reflect US manufacturing and business practices.

3. A large number of Europeans participate in both international standards development as well as European standards development that makes them a dominant bloc of voters since each country has one vote and all European countries vote the same on ISO issues. The US can best protect itself from this dominance only through active participation and leadership. International agreements such as *The Vienna Agreement* have provided both opportunity and drawback to US involvement in European standards development. On the one hand it now provides for US influence in European standards through the aegis of the ISO. On the other hand this agreement now permits main lining European standards directly into ISO standards at the discretion of the committee chairman.

4. Active participation and leadership, particularly in the area of flat rolled sheet products is achieving significant success in providing for North American (ASTM) influence in developing ISO sheet steel standards due to the fact that the ISO steel sheet subcommittee is controlled by the USA. This and the subcommittee on steel castings are the only steel product subcommittees controlled by the USA. Many countries have been lobbying for years in an attempt to take over the ISO flat rolled steel sheet products subcommittee. But these efforts have been thwarted thus far by the continued financial support of this valuable activity and the dedication of its volunteers.

5. In the case of unfairly traded commerce, a key issue often involves the specification or standard employed in the manufacture of the product. Such standards devoid of US participation could present serious problems in future anti-dumping litigation.

### **Market News**

Business conditions remain strong. The SFSA trends indicate continued strong double digit growth in January. While there are projections of a general slowdown due to higher energy prices and continued increases in interest rates, steel foundries should see only a small slowdown. High

energy and commodity prices will continue to stimulate strong demand for additional capital equipment requiring castings. These strong market conditions are also seen in the Census report on iron and steel castings. Raw steel shipments have seen a slower market but much of their markets are tied to consumer goods and their demand remains strong. Inventories remain low relative to orders and orders remain strong for capital goods. The backlog reported last month was actually for January, 11 weeks for carbon and low alloy steel castings and 10 weeks for high alloy castings.

### **Casteel Commentary**

Energy demand is increasing globally; supply is not increasing to meet this growing demand so prices remain volatile and high. This presents both an opportunity and a challenge to steel casting production. Volatile energy prices are difficult to plan for and difficult to manage in pricing and can undermine the financial stability of the foundry operation. On the other hand, higher energy prices create a systemic need for additional supply.

Some believe that the shortfall in energy supply is the result of unusual economic conditions and that conditions should return to a more normal state in the future. The current shortfall is unlikely to be resolved quickly but even more significant longer-term demand will require significant investment in exploration, production and distribution. The shortfall in demand will sustain higher prices that will create the justification and financial conditions for new capital equipment investments.

Expanding exploration, production and distribution will add significant demand for steel castings. In exploration, there is a need for construction equipment, drilling rigs, and downhole bits. Production requires mining equipment, pumps and valves. Distribution will also need construction equipment, pumps and valves. There may also be needs for offshore platforms, etc.

The report from the American Council for an Energy-Efficient Economy (available for download on the Casteel Reporter web page) is an analysis of the current and projected supply, demand, and pricing. As you review it you may wish to think not only in terms of your manufacturing costs, but the market potential. In those energy sources with the strongest pricing and largest shortfalls, there will be significant new investment.

The report is also available here: <http://www.aceee.org/pubs/e065.htm>.

**Raymond**

# STEEL FOUNDERS' SOCIETY OF AMERICA

## MEETINGS CALENDAR

### **2006**

May

9/10 Spring Meeting & Plant Tour, Muskegon, MI  
16 Specifications Committee Meeting, Toronto, Ontario  
20/27 China Tour, TBD, China

June

21/22 Heavy Section Product Group Meeting & Plant Tour, Carlisle, PA

September

9/12 SFSA Annual Meeting, Eldorado Hotel, Santa Fe, NM

December

13/16 National Technical & Operating Conference, The Drake Hotel, Chicago, IL

### **2007**

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)	3 Mo Avg	Jan	Dec
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**Carbon & Low Alloy**

Shipments	20.5	32.3	4.2
Bookings	19.4	17.3	10.0

**High Alloy**

Shipments	0.1	7.3	13.0
Bookings	19.6	61.7	24.0

**Department of Commerce  
Census Data**

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

Shipments	1,715	1,706	1,724
New Orders	1,749	1,790	1,723
Inventories	2,007	1,995	2,017

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

Shipments	70.9	70.6	73.3
New Orders	82.7	72.9	89.3
Inventories	113.8	114.7	113.5

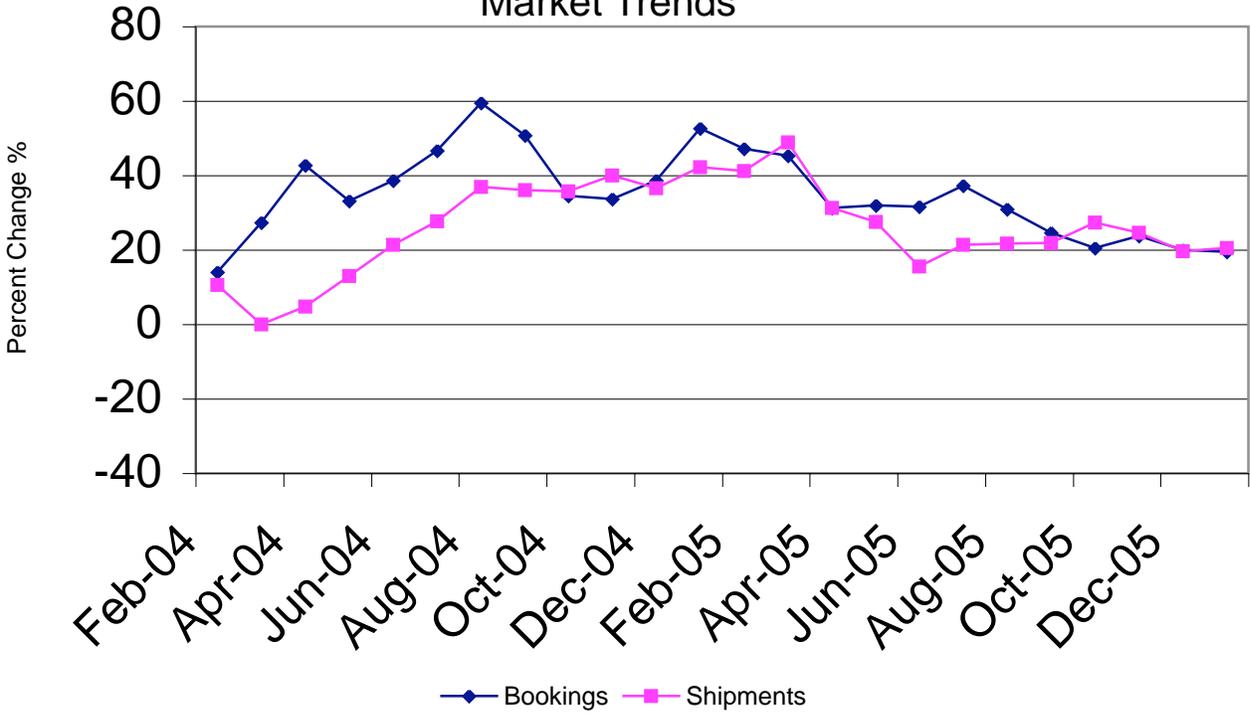
**Nondefense Capital Goods  
less Aircraft (billion \$)**

Shipments	64.2	64.8	65.3
New Orders	64.9	65.6	66.8
Inventories	95.5	96.1	95.0
Inventory/Orders	1.47	1.46	1.42
Inventory/Shipments	1.49	1.48	1.45
Orders/Shipments	1.01	1.01	1.02

**American Iron and Steel Institute**

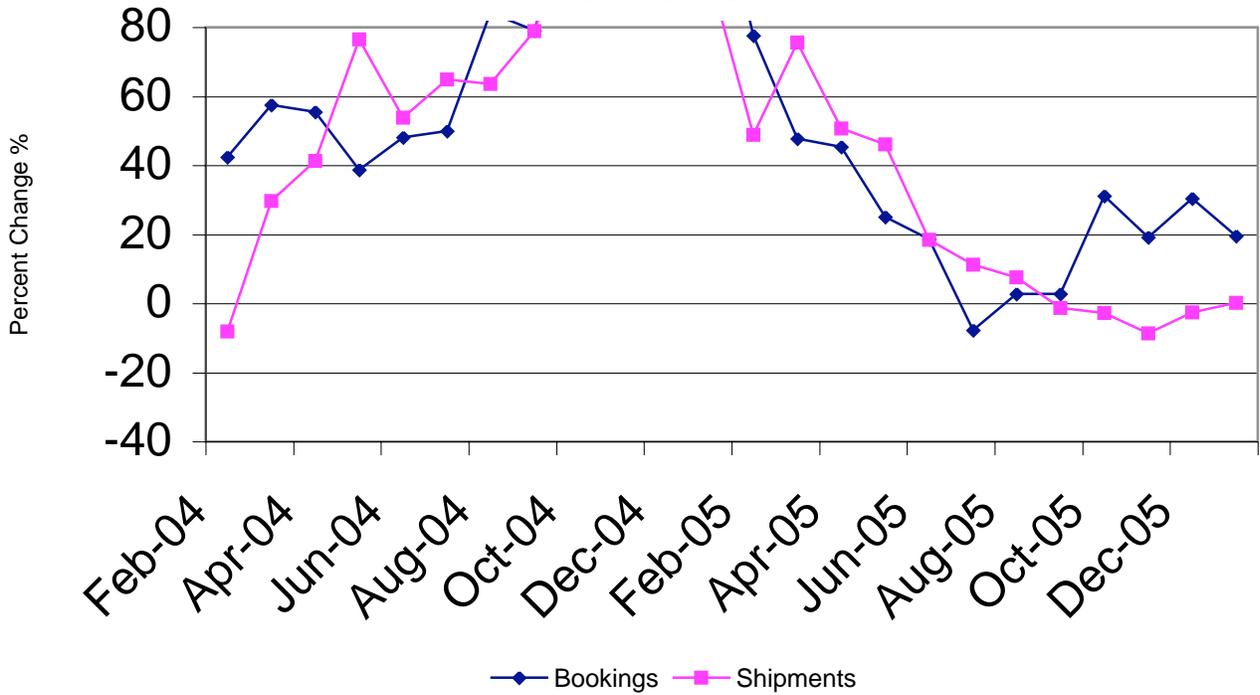
Raw Steel Shipments (million net tons)	8.7	8.9	8.5
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### Carbon & Low Alloy Casting Market Trends



SFSA Postcards

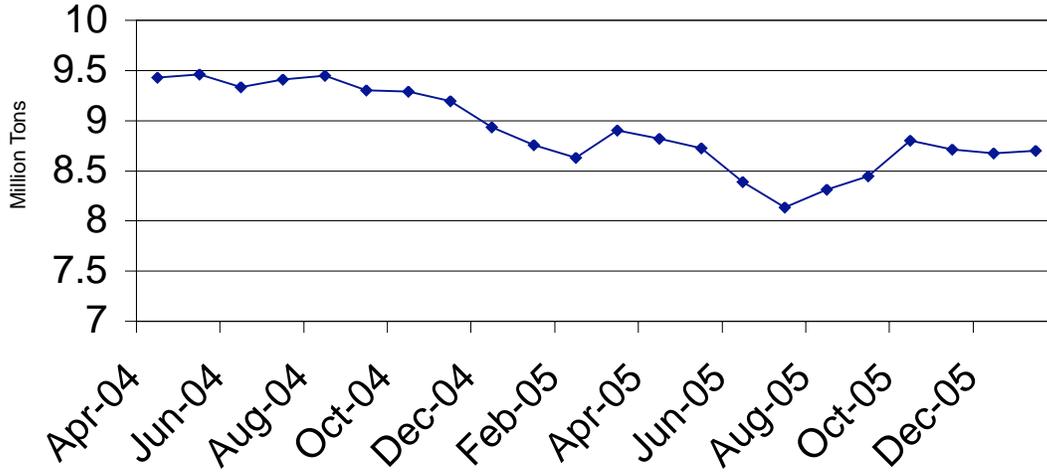
### High Alloy Casting Market Trends



SFSA Postcards

# Raw Steel Shipments

3 month average



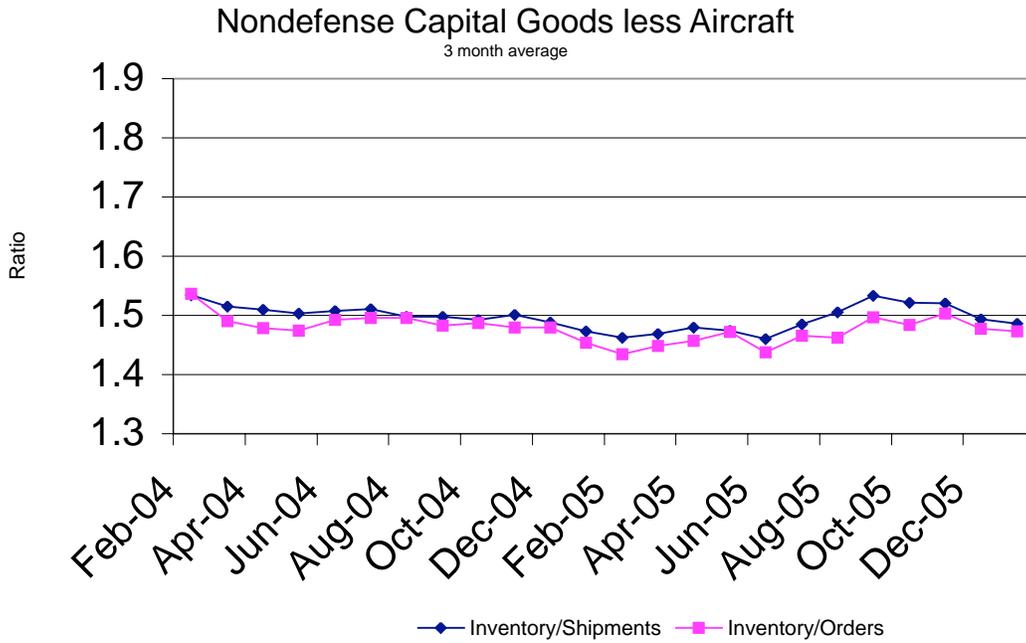
AISI Data

# Iron and Steel Castings

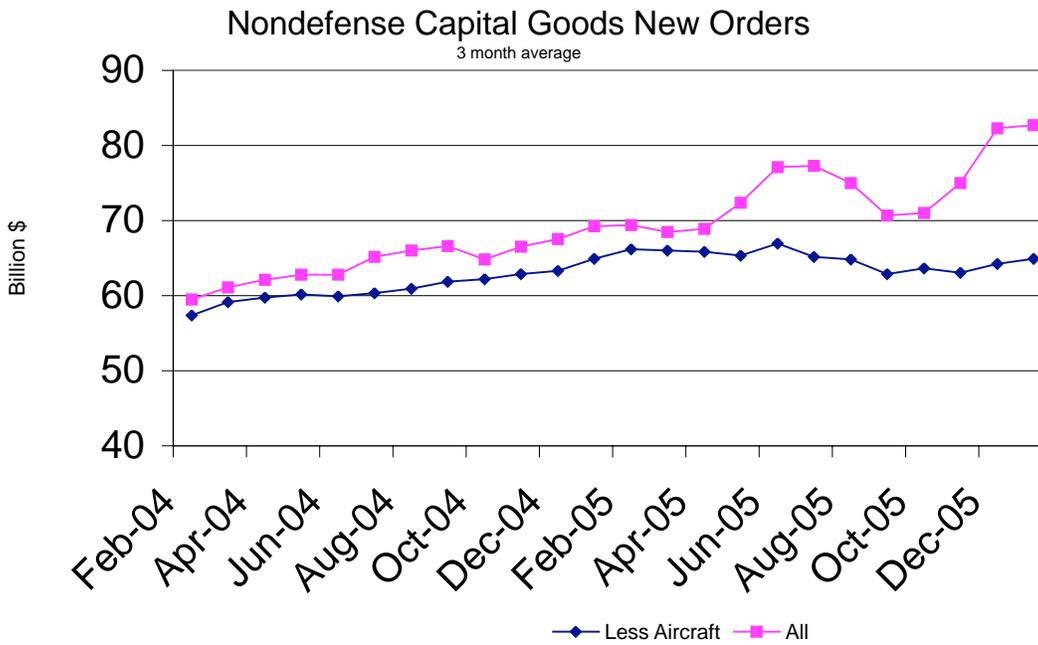
3 month average



SFSA



Department of Commerce



Department of Commerce

## **Steel Founders Society of America - T&O Meeting**

The meeting will be held at Eagle Alloy, Inc., 5142 Evanston, Muskegon, MI. We shall be using one of their conference rooms

### **Program**

#### **Tuesday, May 9<sup>th</sup>**

1:00 pm

Safety Program at Eagle Alloy - John Workman, Eagle Alloy  
Availability of scrap - Miller Compressing  
Price and availability of alloys - Rod Naro/Dave Williams  
The use of solidification simulation in Quality Control and vendor selection - Malcolm Blair, SFSA

6:00 pm

Sponsored dinner cruise with cash bar.

#### **Wednesday, May 10<sup>th</sup>**

8:00 am

Plant tours of Eagle Alloy and Michigan Steel. It is anticipated that the tours will be completed by 12:00 noon.

2:00 pm

Technical Steering Committee meeting

### **Hotel Information**

A block of rooms have been set aside at the Shoreline Inn at Terrace Point on Muskegon Lake. The room block is in the name of Eagle Alloy. The room rate is \$69 per night and includes continental breakfast.

***Please call and make your reservations by April 15th at  
(866) 727-8483***

### **Registration**

To ensure we have a good estimate of attendees please register your intent to attend with Sandra at SFSA <sandra@sfsa.org>

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Malcolm Blair  
VP Technology, SFSA  
Chairman/Secretary ISO TC17/SC11