



SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication

serving SFSA steel casting industry Members

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October — 2005

Casteel Commentary Highlights:

The Casteel Commentary focuses on the need to become more product oriented. It is highlighted in the way we give foundry tours. Instead of following the product backwards through the process to see how it is made, we follow the materials flow through the process. We should give tours backwards to be better at showing off our process. We should also think about our plant in terms of how each operation contributes to the casting we ship.

The SFSA Annual Meeting was well attended and included an optimistic forecast and a strong business program. The presentations available here:
<http://www.sfsa.org/sfsa/annmtg>

The meeting included many lively discussions about customer requirements and future market demands. Last year we had a presentation of the R&D tax credit and a number of members wanted to get that information again. It is posted on the newsletter page on our website:
<http://www.sfsa.org/sfsa/news>

We are asking member companies to apply to sponsor an intern for the Schumo Foundation. The member pays the student to complete an engineering project and then the intern presents his project at the T&O to receive a scholarship for \$5,000. If you are interested in applying to sponsor one of our two interns the deadline is October 13 and the application is located here:
<http://www.sfsa.org/foundation/sponsor.html>

59th Technical & Operating Conference

If you are planning on attending the Conference and have not already registered for the Conference, please do so now. Our room block at the hotel has been expanded, although after October 10 pricing and availability are not guaranteed. Registration information and a preliminary program is available at
<http://www.sfsa.org/sfsa/toconf>



Persons Available

A1213 seeks an operations/quality manager position. Has strong metallurgical expertise, over 20 years experience in the industry and bachelors degrees in Metallurgical Engineering and Industrial Technology

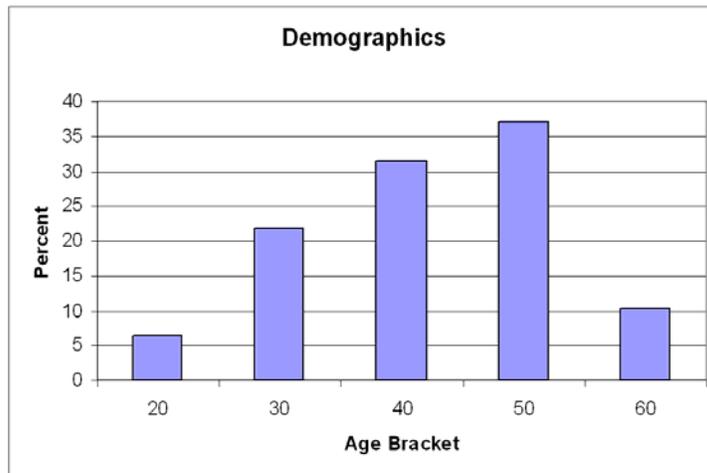
Specification Note

One common perception in the marketplace is that steel castings, like some other cast materials, are brittle and unweldable. Users are often concerned about casting quality and production welding in the foundry and prefer fabrications. Often the quality and technical controls in fabrication are nonexistent compared to the steel foundry. The production of any ASTM cast steel grade requires that weld procedures and individual welders be qualified. When customers are concerned over the serviceability of welds in the plant, we can respond by proposing that we will live with the same standards they use for fabrication welds. We will satisfy the same NDE and procedure qualifications. To demonstrate the weldability and ductility of

the steel grades you make, it can be helpful to create a display board. The board should have weld bend tests and mechanical test results for some of your most common grades. A weld bend test is irrefutable evidence of the ductility and weldability of your steel. Individual welders should have a framed certificate displayed in the work area for each procedure that they are qualified to use. We should turn the cost of compliance with ASTM A488 or ASME into an asset demonstrating our technical and quality performance.

Innovation

As steel casting producers we try to solve some steel casting problem by adding gates and risers. Some times we make the casting worse while adding costs. Our work on gating systems suggests that more complex gating systems and additional riser are often not helpful. One suggestion of the research on gating is to use where possible the filtered riser sleeves to replace the gating system. When this was tested, it gave the best casting with regard to inclusions. Between scrap, yield, and repairs, the filtered riser may be a cost savings. In the current higher demand market, the added assurance for quality and schedule may make this technique attractive where it was not in the past.



Equipment Wanted

A member company is interested in a used rotary sand dryer (10 ton - 30 ton) and a cooler/classifier. If you know of one available or have one and are interested please let me know.

Turnover Rates

I sent out a request to members on turnover rates especially in finishing at the request of a member. There were 18 responses. For the foundry as a whole the average turnover was 36% with the range being from 20 to 50%. In finishing operations the turnover was higher, 52%, with a much larger range, 2 to 300%. The question for specific areas in finishing was not clear and the answers were limited. Some plants remarked that the fallout of new hires was a significant part of the turnover. If a worker sticks it out for at least 6 months, he is likely to stay. With the increase in demand it is difficult to tabulate turnover since expanding the workforce means new people with a higher drop out rate. We need to innovate in the finishing area to automate and remove labor.

Demographics in the industry- As you know, the severe economic conditions for much of the last 20 years has limited the hiring and retention of younger workers. We also asked for the age breakdown of first line supervisors and up from our members. As you can see on the chart, most of our leaders are later in their careers. Almost half of our managers

are within ten years of retirement. Only one third of these managers are younger than 40. It will be necessary for us to train and develop the required leadership in the next few years. The problem is most acute when someone 55+ is in a key position with no obvious successor.

Trade Events

The Department of Commerce routinely organizes trade events and a list of upcoming opportunities is attached to this newsletter and also available at this website:

<http://www.buyusa.gov/uppermidwest/events.html>

Market News

The market demand for steel castings remains strong. While not all markets and plants are at capacity, a number are at their limit. The availability of steel castings is a concern for a number of large customers especially in the larger castings. A slowdown in the rate of growth is seen in all the indicators. The effect of the hurricanes is probably going to reduce the rate of growth and cause some added softening to the economic outlook. The disruption of natural gas production and oil refining could cause some significant volatility in pricing. Natural gas may be in short supply this winter. Plants may want to explore fuel alternates where possible. The reconstruction may prove to stimulate added demand for equipment and lead into a strong start next year. The SFSA forecast is for a strong end to this year with added growth next year.

Casteel Commentary

Obvious things are not always apparent. I have been on hundreds of foundry tours in my career. They mainly follow the same pattern. We start in the mold and core making area, stop at the pattern shop, watch a heat being poured, follow the casting to shakeout, tour the finishing area, go through heat treatment, the laboratory, and finally to the shipping dock. I have even given these type tours in member plants to DOE or DOD executives. Last month I realized that we do that tour wrong..

Only industry people familiar with the foundry can really follow that traditional tour. A novice cannot make sense out of a core making area, see the casting when it still has the gating and rigging attached, understand the purpose of shakeout and finishing. We would be bettered off if we walked out tours backwards through the process. Then our novice customer or employee or visitor could grasp the process better.

If we start at the finish we can show the tour the castings we make ready for shipment to the customer. We can point out the areas requiring a core, the complex geometry and internal features characteristic of castings. We can show off our ability to meet challenging requirements. Then we can show the tour our inspection and certifications procedures, demonstrating that each casting is inspected to make sure the customer requirements are met. We could take the tour to the laboratory, the inspection areas and show the certification typically required. Then we could show the heat treatment and finishing area required to prepare the casting to meet these customer requirements. The weld booths would show how we use welding to produce the castings required. We can show the casting with gates and risers attached, using the opportunity to talk about the need for risers and gates. It may be useful to show the solidification software at this point to show how those gates and risers are designed.. We can talk about soundness and cleanliness and good casting design. Then we can show shakeout, and the tour can see how the casting with gates and risers is removed from the mold and core. Then on to pouring to see how the metal is poured and melted. Then we can walk into the mold closing area and see how the mold cavity is prepared and cores inserted. Then we can show how the pattern makes the mold and the tooling makes the core. When we arrive back at the beginning of the process, the tour is over. The tour can see why each step is necessary for the production of their casting.

The backwards tour approach highlight the basic flaw that often clouds our thinking about the process. Our normal tour is process not product oriented. We think in terms of process not product. The backwards tour helps us identify where we add the value the customer requires. I would challenge all of us to think through our plant from a product perspective and to give ourselves the backwards tour to find unseen opportunities.

Raymond

STEEL FOUNDERS' SOCIETY OF AMERICA
MEETINGS CALENDAR

2005

November
2/5

National Technical & Operating Conference, Chicago, IL

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

SFSA Trend Cards 3 Mo Avg Jul Jun
(%-12 mos. Ago)

Carbon & Low Alloy

Shipments	21.4	13.5	18.0
Bookings	37.4	31.3	40.5

High Alloy

Shipments	11.2	4.4	20.9
Bookings	-7.8	9.6	-10.0

**Department of Commerce
Census Data**

Iron & Steel Foundries (million \$)

Shipments	1,695	1,658	1,717
New Orders	1,744	1,682	1,728
Inventories	2,115	2,046	2,145

Nondefense Capital Goods (billion \$)

Shipments	67.5	64.4	69.3
New Orders	77.3	70.9	80.3
Inventories	112.5	111.2	112.6

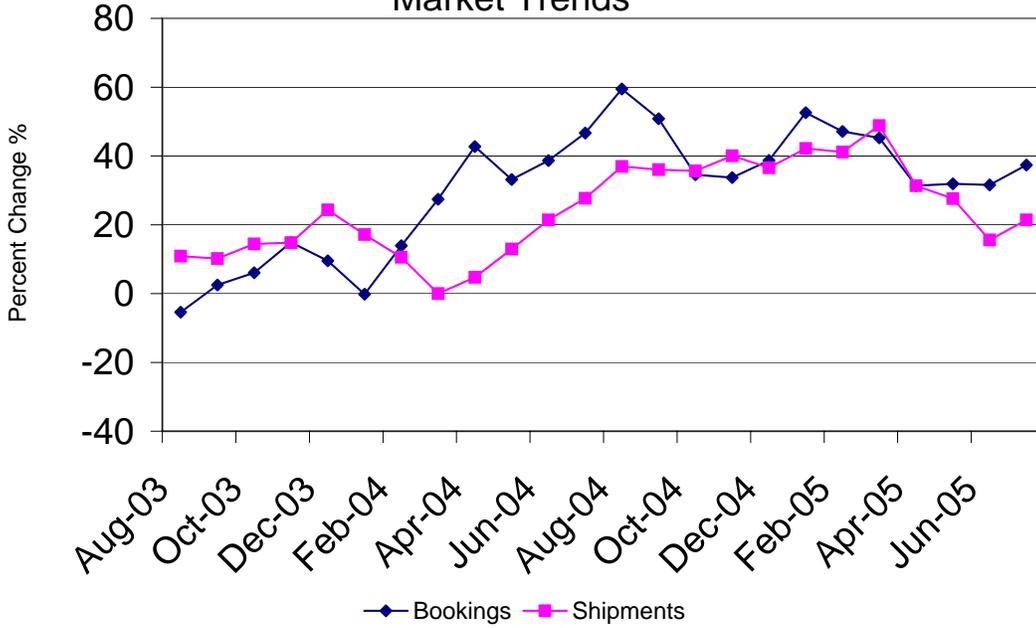
**Nondefense Capital Goods
less Aircraft (billion \$)**

Shipments	64.3	60.8	66.1
New Orders	65.2	61.6	68.9
Inventories	95.4	93.6	96.1
Inventory/Orders	1.47	1.52	1.39
Inventory/Shipments	1.48	1.54	1.45
Orders/Shipments	1.01	1.01	1.04

American Iron and Steel Institute

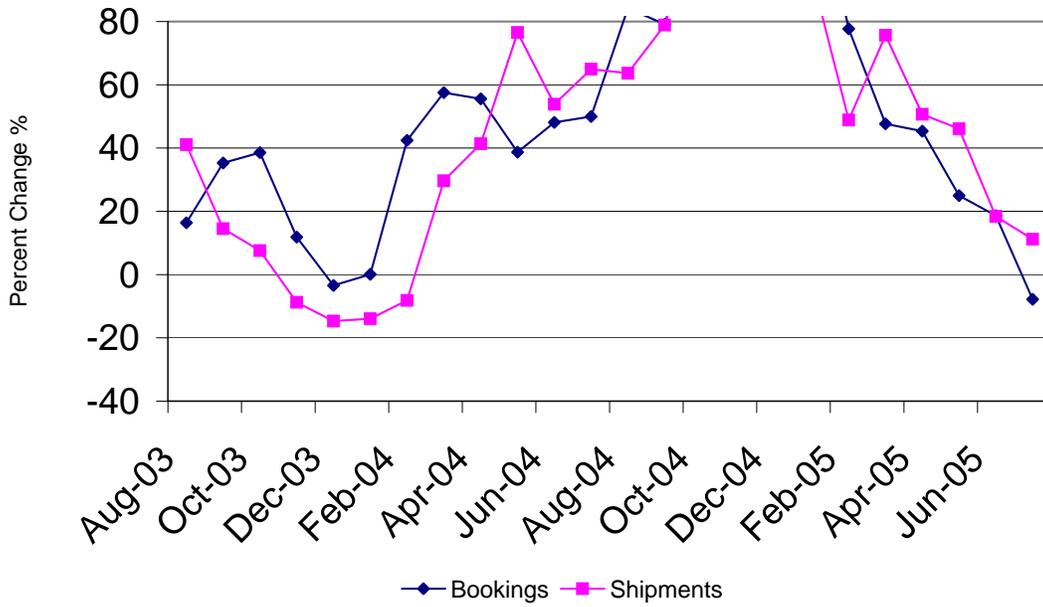
Raw Steel Shipments (million net tons)	8.3		8.2
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Carbon & Low Alloy Casting Market Trends



SFSA Postcards

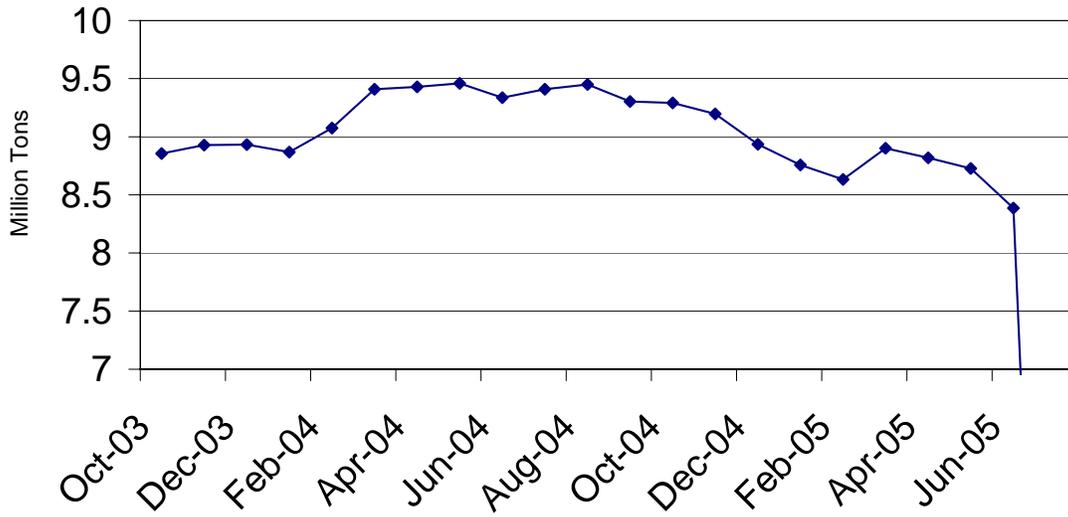
High Alloy Casting Market Trends



SFSA Postcards

Raw Steel Shipments

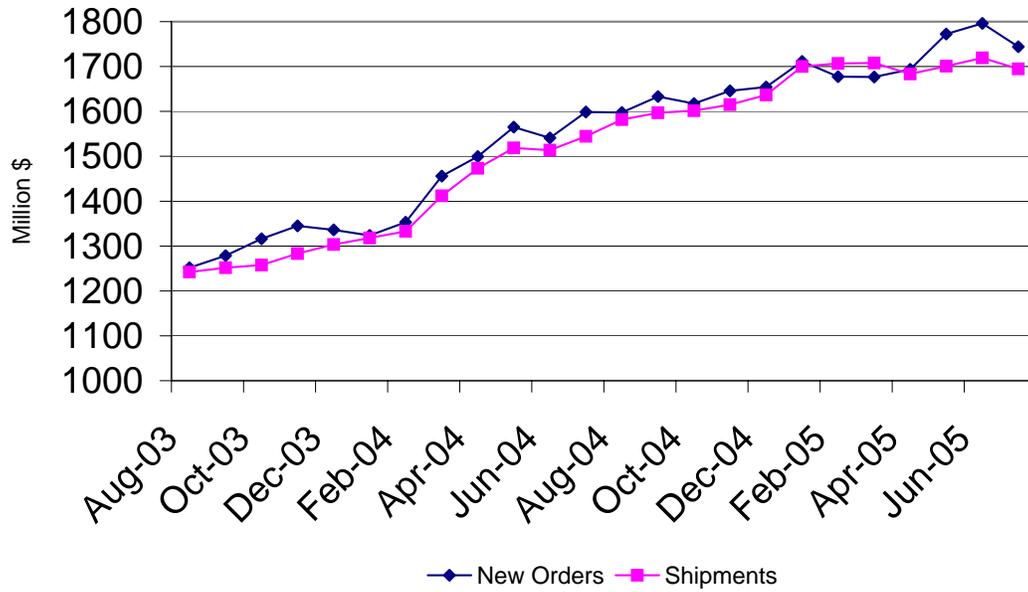
3 month average



AISI Data

Iron and Steel Castings

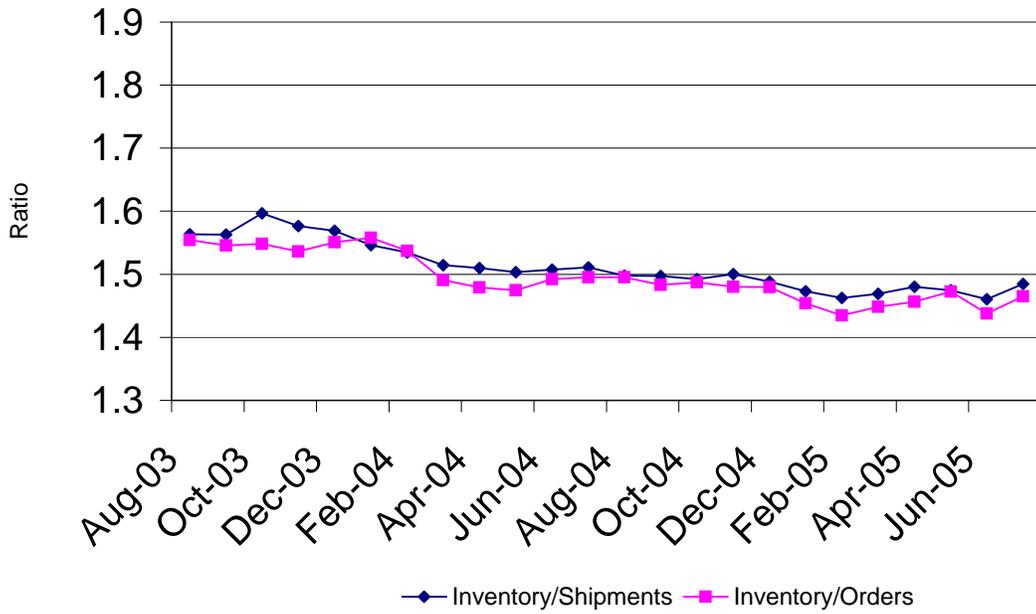
3 month average



SFSA

Nondefense Capital Goods less Aircraft

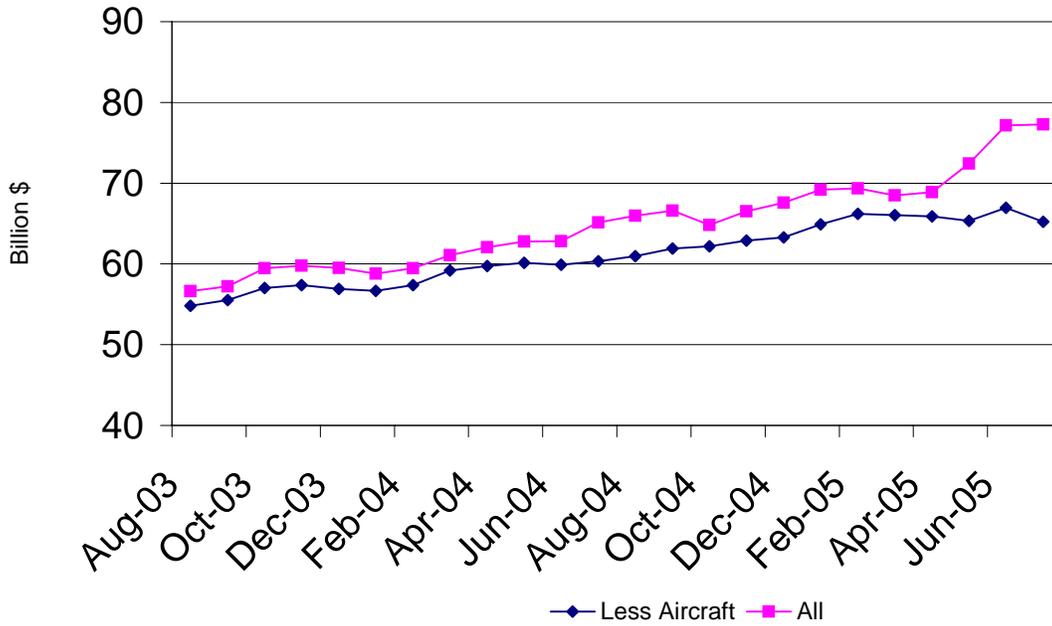
3 month average



Department of Commerce

Nondefense Capital Goods New Orders

3 month average



Department of Commerce

Subject: Upcoming Illinois Trade Events

Below is a list of upcoming int'l trade events, many of which our office is organizing or co-sponsoring. We hope that you will be able to join us for at least one of them! You can also access this list as well info on other upcoming int'l events & missions at <http://www.buyusa.gov/uppermidwest/events.html>

Best Regards,

*Debra H. Rogers
International Trade Specialist
U.S. Export Assistance Center – Chicago
US Dept of Commerce
T: 312-353-6988*

October 4, Northeast China Region - Individualized Market Assessments

Commercial Officer Soching Tsai of the U.S. Department of Commerce Commercial Service office in Shenyang, China will be available for one-on-one consultations with exporters interested in obtaining insights into business opportunities in Northeast China. Best regional prospects for exporters include Transportation - Shenyang/Harbin subway systems projects, Dalian port expansion, Shenyang airport expansion; Logistics; Pollution control (solid waste/waste water technologies); Upgrading of petrochemical plants; Agriculture (dairy and cattle farming, farm equipment, ag processing). To register for your individualized market briefing, visit <http://www.buyusa.gov/uppermidwest/nechina.html>. For questions contact Phyllis Bingham, US Dept of Commerce - Chicago, tel 312-353-3748

October 19-23, 2005: Nigerian Reverse Trade Mission - Chicago

A fifty member delegation from Nigeria whose primary interests include Information Technology, Ports and Transportation, Pharmaceutical/Healthcare, Printing, Plumbing and Building Construction, Cosmetics & Toiletries, Energy, Security and Safety Equipment, Shipping and Hauling and services which entail Real Estate and Management, Legal and Media Consultancy are being hosted by the Continental African Chamber of Chicago (CACC), October 19-23. The purpose of the trip is to enhance the growing inflow of business and investment opportunities that exist in Nigeria. CACC is organizing a seminar on 'Doing Business in Nigeria' scheduled for October 20th. One-on-one meetings will be conducted with the delegates on October 21 and 22. For further information contact CACC via telephone at 312/987-1889 or 312/987-1890 or via email at: gdata@kofainternational.com.

February 7-9, 2006: BIS Export Regulations Seminar - Chicago

Save the date

We make every effort to minimize unwanted communication from our worldwide offices. If you do not wish to receive similar announcements from the U.S. Commercial Service in the future, please reply to this message with "UNSUBSCRIBE" in the subject line of the email. A staff member will remove you from our active distribution list so that you do not receive additional messages from us. Please Note: We do not sell, barter, share, or distribute our client lists with parties outside the U.S. Federal Executive Branch of Government unless required to do so by law. You can review our privacy policy at <http://www.commerce.gov/privacystatement.html>