



# SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication  
serving SFSA steel casting industry Members

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## October — 2012

### **Casteel Commentary**

The Casteel Commentary discusses the advantage we currently hold in the marketplace with senior and experienced technical and operating people. As we recruit and plan for the future we need to institutionalize our competitive advantage by extending our greater subject matter expertise.

### **66<sup>th</sup> Technical & Operating Conference**

Full details of the program can be found on the SFSA website at <http://www.sfsa.org/sfsa/toconf>. The Workshop includes a “hands-on” demonstration of the Data Mapping Software developed from the ESMARRT Department of Energy program. This software will allow the easy collection and collation of data on the shop floor. The conference program includes more than 40 papers with 60% coming from foundries and covers a wide variety of topics.

### **SFSA Annual Meeting**

We had an outstanding Annual meeting in Park City, UT. We had 66 participants representing 24 companies. The speakers covered topics ranging from sand availability and future, scrap costs, ESOP ownership options, etc. The SFSA Forecast was presented showing a stable market. The presentations from the Annual meeting are here: <http://www.sfsa.org/meetings/annmtg12>.

This year we continued the practice of devoting a lot of our program time to an industry roundtable. Participants were asked to bring an improvement in their plant to share and a question for the group. The roundtable resulted in a wide ranging discussion on a host of topics. We talked about health insurance and the payoff of wellness programs. We talked about scheduling and communicating with customers on locking down the requirements for production planning. Pattern storage policies and liability was covered. Managing overtime and organizing shifts to maximize production was brought up for consideration. These are only a few of the topics that were opened up for industry input. Many participants remarked that the industry roundtable was the highlight and best value of the conference.

We intend to continue to include this in our future programs and I would encourage you to plan to attend next year. Next year's meeting will be held at Half Moon Bay, CA.

One final topic that was presented at the Annual Meeting was the construction project in San Francisco. SFSA has been supporting the development of steel castings in building construction for a decade and the Transbay Transit Center represents a monumental application of steel castings in the US. The components will not only carry the load of the structure but also provide the aesthetic characteristic of the building. The project will further develop the consideration of steel castings for building construction and future applications will cover the gamut from small to big, carbon and low alloy to high alloy, sand to investment, and low to high quantity.

### **Future Leaders Group**

About 30 attendees enjoyed the premiere presentation of “*The Good, the Bad, and the Ugly*” and a tour of Spokane Industries; our gracious hosts for the events. Raymond Monroe, Malcolm Blair and David Poweleit presented a range of topics to better enable steel foundries to educate their customers on the opportunities steel castings offer. SFSA members can download a copy of the presentation at <http://www.sfsa.org/misc/goodbadugly>. SFSA is considering providing this seminar at additional

locations in the near future – we'll announce the next opportunity in a future Casteel Reporter. We would also consider providing the seminar directly to your customers. Please contact David Poweleit at [poweleit@sfsa.org](mailto:poweleit@sfsa.org) for more information. About two-thirds of the attendees were Future Leaders as the incorporation of a seminar has been a focus at recent meetings. Future Leaders also heard graybeard presentations from Malcolm Blair, Ed Kaczmarek and Rod Grozdanich on life lessons, leadership, and foundry trials; and participated in roundtable discussions.

**North Central and Heavy Section Meeting**

We have received a number of questions regarding "Hardenability". This suggests that there is need to discuss this subject in greater detail so that members can have a greater appreciation of the issues. We have arranged with Prof. David Van Aken, Missouri University Science and Technology, Rolla to present a short course on this subject. This course will be useful as an introduction and a refresher.

In addition to this short course there will be a plant tour of Sivyer Steel and the possibility of a plant tour of Rock Island Arsenal (RIA). As this is a military establishment, there may be limitations to access by non-citizens. If you wish to go on the RIA tour then non-US citizens will need to supply "Country of Citizenship" and photo ID at least 30 days ahead of the tour date i.e. 9/7/12. This information needs to be sent, in electronic format, to Hal Davis. When you arrive at RIA you will need to have the original photo ID with you.

**10/9/12**

- 8:30 am - Optional - Plant tour of Rock Island Arsenal, Rock Island, IL
- 1:00 pm to 5:00pm - Hardenability - Short Course - Prof. David Van Aken, MUS&T Course content; Quench factor analysis or how to determine the quench severity of a quench bath Determining hardenability by chemistry ASTM A255 Determining the hardness profile of a round quenched bar using quench severity and Jominy data or chemistry Calculation of tempered hardness based upon alloy content (martensite only)
- 6:30 pm - Group dinner separate checks

**10/10/12**

- 8:30 am - Plant tour of Sivyer Steel, 225 33rd Street Bettendorf, IA 52722 (563) 355-1811

The meeting will be held at Isle Casino Hotel, 1777 Isle Parkway, Bettendorf, IA 52722 (563)359 7280

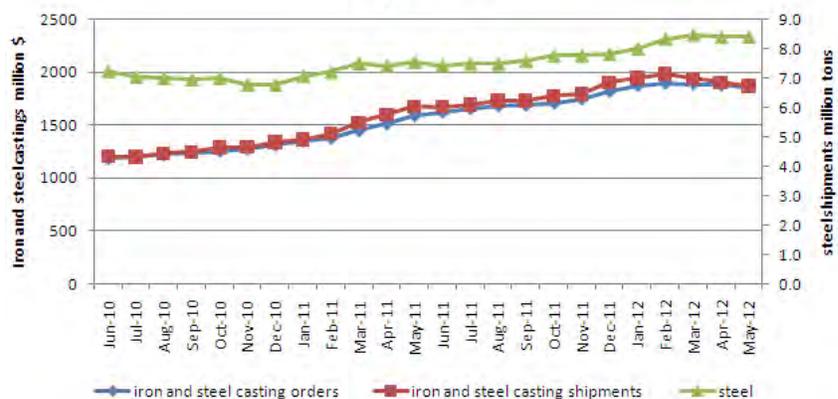
Sivyer Steel have a corporate rate at the hotel of \$69.00 + tax. You must mention Sivyer Steel when making a reservation.

Please register your attendance on this course and citizen status with Malcolm Blair [blairm@sfsa.org](mailto:blairm@sfsa.org)

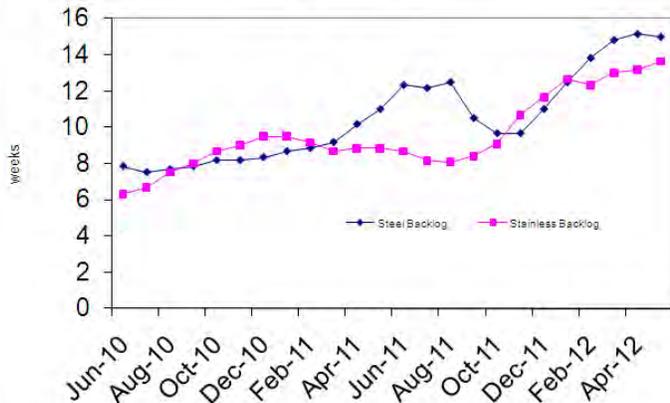
**Market News**

The SFSA Annual Forecast for 2013 is included in the SFSA Annual Meeting materials. We are projecting a flat or stable year. Current market conditions appear to be slowing form an active and high level. Shipments for steel castings for this May are 6% above last May while stainless castings shipments are down 3%. The rolling average still shows higher average activity.

**Iron and steel casting shipments and AISI steel shipments**



Casting Backlog



Iron and steel casting activity reported by the US DoC peaked in February and has been declining through May. Steel long products have stabilized this year around 8.5 million tons a month or around 100 million tons annually. This production level is a strong level but not record breaking. Both steel long products and iron casting production lead steel casting production by 6 to 12 months.

Non-defense Capital Goods orders and shipments have been declining since February and inventories are growing raising the concern of a continued slowdown. The PMI (purchasing managers index) has broken

below 50% for manufacturing around the world signaling a slowdown.

Backlog for steel and stainless steel castings have reached the highest level I have seen since we started gathering this number about 10 years ago. It appears that we should anticipate a slowing market for the balance of this year and the beginning of next year. The slowdown in China along with the financial crisis in Europe and the federal budget issues in the US make it likely that we will see continued uncertainty and slower economic activity. On the other hand, the continued demand for commodities in the developing world and in the developed areas is likely to require continued capital investment and spark ongoing demand for steel castings.

If oil and copper prices remain high and interest rates and inflation rise, steel casting demand should continue to be strong.

### **Casteel Commentary**

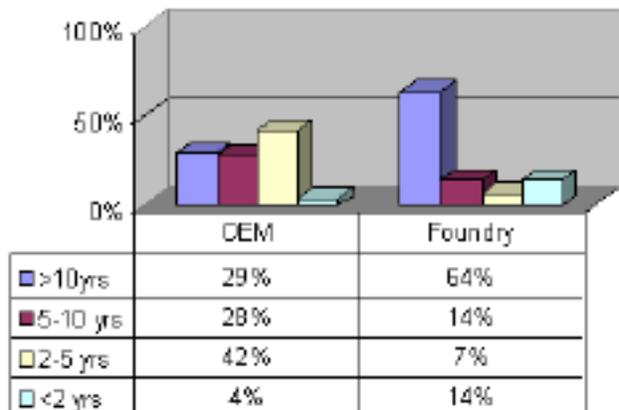
The issue of recruiting the next generation of foundrymen is a global problem. This problem however is not isolated to our industry. Our customers have been more actively recruiting the next generation because they have retired many of their most experienced people and are relying on new relatively inexperienced people to buy and use steel castings.

A study conducted by a customer of steel castings in the UK last year documented this trend to having experienced people in the foundry compared to in the OEM.

The bar chart shows that 64% of the foundry technical people have over 10 years of service while 46% of the OEM's staff has less than 5 years of service. No wonder it is difficult to communicate or work with customers to resolve casting issues.

This does suggest an opportunity for steel casting producers. We need to replace our senior staff with a new generation of workers but we need to retain and improve our level of technical expertise so that our customers are dependent on us for their steel castings. To the extent that we develop, own, understand and create the steel castings that are essential to their products, our customers will be unable to treat our castings as a commodity. To the degree we

Average service within technical department



differentiate ourselves by attaining stringent technical and commercial requirements, we make it challenging for our competitors to compete. Even more, we make it difficult for our customers to change.

Large organizations like OEM customers are inevitably risk driven. Large organizations have immense power that can make them successful or self destructive. To avoid self immolation, they develop processes and procedures, a bureaucracy, to avoid making costly mistakes. Security is found for the company and employees by avoiding any unnecessary risk. Selling to a large risk driven enterprise requires changing the perception of risk in your favor.

If you develop a cast solution in steel that performs well the OEM customer is at risk if they move that component to a new process or a new supplier. Only if your quality, cost or delivery is a problem will the customer seek a new supplier. He will use competitive suppliers and alternative processes in negotiation, but he is generally unwilling to change unless compelled to do so.

If we use our superior product and process knowledge to create the solution for our customer in the form of a steel casting and enshroud it in mystery and technical art, he is at risk to move the work. The more we understand the customer's requirements and business, the more we can heighten the risk of change and the stronger we are in the negotiation.

Ultimately, if we design the component and guarantee its delivery and performance in an economic manner, we significantly reduce the ordinary risk to our customer. We do then create the risk of his dependence on us. Designing and supplying a machined and sub-assemble part makes us critical and more dependent on our customer.

So, I would argue that in the broadest range of customers and business conditions, we will be well served as we plan succession for our plants to focus on recruiting and developing the technical and subject matter experts that will place us in the most competitive position in the market. With our more experienced workforce we are in an advantageous position now and we need to in our future institutionalize this advantage.

Raymond

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

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

Shipments	25.3	8.4	5.6	15.0
Bookings	24.4	23.4	22.3	20.0
Backlog (wks)	12.8	15.0	15.5	14.5

**High Alloy**

Shipments	28.7	21.9	-3.0	28.0
Bookings	28.8	-9.7	-6.3	-12.9
Backlog (wks)	11.2	13.6	13.4	13.5

**Department of Commerce  
Census Data**

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

Shipments	1,793.9	1,858.7	1,822	1,882
New Orders	1,843.8	1,868.7	1,858	1,888
Inventories	2,068.6	2,110.0	2,135	2,107

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

Shipments	70.2	69.9	70.2	69.5
New Orders	75.6	70.2	71.0	69.4
Inventories	167.0	166.2	167.4	166.1

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

Shipments	65.0	63.9	63.9	63.3
New Orders	66.8	64.8	65.5	64.0
Inventories	115.8	118.6	119.2	118.7

Inventory/Orders		1.83	1.82	1.85
Inventory/Shipments		1.86	1.86	1.87
Orders/Shipments		1.02	1.02	1.01

**American Iron and Steel Institute**

Raw Steel Shipments (million net tons)	8.0	8.4	8.4	8.2
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