



# SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication

serving SFSA steel casting industry Members

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## January — 2006

### Casteel Commentary Highlights:

Happy New Year 2006. This month's Casteel Commentary makes predictions for 2006 ahead. Business will remain strong but we will continue to face challenges like staffing and materials cost and availability.

### Carbon and Low Alloy Research Committee

The SFSA Carbon and Low Alloy Research Committee will be meeting in Iowa City on February 23, 2006. If you are interested in attending or joining the Committee, contact Malcolm Blair.

### Forecast Update

Strong market conditions led the Marketing Committee in their December meeting to update the Forecast. As you can see in the table, market demand should be even stronger than earlier projected.

Market	Tons	% Change
Railroad	669,000	15
Mining	148,000	15
Construction	129,000	15
Trucks	26,000	4
Valves	46,200	12
Pumps	13,500	12
Oil Field	21,700	11
Military	12,400	8
Others	75,900	13
<b>Total</b>	<b>1,141,700</b>	<b>14.5</b>

### Specification Note

A common confusion among some customers is the impression that there is a commercial standard for steel casting quality. Commercial quality casting is a slang term for meeting the normal expected steel casting quality available in the marketplace. While as a commercial matter in communication it may be useful as a purchase requirement it is not a meaningful specification. Customers may interpret this commercial quality requirement to include radiography, visual inspection, and magnetic particle. It is necessary to respond when a customer specifies "commercial quality" with either the statement that the only commercial requirements are those specified in the purchase agreement and no added requirements are included in commercial quality or to refer to ASTM A781. A781 includes the common technical requirements for most of the ASTM steel casting standards. Its main requirement is a visual inspection. In any case, allowing an undefined requirement in a purchase agreement is an invitation to trouble.

### Innovation

One member pointed out to me that we may not be correctly calculating the alloy costs for casting. Most know that it is not merely the alloy shipped with the casting but needs to account for the melt loss, typically 9% of the pour weight. Many do not realize that in cleaning more alloy is lost. In grinding and arc-air, alloy is also lost. To estimate this loss it is necessary to know the pour weight and calculate melt

loss, the cast shipped weight to calculate alloy shipped, and the returns weight to calculate the alloy recovered. The pour weight minus the shipped weight minus the returned weight is lost weight in cleaning. This could be in excess of 10%. Grinding and arc-air are also alloy losses and need to be considered in alloy costs.

## **Market News**

Demand for steel castings remains strong and should continue throughout 2006. There will undoubtedly be some markets that are slower but overall, steel casting producers should not suffer from a drop in demand. The SFSA trend cards show strong bookings for October, in excess of 20% over an even higher increase last year.

Iron and steel casting new orders and shipments are strong as reported by the Dept. of Commerce. Steel shipments as reported by AISI rebounded from lower levels in July and continue to recover. There is some evidence that added capacity especially in China will put downward pressure on steel goods in the global market place.

Orders for nondefense capital equipment remain strong and are larger than shipments pointing to continued expansion. Inventories remain stable while the pace of new orders and shipments moderated in the past few months. Higher prices for energy and materials will support demand for new and replacement capital equipment but may lead to a slowdown in the global economy. This could cause some markets to remain strong while others soften in the coming year.

## **Casteel Commentary**

Last year in 2005 we made seven prognostications.

### **1. Demand will slow some in the first half of the year but end strong. We will not be able to satisfy the market demand for steel castings.**

There was no slow start. In 2005, the market growth rate moderated at year's end but grew continuously. Plants that were still uncertain and not yet strongly booked saw significant increases. While not all the capacity is fully booked, increasing production in many sectors is the number one challenge.

China remains a significant concern for both equipment demand and competing supply. A good summary of the relationship between the U.S. and China is available at <http://www.uscc.gov>. The following is from Steel Guru, January 2, 2006:

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#### **China's GDP up 9.8% in 2005 - NDRC**

*02 Jan 2006, Monday*

China's economy grew 9.8% in 2005, said Ms Ou Xinqian vice minister of the National Development and Reform Commission NDRC. The commission's previous estimate for last year's economic growth was 9.4%. This figure was adjusted according to the newly-revised GDP in 2004.

China last month revised the size of its economy in 2004 by 16.8% to 15.99 trillion yuan (\$1.93 trillion), with over 90% of the newly-added 2.3 trillion yuan from better data about the services sector.

Ms Ou revealed the figure at a meeting on the coal supply and demand. She said China's CPI remained within 2% in 2004 and the fixed assets investment grew 25%.

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**2. We will be limited in many markets by our capability and capacity constraints pushing up profits and production. New plants and capacity will be planned. Existing plants will begin to make a few major equipment purchases.**

It was true that in many markets, steel casting supply was a concern and a limit on production. Even with sold out facilities the uncertainty of the market and the recovering financial conditions limited the ability to make capital investments. These conditions are likely to limit the funds available for investment for at least the next year. For this reason, even with robust market conditions, only limited capital investment will be possible.

**3. The lack of supply from North American producers will be exacerbated by a return of significant business from overseas. The lack of consistency will be unacceptable. Late deliveries, fluctuating quality, and the lower dollar will bring home business that looked gone forever.**

While large OEM customers continue to express concern over the cost of domestic supply and are actively pursuing overseas producers, demand for domestic sources is strong. In higher volume capacity limited markets like railroad castings, overseas supply is being developed and utilized. In smaller volume quality sensitive larger castings, domestic supply remains overbooked. In other markets like long steel products, worldwide excess capacity will exert downward pressure on pricing, in capital goods markets involving large equipment, demand should remain strong for domestic supply for the entire year. In many cases firm orders and build schedules are already in place. The only question in these markets is how rapidly production can be increased within the constraints of the existing plants to increase supply.

**4. Salaries will begin to rise for qualified people as we bid up the salaries to maintain the needed high levels of production. We will for the first year in 20 years hire some new graduates to train for our needs.**

The two major limits on increased production is the uptime and capacity of the existing plant and the lack of a supply of knowledgeable and skilled people. Several plants hired skilled trades people for maintenance to improve uptime, paying market wages in excess of their current wage structure. Several plants also became more aggressive in intern programs and hired young recent graduate engineers. While not yet a crisis, locating successors for senior leaders will remain an acute problem. Wages for qualified candidates are likely to be bid up reflecting the limited supply.

**5. We will continue to face pricing pressure to maintain availability of raw materials. Producer price index rise depends on many nonmaterial inputs so the inflation will be muted but increase faster than expected. The ability of suppliers like us to raise prices after 20 years of stable and declining prices will challenge the OEMs.**

After volatile and sharply increasing prices, prices for many materials have stabilized somewhat. Many material prices moderated during the year but have recently again increased. Volatility and strong global demand are likely to continue to support prices of materials. This makes the costs of steel casting production uncertain but also creates demand for capital equipment for production of these materials. Steel casting price increases are somewhat more moderate than other materials since labor and other costs are a higher percent of the total cost and have not yet seen the volatility of rapid increases.

**6. Currency valuation will become a political issue because of its affect on trade. Free trade requires market based currency values and the free flow of capital investment internationally. Countries like China that peg their currency and restrict foreign direct investment will not be able to sustain this policy.**

A modest move by China to "float" its currency and move it from a dollar peg to a basket of currency, allowed China to defuse the political pressure that was building against it. While they have not made any substantive change, the recovery of manufacturing activity, the commitment of policymakers to free trade, the indifference to manufacturing and the other issues in the relationship with China makes it unlikely that any changes will be advocated strongly by the U.S. Slowing growth rates, structural problems, market distorting subsidies and capital investments make China subject to a large economic set back. Rising costs for transportation and materials makes global supply less attractive. Strong relatively price insensitive demand for larger capital goods makes domestic supply preferred.

**7. Manufacturing issues will not be addressed as the strong economy improves the employment picture, companies are profitable, and politics focus on Iraq and Social Security reform.**

There remains little support or public policy interest in manufacturing. With improved economic conditions, attention has moved on to Iraq, economic news and scandal. With this as an election year not much will get done likely.

#### **Predictions for 2006**

- 1. Business for steel foundries will remain strong. New products and new processes will begin to be developed. Some equipment purchases will be made but the lack of capital and continued volatility will limit capital investment.**
- 2. Raw materials and energy prices will remain high and volatile and inflation in general will be more troublesome than expected. This will likely lead to continued increases in interest rates. Price increases will become a normal part of business again.**
- 3. The growth in the consumer economy will slow because of higher material and energy prices.**
- 4. The lack of available and qualified workers will begin to replace unemployment as a concern. Staffing will be a major problem at all levels above direct labor.**
- 5. While shortages, higher prices, and defense needs will cause concern among some policymakers about manufacturing, no major new policies to improve competitiveness or reduce regulatory burden will occur.**
- 6. China and the US economy are tied in unintended ways and will see some small adjustment. Some step will be made in trade and currency to try to avoid political damage in this election year. Iraq will recede as an issue as troops are drawn down and conditions improve. Iran will be a problem with its weapons program and political instability.**

# STEEL FOUNDERS' SOCIETY OF AMERICA

## MEETINGS CALENDAR

### 2006

January  
6

T&O Committee Meeting, Chicago, IL

February  
23

Carbon & Low Alloy Research Committee Meeting, Iowa City, IA

May  
16

Specifications Committee Meeting, Toronto, Ontario

September  
9/12

SFSA Annual Meeting, Eldorado Hotel, Santa Fe, NM

December  
13/16

National Technical & Operating Conference, The Drake Hotel, Chicago, IL

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

**SFSA Trend Cards** 3 Mo Avg                      Oct                      Sep  
(%-12 mos. Ago)

**Carbon & Low Alloy**

Shipments	27.4	30.0	18.9
Bookings	20.5	19.0	21.5

**High Alloy**

Shipments	-2.9	-0.6	-5.3
Bookings	31.2	94.5	-9.9

**Department of Commerce  
Census Data**

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

Shipments	1,691	1,719	1,693
New Orders	1,671	1,721	1,734
Inventories	2,043	2,021	2,038

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

Shipments	66.1	67.3	64.5
New Orders	71.0	71.8	67.5
Inventories	112.4	112.6	112.7

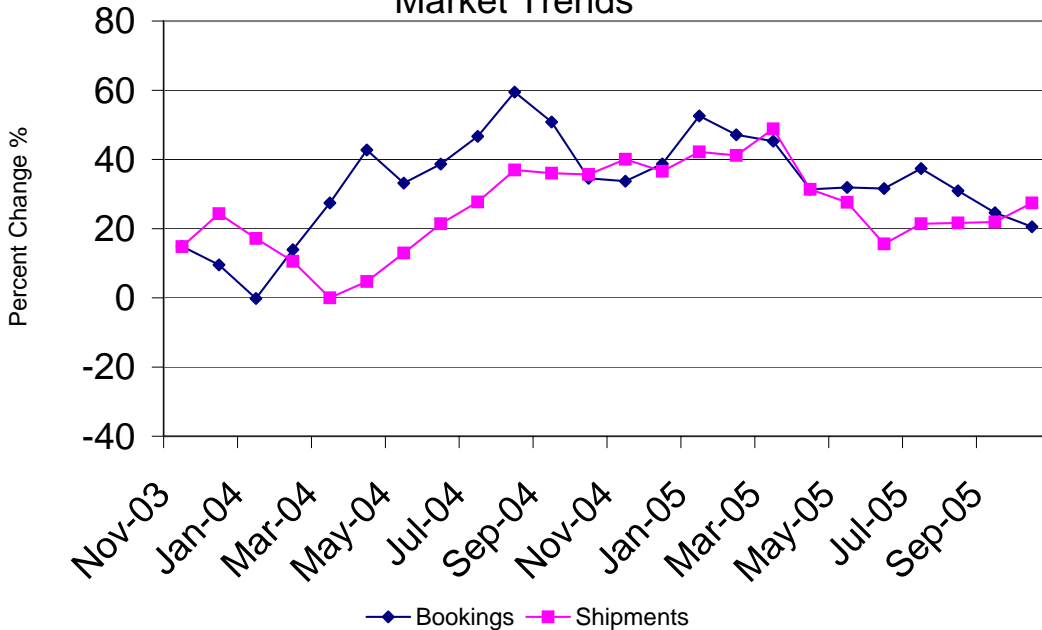
**Nondefense Capital Goods  
less Aircraft (billion \$)**

Shipments	62.0	62.7	61.5
New Orders	63.6	63.7	63.1
Inventories	94.4	94.3	94.5
Inventory/Orders	1.48	1.48	1.50
Inventory/Shipments	1.52	1.50	1.54
Orders/Shipments	1.03	1.02	1.03

**American Iron and Steel Institute**

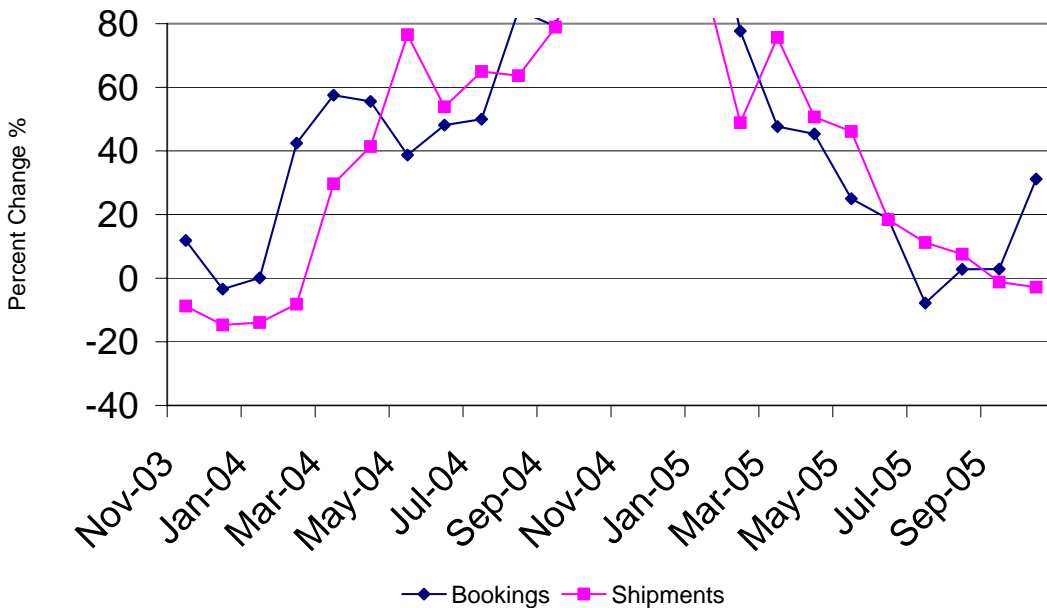
Raw Steel Shipments (million net tons)	8.8	8.8	8.6
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### Carbon & Low Alloy Casting Market Trends



SFSA Postcards

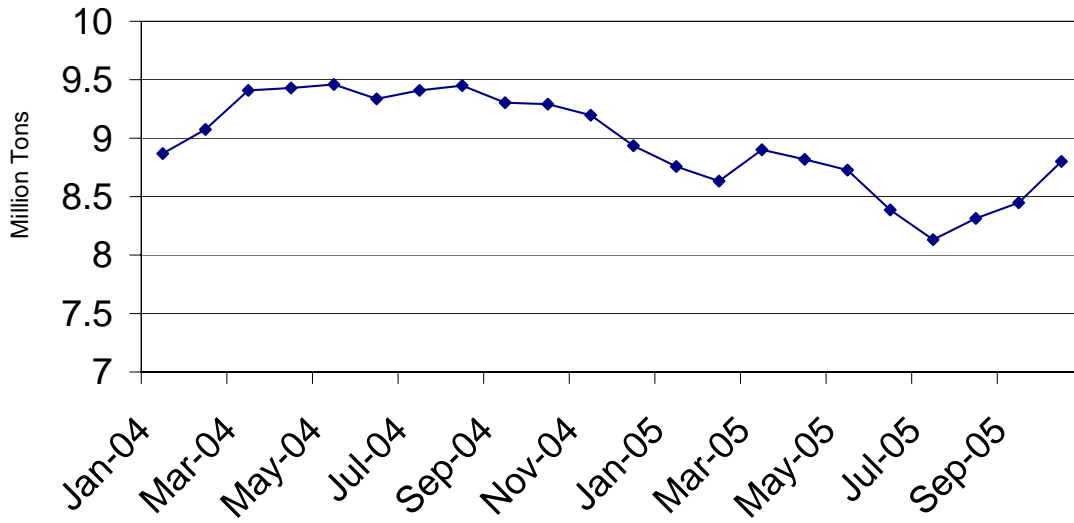
### High Alloy Casting Market Trends



SFSA Postcards

## Raw Steel Shipments

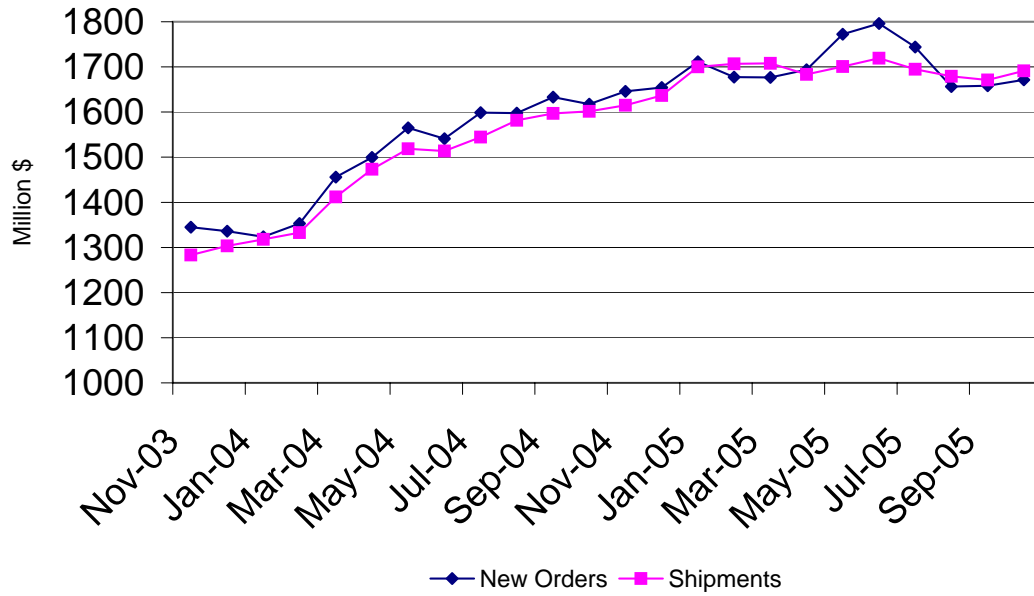
3 month average



AISI Data

## Iron and Steel Castings

3 month average

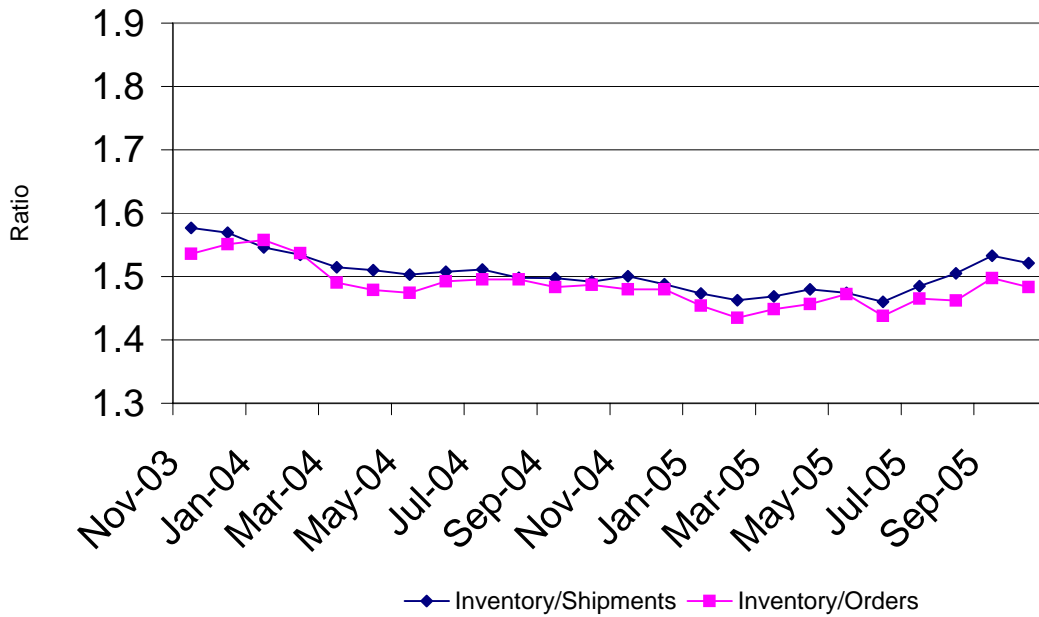


SFSA



### Nondefense Capital Goods less Aircraft

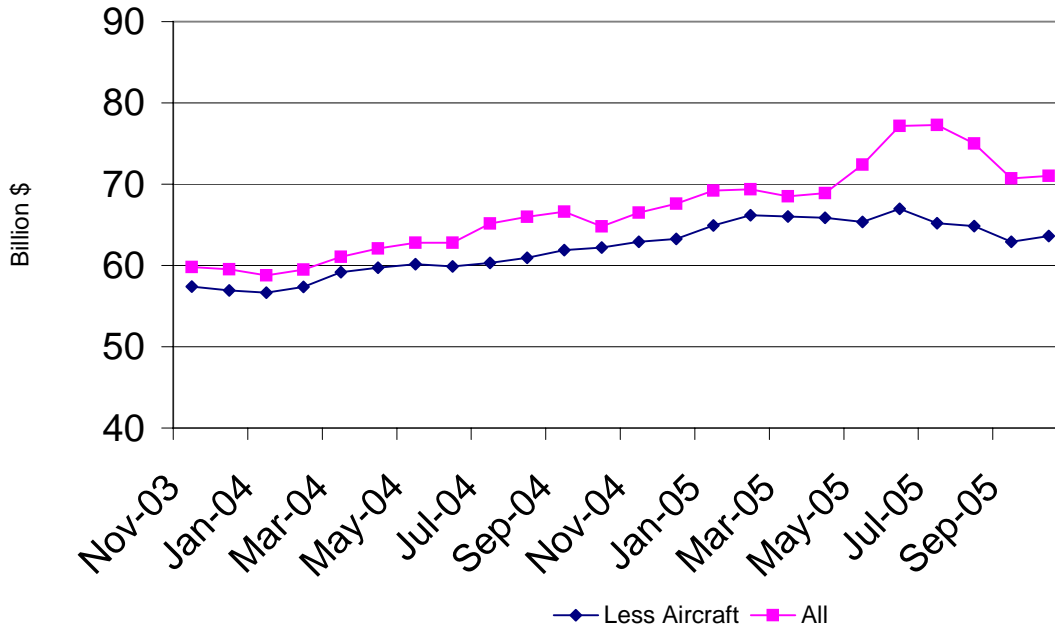
3 month average



Department of Commerce

### Nondefense Capital Goods New Orders

3 month average



Department of Commerce