SFSA CASTEEL REPORTER

Steel Founders' Society of America

a publication serving
SFSA steel casting industry Members

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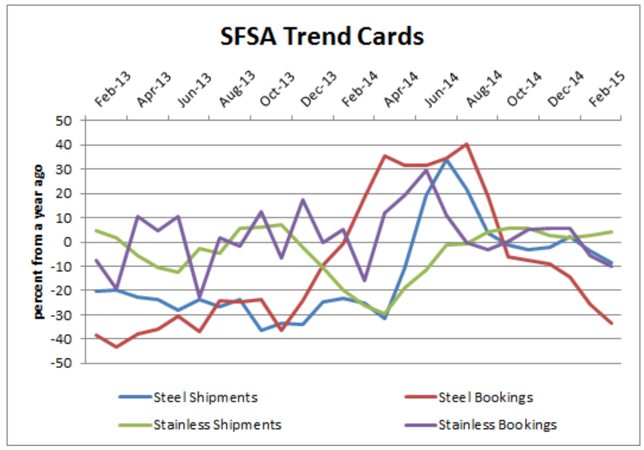
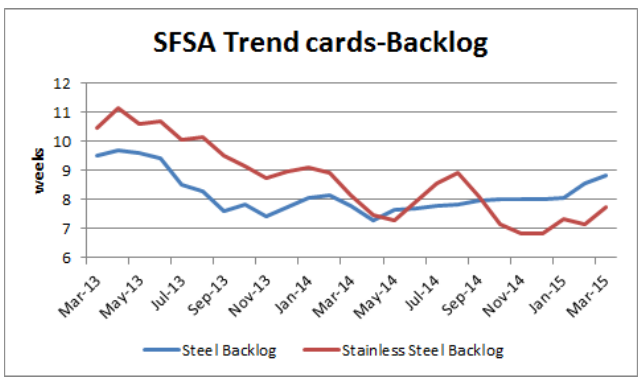
Casteel Commentary

I apologize for a long rant on environmentalism and our need to respond. I do think we need to publicize our value by showing not only are we safe and clean but that our production is making the world a better place for all of us. Let me know your thoughts!



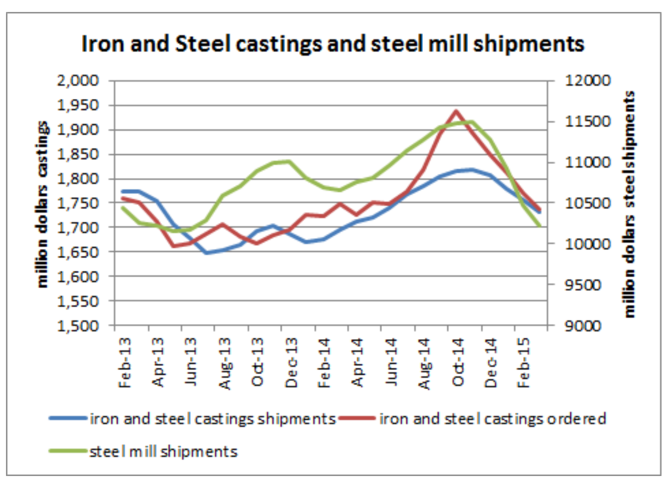
Market News

Bookings and shipments of steel castings have been decidedly down for 2015. While the consensus forecast for the US economy is for a strengthening recovery, the indicators most associated with steel casting production are grim. Steel mill production is down since August 2014 from an annual rate of around 100 million tons to 90 million tons in May 2015 for a projected decline in steel castings of 20% in that period.

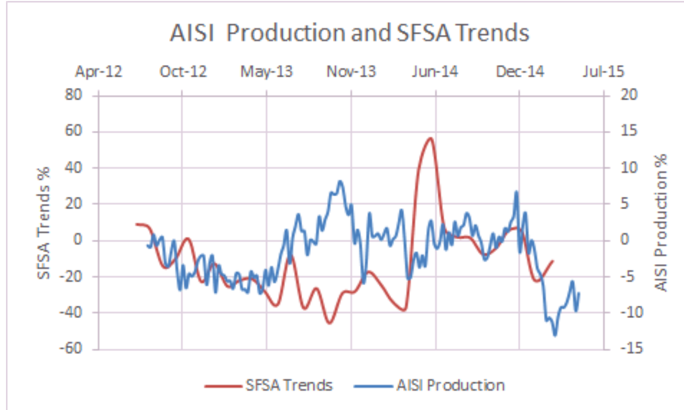


Steel casting sales are closely correlated to the price of oil for example, with an agreement of 79%. Oil prices in the same time period from over $100 a barrel to around $60 a barrel. This would suggest a decline in that period for steel castings sales of over 30%. Copper price is also highly correlated with an agreement of 68%. The decline in copper prices has been less dramatic and would suggest a decline in steel casting sales of only 5%. Scrap prices are another correlated indicator of steel casting sales with an agreement of 69%. Scrap prices suggest a decline in steel casting sales of 20%.

It would seem from these indicators that the steel casting market today is off from relatively slow market conditions of 2014 by an overall 20%. The SFSA trend survey shows a sharp decline in bookings and a smaller decline in shipments. Back log reported has remained relatively stable for the past year around 8 weeks.



Steel casting sales is also closely related to steel mill new orders with a correlation agreement on an annual basis of 80%. Steel mills new orders have fallen sharply from $11,500 million in monthly sales to $9,300 million. Steel mills new orders suggest a decline of 28% for steel castings. As can be seen not only are steel mill products down, the combine iron and steel casting sales are down by a similar amount.

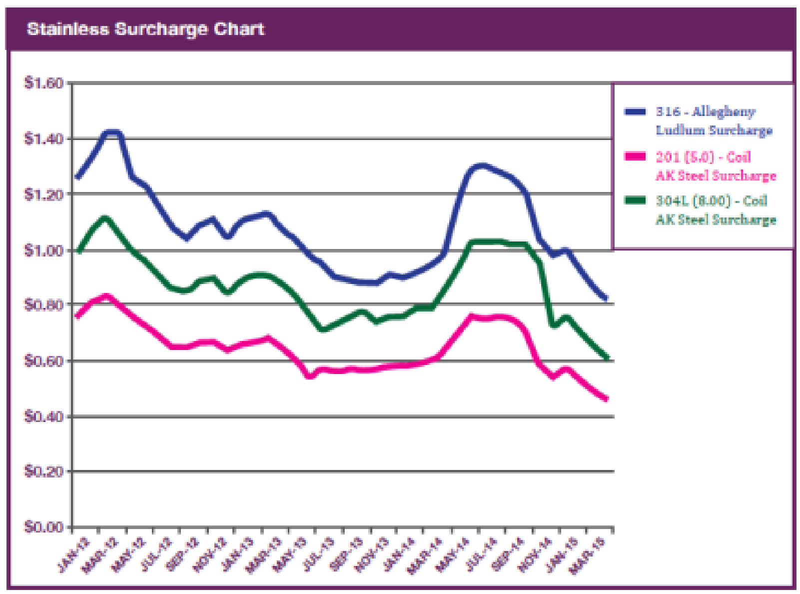


Non-defense capital goods new orders less aircraft has shown a similar but smaller decline since late summer 2014. Orders for March 2015 are running below shipments signaling a likely continuation of declining demand.

The weekly AISI production percent change shows many of the same trends we see in our SFSA trends report. SFSA trends show lower levels of demand in 2013 with a sharp increase in early 2014 which may be the result of the slowdown in mining products. The drop in steel production for the first half of 2015 suggests continued slow market conditions for steel casting producers.

From Metal Miner, Monthly Metal Buying Outlook May 2015, the demand picture for stainless is for downward pressure on prices. This reflects a buildup in inventory suggesting slowing demand.

All of these numbers indicate that market demand is low for steel casting products and this is likely to continue for most of the year 2015. Market conditions could change quickly and abruptly at any time. The need for capital investment in infrastructure is likely to remain a significant need but the ability to invest is tempered by current economic conditions. The continued low interest rates eliminate any sense of urgency to make the investment and the poor financial condition of government entities makes the public investments difficult. The misallocation of investment due to ZIRP makes needed investments in infrastructure non-viable. It is expected that after an adjustment in asset prices to reflect there market worth and a return to normal interest rates, demand for capital equipment will be strong. This may happen by the end of 2015 but is more likely to occur in 2016.



STEEL FOUNDERS' SOCIETY OF AMERICA
BUSINESS REPORT

SFSA Trend Cards (%-12 mos. Ago)	12 Mo Avg	3 Mo Avg	March	February	January
Carbon & Low Alloy					
Shipments	4.2	-9.4	-11.3	-21.9	5.1
Bookings	5.1	-30.6	-25.0	-37.1	-29.7
Backlog (wks)	8.1	8.9	9.0	9.5	8.2
High Alloy					
Shipments	-0.6	1.2	-4.5	0.0	8.0
Bookings	7.1	-9.9	-10.0	-29.7	10.0
Backlog (wks)	7.6	7.8	8.0	7.4	8.0
Department of Commerce Census Data					
Iron & Steel Foundries (million $)					
Shipments	1,775.2	1,742.0	1,763	1,725	1,738
New Orders	1,812.4	1,666.7	1,526	1,662	1,812
Inventories	2,264.4	2,275.0	2,283	2,282	2,260
Nondefense Capital Goods (billion $)					
Shipments	79.0	80.0	79.8	80.1	80.1
New Orders	86.1	79.2	80.7	77.6	79.2
Inventories	184.3	186.6	186.8	186.6	186.5
Nondefense Capital Goods less Aircraft (billion $)					
Shipments	69.7	69.8	69.7	69.9	69.8
New Orders	71.0	69.1	68.7	68.6	70.1
Inventories	122.3	122.7	123.1	122.8	122.4
Inventory/Orders		1.8	1.79	1.79	1.75
Inventory/Shipments		1.8	1.77	1.76	1.75
Orders/Shipments		1.0	0.99	0.98	1.00
American Iron and Steel Institute					
Raw Steel Shipments (million net tons)	8.1	7.3	7.3	6.9	7.8

Casteel Commentary

Compared with earlier generations, even our parents and grandparents time, we live like kings. We have the longest life expectancy, the cleanest environments, the easiest jobs, the most leisure time, the most comfortable cars, the largest homes, the best toys, the most advanced phones, the most powerful personal computers, etc.

Our smart phone is a better computer than the Apollo Guidance Computer (AGC):

	Apollo Guidance Computer	Average new Smartphone	
RAM size:	4KB	~4GB	1,000,000X larger
RAM speed:	8MB/s	6,400MB/s	800X faster
Weight:	70 pounds	100g	3,000X lighter
Cost:	$150,000	$500	300X cheaper
Power Requirements:	70W	1.3W/core	50X more energy efficient

And yet…

We are increasingly afraid of less and less risk. We avoid trans fats, gluten, salt, sugar, caffeine, etc. We use a hand sanitizer to avoid infection. We get a flu shot to avoid getting sick. We ban smoking and avoid second hand smoke. We seem to think that we can live healthy lives forever if we avoid toxins and have the right diet. In the face of massive and convincing scientific studies that show low risk we remain afraid of things that poise no measurable risk to our health or lives.

Our privileged life depends on the benefits of modern technology. This technology depends on the materials and equipment made possible only by traditional manufacturing like our steel foundry industry. Bridges, locomotives, nuclear power plants, oil platforms, steel plate, etc. build the society, the economy and lifestyle we enjoy. We need steel foundries to have our current easy and comfortable life.

We have failed to educate and communicate to our people the essential need for manufacturing and technology to support the freedom and ease we have. We have allowed others to sensationalize the risks remaining when we live in the safest and healthiest of times. Many people believe the world is in worst shape than ever when every analysis shows we are better off than ever.

Why this diatribe?

Well, I participated in a public meeting where a member was seeking a permit to operate and the regional authority had proposed significant >50% reduction in production to reduce their environmental impact. The workers, suppliers, and some of the neighbors spoke out that the plant was a valued and necessary asset of the community and that the loss of jobs would hurt.

Some neighbors and advocacy groups wanted the restrictive conditions because that would reduce the local pollution. They believed that even with the reductions the plant was still damaging the environment and endangering the health of local citizens.

The support of the restrictions was clearly not based on the desire to manage the environmental impact but to gain the lowest level of production and impact possible. The goal was not to balance the needs for the products made by the foundry and the economic benefits but to eliminate the plant from the neighborhood.

As an industry, our response has been typically to argue that we are important economically to the community in jobs and suppliers, that we are a recycling industry and therefore a positive to the environment and that we are in compliance with all our permits and environmental regulations. I think we need to rethink this strategy moving forward.

It seems to me that we have failed to publicize to our neighbors and friends, what our plants actually make and do. We need to take an active role in showing how our plants are making the castings essential to the prosperous and safe lives we live.

I think we need to stop hiding supposing that we can fly under the radar and avoid scrutiny. We should regularly invite the community in to see what we are doing. We should host high school and community college tours to let young people see our production and products. We need to create press releases that highlight our products and how we are benefitting the world with our production.

We are unlikely in any case to convince the activist that are dedicated to de-industrialization or the NIMBY neighbors that want the benefits but not the proximity. We can and should convince the vast majority of people that are just uninformed. If you watch the movies or listen to the news, you get the picture of manufacturing that we are serial and heartless polluters skirting the law to maximize our profits with no love for or concern for the environment or people. You would not know that manufacturing is the reason for our comfortable and safe life style. You would not know that in a simple aragrian life, you would be cold, hungry and breathe benzene and other toxins as you huddled around a smoky fire trying to stay warm.

Every time we make a recognizable product or receive a new order for from an important company, we should let our community know how we are making the world a better place.

Raymond

SFSA Fall Leadership Conference

The Board of Directors of the Steel Founders' Society of America invites you to attend the Fall Leadership Meeting September 12-15, 2015. The meeting will be held in Washington D.C. with opportunities to connect with lawmakers as well as enjoy our nation's capital. We look forward to your attendance and participation in this educational and networking meeting and welcome the opportunity to share new developments in the steel casting industry with you. The meeting will include industry business sessions with round table discussions and presentations from:

- Richard Brandt, Iacocca Institute-Lehigh University - Globalization Going Backward
- Joe Trauger, National Association of Manufacturers - Workforce Development, Lobbying, Healthcare
- John Anton, IHS Global - Steel Markets Update
- Ron Lorentzen, International Trade Administration - Manufacturing Trade Issues
- Max Schumacher, German Foundry Association - German Foundry Business Climate and Trends

Registration is currently being offered at a discounted rate through June 1 - https://www.sfsa.org/meetings/fall15. Reservations may be made through the following link https://www.loewshotels.com/madison/Steel-Founders-Fall-Leadership-Meeting?corpcode=SFS911

Tentative Schedule Events

Saturday 9/12

8am	Executive Committee Meeting
12pm	Group Outing (optional)
6:30pm	Welcome Reception

Sunday 9/13

8am	Board of Directors Meeting
12pm	Group Outing (optional)
6:30pm	Dinner

Monday 9/14

8am	Business Session
9am	Spouse Breakfast
1pm	Group Outing (optional)
6:30pm	Dinner

Tuesday 9/15

8am	Business Session
9am	Spouse Breakfast
6:30pm	Reception

We look forward to seeing you in Washington DC!

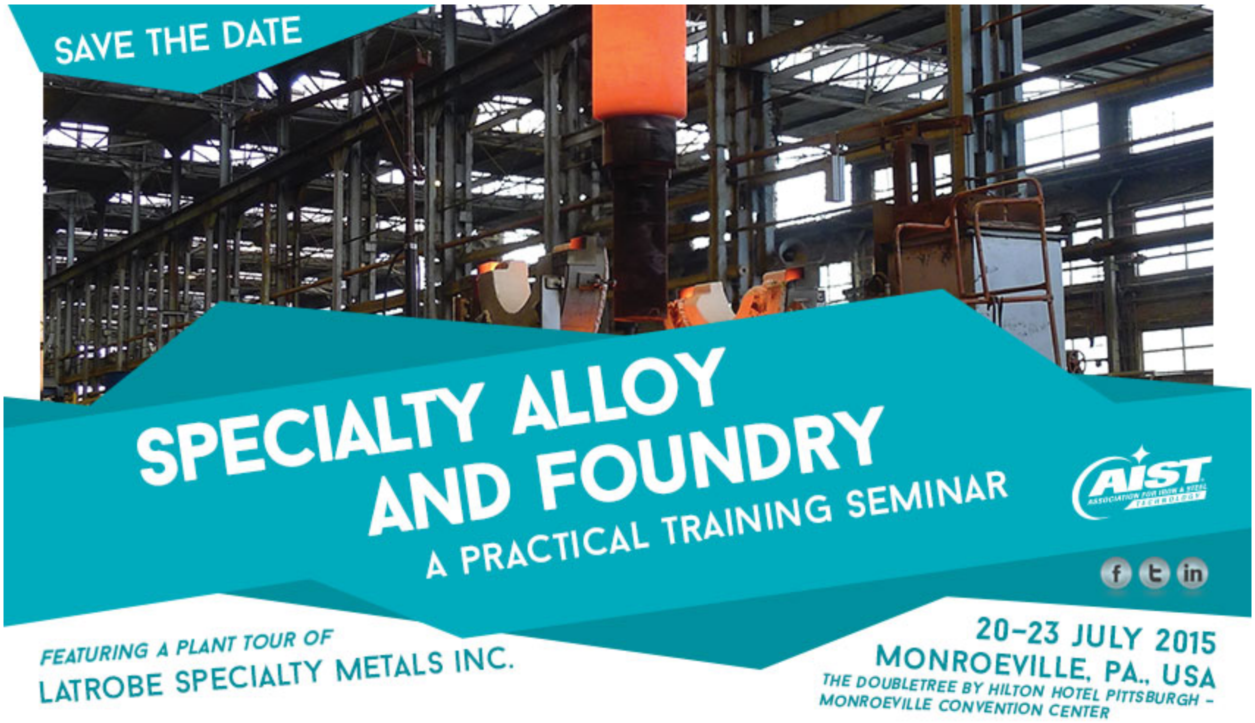
SFSA Spring Leadership Meeting

The SFSA Spring Leadership Meeting was held on May 6th in Rosemont, IL. The meeting kicked off with an industry roundtable session followed by a full day of presentations. If you were not able to attend, we have made the presentation slides available to all members at https://www.sfsa.org/meetings/spring15.php.

AIST Training Seminar and Plant Tour

AIST has announced a two-and-a-half-day seminar that provides an overview of melting, refining, and solidification in stainless and specialty steel mills and foundries. On the first two days, products, process cycles and safety will be discussed. Alloy chemistry, material selection, induction furnace melting, refractories, refining, ingot casting and remelting will also be covered in detail. A steel mill and a foundry will be toured on the final half day.

This seminar is geared toward the mill or foundry meltshop manager, engineer, operator, or supplier who needs an introduction to stainless and specialty steel melting, refining, ingot casting and remelting.



SFSA Research Review

The SFSA Research Review will be held on July 27-29 in Des Plaines, IL. As with the past couple of years, the review will feature research from both the Carbon & Low Alloy and the High Alloy research programs. The meeting offers an opportunity for industry to help steer the society's research. Researchers will present their portfolio of projects with more time to get into the detail and have discussion.

University of Iowa has almost completed their work on riser sleeves, which demonstrates that for the most part there is minimal difference between the different sleeve types and manufacturers. Based on this, one would be best served selecting a riser based on cost. UI is developing MAGMA datasets for the sleeves and these will be made available to members similar to the alloy datasets that were compiled. Attendees at the Review will hear first-hand the conclusions of this project.

Information about location and registration can be found at https://www.sfsa.org/meetings/rr15.php

Specifications

The Specification Committee is chaired by Elaine Thomas from Bradken-Tacoma and met in May at the ASTM A01 meeting. Ron Bird, Stainless Foundry (retired), will be presented with an ASTM recognition award at the November ASTM A01 meeting. The committee discussed the increased requirements of more stringent specification and certification by customers, such as API (20A), NORSAC, ABS and ASME; and changes for the new revision of ISO 9001. One challenge is many customers no longer understand the requirements their purchasing documents state. The committee proposed utilizing a survey to identify concerns and setup task groups to work the challenges as a team. The committee also discussed doing a panel discussion on specs at the 2015 T&O Workshop. Items such as sub-size Charpy, hardness testing and corrosion testing ILS continue to be worked. Discussion was held on developing new, draft standard in ISO for performance radiography.

Building Construction

The North American Steel Construction Conference was held in March. SFSA co-presented with Bradken on steel castings as a prelude to the development of the AISC guide for using steel castings in building construction. The conference had over 4000 attendees, which broke an all time high by at least 15%. SFSA is pursuing a change to AWS for welder qualification, which currently does not cover casting and therefore imposes an undue burden. Opportunities for steel castings continue to remain strong in this market. Vector Praxis approached SFSA to learn more about utilizing steel castings for their modular design buildings. This is the perfect example of castings being the nodes in a set of Tinker Toys.

SFSA Wiki News

We have added a considerable amount of reference materials to the wiki (http://wiki.sfsa.org) this month. Recently added materials include PDF copies of all of the papers presented at the Technical & Operating Conferences from 1983-2014, the Steel Foundry Facts (papers presented at earlier T&O Conferences), and an archive of the Journal of Steel Castings Research, which was published from 1955 until 1981. This is in addition to the SFSA Research Reports, Steel Castings Handbook content, and other SFSA publications that we added earlier this year.

The wiki is available for use by all SFSA members. If you haven't explored the SFSA wiki yet, visit http://wiki.sfsa.org/index.php/Get_an_account and get started.