



# SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication  
serving SFSA steel casting industry Members

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## *April — 2011*

### **Casteel Commentary**

This month's commentary looks back on the conditions that lead steel foundries to invest in added production. Several approaches were used to consider that decision. Adding a unit of production must have been supported by the sale of that unit. The cost of adding a unit of production was typically between one half up to the full value of the sales price of that unit.

### **Annual Meeting**

The 109<sup>th</sup> SFSA Annual Meeting will be held at the Montage in Laguna Beach, California, September 10-13, 2011. There are discounts for early registration – registration information is available on the SFSA website.

### **Carbon & Low Alloy Research Review**

The Carbon & Low Alloy Research Review will be held July 12-13 in the Chicago area. Scheduled tentatively are presentations on SFSA research into areas such as: Validation of Radiographic Testing, Visual Inspection, Porosity v. Performance, Riser Sleeve Modeling, Segregation Modeling, Sand Properties and Casting Distortion, Mold Gas Evolution, High Strength Steel and FeMnAl Metallurgy and Properties.

### **Spring Management Meeting**

The SFSA Spring Management meeting was held in March. The program focused on the economic conditions facing our industry. Bernie Lashinsky projected a strengthening economy with no threat of a double dip. The suppliers of scrap, ferroalloys, pig iron, and binders; all projected adequate supplies but rising costs as their markets recover. G. Weed for the EPA Energy Star program reported success at several steel foundries in their energy management programs and solicited added members to participate. All of the presentations are available to members on the SFSA website.

### **Market News**

Shipments for steel castings remained strong in November, recovering most of the dramatic downturn from the economic crisis. Stainless casting shipments fell in November. Bookings are still improving but have not caught up with the shipment recovery. Backlog ironically has risen more sharply for the stainless castings market with a reported 3-month median average of 8.3 weeks for steel and 9 weeks for stainless steel castings. Business in 2011 has continued to improve and many producers are expecting good market conditions for the balance of the year.

Iron and steel casting shipments reported in the US census for November show continued strength for both orders and shipments. Steel mill shipments continued a small decline.

Non-defense capital goods new orders excluding aircraft continued to climb signaling continued underlying demand for capital equipment and consumable goods. The ratio of inventories to orders fell and the ratio of inventories to shipments remains at the lowest levels since September of 2008.

Manufacturing has been the leader in the recovery. This is in part due to the strong demand and pricing for commodities. The historic pricing levels for copper and the relatively high prices for oil are

supporting demand form capital equipment containing castings. Some of the demand and pricing is undoubtedly due to concern about the future value of the dollar, eroding both in foreign exchange and as the result of inflation. As long as the economy continues to improve, demand for steel castings should remain strong. Customer feedback indicates expectations for continued market growth for the year.

We need your help! Our SFSA trends are based on members input. Our respondents have continued to dwindle. We need more members to fill out our monthly survey on bookings and shipments to make the numbers more representative of the industrial conditions.

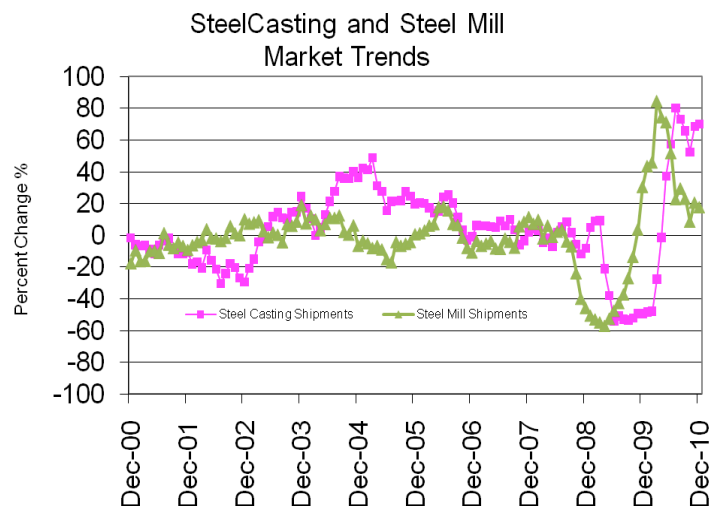
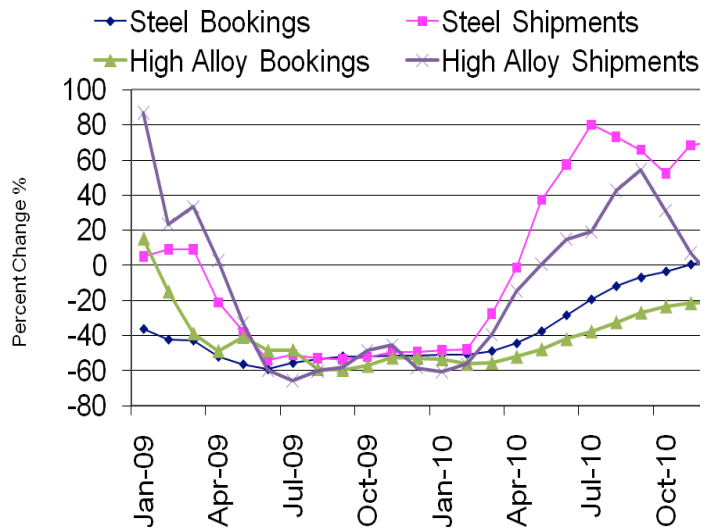
**Casteel Commentary**

Two years ago, the steel casting industry operated close to its capability for production. Especially stretched were the producers of larger steel castings. This challenge of supply two years ago was felt not only by the steel casting industry and our customers but was felt globally for all large steel components. In the past when steel casting producers were stretched, the market was indicating the need for new investment for expanding plant capacity.

In considering the requirements for adding additional capital equipment to expand production, several approaches have been used. SFSA did a brief survey correlating what prior investments that expanded production cost. The cost of increasing the production appeared to be related to the product unit price. In considering the investments in steel mill production, the same became apparent; the cost of increasing unit production was related to the market unit price. Since the return from the added units of production must justify the added investment, it makes sense that the investment required was related to the unit cost. If the required investment for added capacity exceeded the product unit cost sufficiently, then investment would not be justified. If the production investment was small relative to the unit cost, then the investment would be rational.

A common way of assessing capital equipment investment options is to consider the payback period for the investment. This takes the savings from the investment and calculates how long the savings will take to repay the investment. A three-year payback period is a common hurdle, or a 33% savings. In the past, when the gross margins exceeded the 30%, production-increasing investments were made. According to Robert Morris Risk Management, the median gross profit for steel foundries with sales of \$10 to 25 million recently peaked in 2006 at 26.5%.

Another approach to investments in added production was to consider alternative investments. Since the discount rate selected or interest rate expected is used to evaluate investment returns, it is common to use a 5% rate to evaluate alternative investments. With investment returns prior to 2008 showing strong results,



investors expected more like 7%. With the current interest rates, investors expect more like 3%. According to Robert Morris Risk Management, the median operating profit for steel foundries with sales of \$10 to 25 million ranged from 2.8 to 8.0% from 2002 to 2007. In the past, when operating profits exceeded expected alternative investments returns, additional productive investments were made.

One way steel foundries have been valued in the past is as a multiple of their total sales. A typical foundry value was one half the annual sales. This valuation was the result of the desire for the ROI to meet a goal that was higher than the operating profit. According to Robert Morris Risk Management, the median ratio of sales to total assets for steel foundries with sales of \$10 to 25 million ranged from 1.8 to 2.9 from 2002 to 2007. In the past, added production investments are made when the investment will support the sales required.

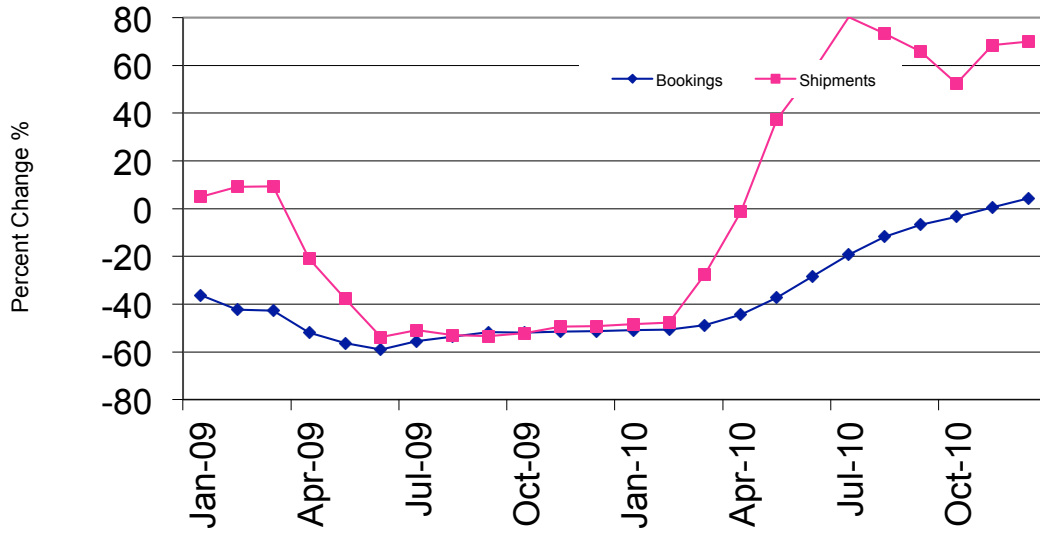
Added productive investments in the past have been made when the cost of adding the investment is less than the needed return. In surveying several approaches it is reasonable to conclude that investments were made when the cost of adding a unit of production was less than the unit price of the goods sold.

*Raymond Monroe*

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

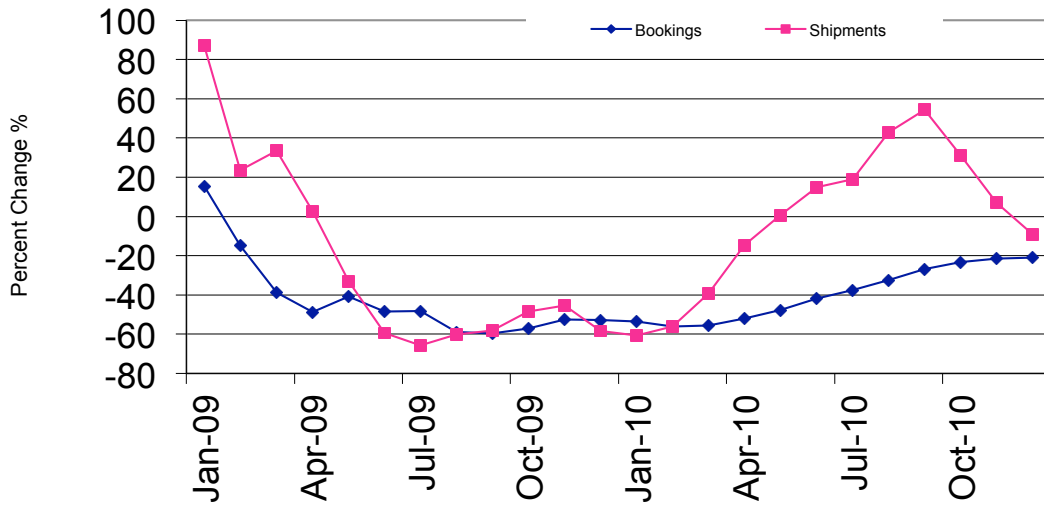
<b>SFSA Trend Cards</b> (%-12 mos. Ago)	12 Mo Avg	3 Mo Avg	Dec	Nov
<b>Carbon &amp; Low Alloy</b>				
Shipments	41.4	69.9	56.2	94.9
Bookings	-19.9	4.3	7.6	5.1
Backlog (wks)	8.3	8.3	9.0	8.0
<b>High Alloy</b>				
Shipments	5.2	-9.0	0.0	5.2
Bookings	-36.3	-21.0	-19.8	-20.8
Backlog (wks)	7.3	9.0	10.0	8.0
<b>Department of Commerce Census Data</b>				
<b>Iron &amp; Steel Foundries (million \$)</b>				
Shipments	1,256.3	1,308.7	1,356	1,302
New Orders	1,277.6	1,336.3	1,376	1,296
Inventories	1,891.4	1,827.7	1,827	1,826
<b>Nondefense Capital Goods (billion \$)</b>				
Shipments	63.0	65.9	67.6	65.3
New Orders	64.3	66.7	63.2	65.6
Inventories	131.5	135.8	137.1	135.7
<b>Nondefense Capital Goods less Aircraft (billion \$)</b>				
Shipments	59.0	61.8	63.1	61.6
New Orders	60.2	64.4	66.8	64.2
Inventories	100.1	103.6	103.7	103.8
Inventory/Orders		1.61	1.55	1.62
Inventory/Shipments		1.68	1.64	1.69
Orders/Shipments		1.04	1.06	1.04
<b>American Iron and Steel Institute</b>				
Raw Steel Shipments (million net tons)	6.9	6.8	7.1	6.5

### Carbon & Low Alloy Casting Market Trends



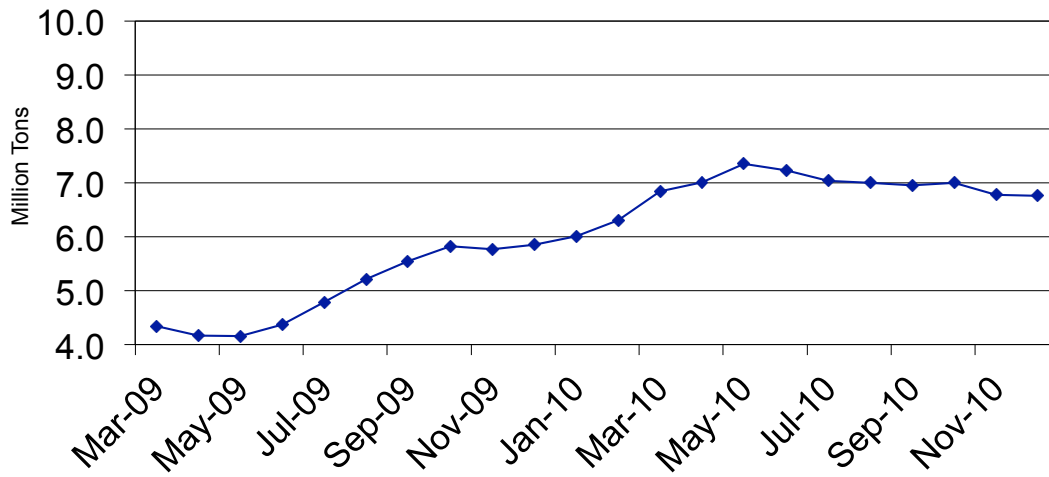
SESA Postcards

### High Alloy Casting Market Trends



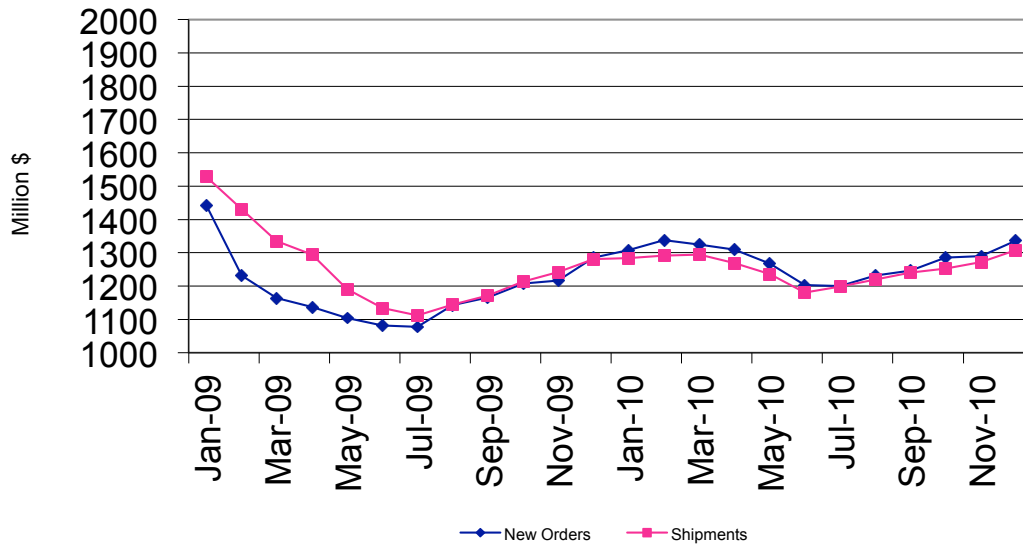
SFSA Postcards

### Raw Steel Shipments 3 month average



AISI Data

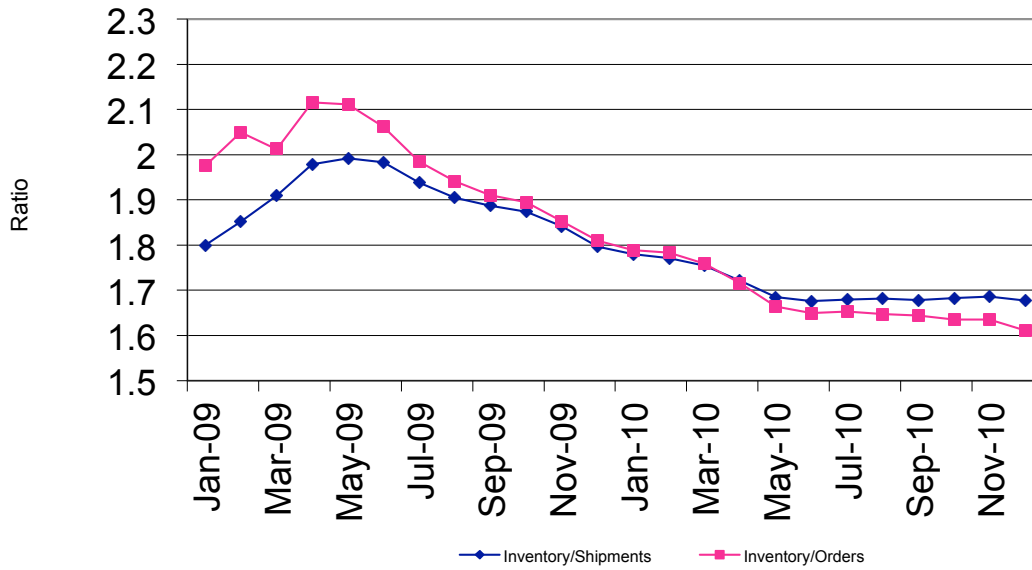
### Iron and Steel Castings 3 month average



SFSA

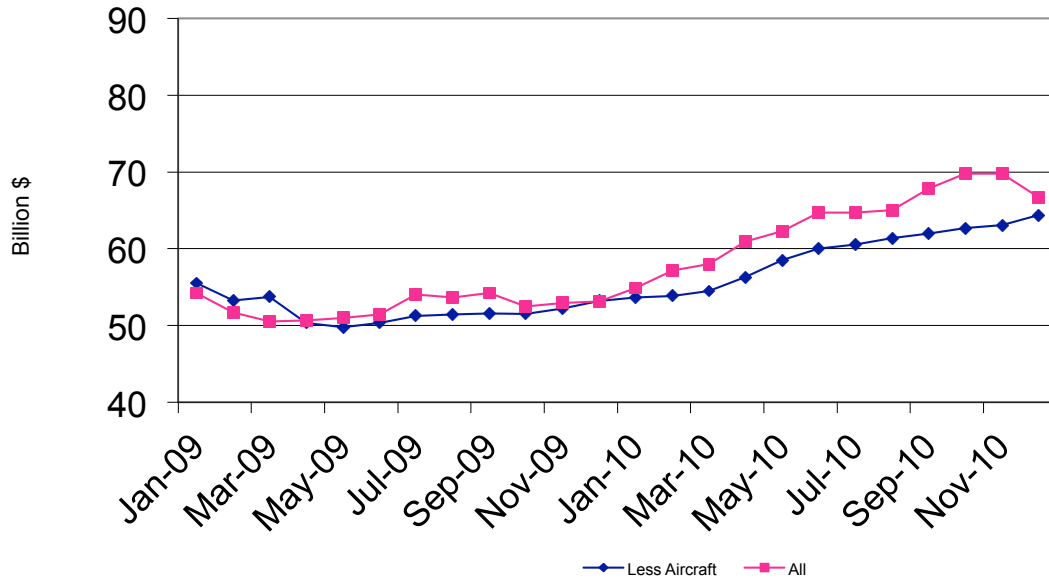
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### Nondefense Capital Goods less Aircraft 3 month average



Department of Commerce

### Nondefense Capital Goods New Orders 3 month average



Department of Commerce