



SFSA CASTEEL REPORTER

Steel Founders' Society of America

a publication serving
SFSA steel casting industry Members

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Casteel Commentary

This month's Casteel Commentary looks back on the projections of 2014 and proposes some changes in market conditions for 2015. Hopefully these will stir up some thoughts that will be helpful.

SFSA Staff Resources

In the past 4 months, the SFSA has added two new positions so that we may increase resources and better serve our members. Most recently, Diana David, Research Manager and in August, Ryan Moore, Director of Programs and Services.

- Raymond Monroe, Executive Vice President - provides technical resources for SFSA members, represents steel casting industry interests and provides representation of the steel casting industry in government affairs including EPA, OSHA, and commerce and business related areas. monroe@sfsa.org, Tel: (815) 263-8240, Fax: (815) 455-5312
- David Poweleit, Vice President of Technology - provides technical resources for SFSA members, oversees SFSA's Research portfolio, supports SFSA Technical and Operating committees and groups, provides technical support to DOD programs such as AMC, and represents the steel casting industry in specifications including ASTM and ISO. poweleit@sfsa.org, Tel: (847) 846-8633, Fax: (815) 301-4139
- Diana David, Research Manager - provides technical resources for SFSA members, and oversees SFSA's Research portfolio. ddavid@sfsa.org, Tel: (815) 676-6536, Fax: (815) 676-6536
- Kelly DiGiacomo, CPA, Director of Finance & Administration - manages SFSA's financial operations. kdigiacom@sfsa.org, Tel: (815) 455-5303, Fax: (815) 455-5303
- Ryan Moore, Director of Programs and Services - responsible for program management, safety/hr and marketing committee support, and the implementation and management of various key SFSA strategic initiatives. rmoores@sfsa.org, Tel: (815) 455-7851, Fax: (815) 455-7851
- Rob Blair, Manager of Information Services - manages SFSA's AMC CSR technology transfer programs, all of SFSA's information technology and infrastructure, operates and maintains the SFSA web services and sites, and supports the National T&O Conference. blair@sfsa.org, Tel: (815) 455-5304, Fax: (815) 455-5304

Member Recognition

SFSA is proud to recognize the following people who received awards in 2014 and their member foundry who support their involvement in the society:

- Jack Lilley, MetalTek International, Frederick A. Lorenz Medal
- Elaine Thomas, Bradken, Charles W. Briggs Medal
- Kent Peaslee, Missouri University of Science & Technology, Thomas E. Barlow Award
- Zed Howell, Howell Foundry, Master Foundryman Award
- Eric Carroll, Harrison Steel Castings Company, Robert G. Shepherd Award
- Amie Perez, Bradken, Robert G. Shepherd Runner-up Award

- Derek Hughes, Harrison Steel Castings Company, Rod Duncan Award
- Jared Kerker, MetalTek International, Schumo Foundation Scholarship
- Donald Bissell, McConway & Torley, Schumo Foundation Scholarship
- Gene Baump, Columbia Steel Casting Company, Schumo Foundation Scholarship

We would like to thank all of these individuals for their service to the steel foundry industry.

Market Commentary

Steel casting shipments and bookings have fallen in October and November of 2014. Stainless castings saw a small down month in shipments November but the three-month number and the bookings are positive. Backlog is low in stainless casting but an ordinary 8 weeks in steel casting markets.

Of great concern is the continued sharp decline in oil prices along with a steady slow decline in copper prices. Positive news includes stronger overall growth in the economy and increased employment. The forecast for the coming year for steel castings was updated by the marketing committee in December and is located here for your use. Let us know if you have any questions about this forecast.

Steel sales as indicated by shipments show continued positive results through November. Orders for capital good for the past few months have stalled and are not showing growth. Iron and steel casting sales are showing a similar stall in growth.

The SFSA production index calculated from the trend data reported by members shows the strong market demand in mid-2012 with a severe slowdown of 30% total until early 2014 with a modest recovery since then.

Casteel Commentary

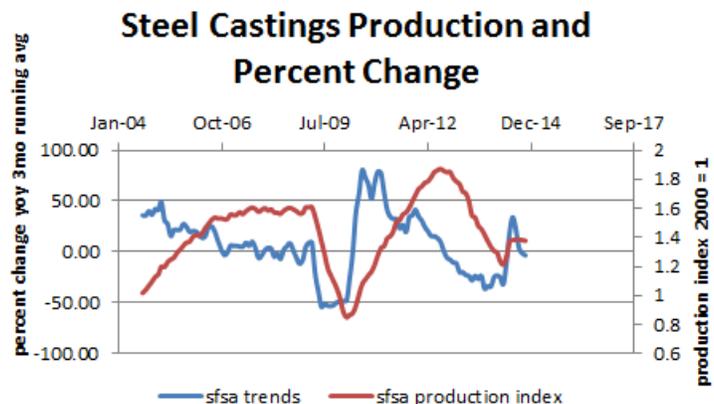
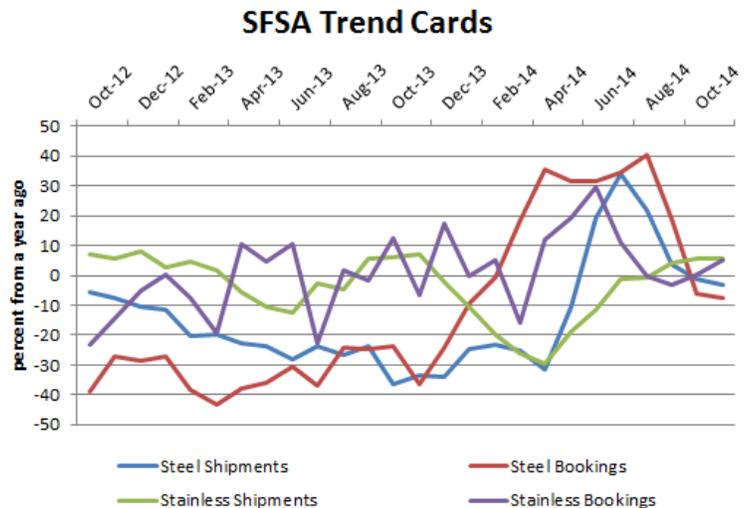
Last year's forecast:

1. **Steel casting demand will be stable with modest increases. There is some potential for downside risk especially if equity prices drop dramatically from their current valuations.**

Wrong, steel casting shipments were down about 10% from the prior year.

2. **Commodity prices will also remain stable creating continued demand for replacement parts for consumables and some equipment demands. There is also downside risk here since the developing countries may see economic slowdowns and put downward pressure on energy and mining products.**

For copper this was accurate. While demand for mining equipment remained moribund, the price of copper stayed mostly above \$3 lb. until near the end of the year. The drop had to do with reductions in demand in developing countries and increased supply responding to the high prices.



3. Energy markets will continue to be active while the price differential between oil and gas gets resolved through investment in conversions to use gas to replace oil and coal.

For oil, the price of West Texas oil remained above \$90 a barrel until October and then fell dramatically. Increased supply coupled with stagnant demand has led to a surplus of production capacity and this is having a depressing effect on prices, now around \$50 a barrel.

The prediction was wrong, instead of conversions from expensive oil to cheaper natural gas, increased oil production is bringing down the price of oil

4. Stainless products will continue to see strong markets while infrastructure to expand capacity in the CPI industry is built to take advantage of the availability and price of gas.

Large investment projects continue to be planned and are possible but they were not released this year. Stainless casting shipments fell at the end of Winter and in early Spring and began to recover toward the end of the year with an overall decline for 2014 of 10% as well.

The consensus for 2015 is for accelerating growth in the US economy. Improving employment numbers and continued low interest rates are providing an opportunity for the economy to return to a higher growth rate.

It is generally thought that growth will accelerate and this will lead to increased interest rates around the end of the year. The US economy is the strongest in the world in growth rate for developed economies. China is expected to slow in growth but continue to post 5-8% growth in their economy. This will be tempered by the need to clean up excessive leverage and mal-investment in building and industries that are not needed by the economy. Oil and copper prices are expected to bottom out this year but it may be lower than now and then recover to \$50 a barrel typical and \$3 lb.

My thoughts for 2015

- 1. Steel casting demand will be down, not dramatically, but enough to make 2015 a challenging year to run the business profitably.**
- 2. The US dollar will continue to strengthen against other major currencies making imports more competitive and making large domestic OEM's interested again in global sourcing.**
- 3. Low oil and copper prices make both the mining equipment and oil field business slower than we forecast. Steel casting sales have generally followed these prices.**
- 4. A significant adjustment in equity (stock) prices is likely with a fall of more than 20% sometime in the year.**
- 5. Rising interest rates at the yearend will result in larger projects moving forward to avoid escalation in costs on investment.**
- 6. Building construction should be up around 10% this year, improving this long dormant market.**
- 7. Stainless markets should remain steady with low oil prices allowing investment in the CPI industry in US.**

Raymond Monroe

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

SFSA Trend Cards (%-12 mos. Ago)	12 Mo Avg	3 Mo Avg	November	October	September
Carbon & Low Alloy					
Shipments	-3.9	-3.3	-4.0	-7.5	1.5
Bookings	16.0	-7.5	-3.0	-14.6	-4.9
Backlog (wks)	7.9	8.0	8.0	8.0	8.0
High Alloy					
Shipments	-8.4	5.7	-2.0	10.0	9.0
Bookings	7.4	5.2	4.5	10.0	1.0
Backlog (wks)	8.0	6.8	8.0	6.5	6.0
Department of Commerce Census Data					
Iron & Steel Foundries (million \$)					
Shipments	1,751.6	1,823.0	1,809	1,821	1,839
New Orders	1,800.8	1,910.0	1,837	1,918	1,975
Inventories	2,261.8	2,283.7	2,311	2,292	2,248
Nondefense Capital Goods (billion \$)					
Shipments	77.7	79.9	79.1	79.8	80.9
New Orders	86.4	82.5	82.5	82.4	82.5
Inventories	181.4	185.7	186.4	185.6	185.0
Nondefense Capital Goods less Aircraft (billion \$)					
Shipments	68.9	70.5	70.2	70.3	70.9
New Orders	70.6	71.3	70.6	71.0	72.3
Inventories	121.6	123.0	122.9	123.0	123.1
Inventory/Orders		1.7	1.74	1.73	1.70
Inventory/Shipments		1.7	1.75	1.75	1.74
Orders/Shipments		1.0	1.01	1.01	1.02
American Iron and Steel Institute					
Raw Steel Shipments (million net tons)	8.3	5.6	0.0	8.5	8.4

Technical & Operating Conference

The 2014 National Technical & Operating Conference was a success – attendance was the highest of the past five years with 174 members coming. They represented 58 member foundries (likewise the highest of the past five years). The conference retained a strong industry focus with three-quarters of the 42 papers coming from members. The conference workshop had the highest attendance to date with an additional 50% more attendees than normal. Credit for this strong program goes to the authors and the T&O Committee. Thank you all! The committee has already started preparations for the 2015 National T&O Conference, which will be held in Chicago on December 9-12, 2015. Please consider this an open call for papers. If you or a colleague has a topic to present, or you would like a specific topic covered, please contact David Poweleit at poweleit@sfssa.org.

Specifications

The Specification Committee discussed hardness conversion for duplex stainless steels as part of ASTM A370. An Inter Lab Study is planned for ASTM A262, which covers the standard practices for detecting susceptibility to intergranular attack in austenitic stainless steels. The test block for ASTM A356 and A1067 will be modeled to improve the design and then balloted. John Griffin is looking for additional participants in a Telebrineller study (contact John if you have one at jagrif@uab.edu). The investment casters have asked for additional time to collect data showing P & S levels mirror today's production. A specification for solidification analysis was discussed with an opportunity to utilize the process developed for MTI for the MAGMA datasets that are currently available to SFSA members. A new specification for C12A was proposed, but seems unlikely to go forward. SFSA will pursue action through ITAC to enable adding grades to the EN standard. A new definition for the ruling section under ASTM A148 was drafted and will be balloted. The testing subcommittee is working on developing a process for sub-size Charpys for values over 40 ft-lb. A new standard will be developed under ISO for correlating radiography to performance.

Energy

Prices are falling at the pump, but saving a dollar still amounts to an extra buck of profit. Anoop Balakrishnan and Kyle Long from Harrison Steel Castings Company presented "Energy Savings and Sustainability in the Foundry" at the T&O. Elizabeth Dutrow, Director of EPA's successful ENERGY STAR industrial partnership, attended SFSA's 2014 Annual Meeting and spoke on the topic "What can ENERGY STAR do for you?" She pointedly said energy management is a valuable opportunity that company owners and managers in our industry need to take advantage of by appointing and supporting a corporate energy manager and joining ENERGY STAR for further support. Key takeaways from her presentation included:

- Energy is a controllable cost – examples in the steel casting industry prove it.
- Casting plants have energy waste in them: the annual cost of an energy manager will be more than covered by the energy savings found.
- Energy can be up to 9% of foundry's operating costs while operating profit is around 4%. Anything shifted from energy/operating costs improves operating profit.

This year, ENERGY STAR is dedicating resources to work specifically with metalcasters, including the steel foundries, to help you setup energy management programs and will provide professional energy consulting support at no charge to those companies who join and actively participate in the program (visit www.energystar.gov/join to learn more).

International Foundry Forum

2014 offered an opportunity to participate in the International Foundry Forum (IFF). IFF is a gathering of the CEOs worldwide, of important casting users, ferrous and non-ferrous foundries, foundry equipment and consumable suppliers as well as high-level association representatives. The main goal is to increase the marketing opportunities for castings in competition with other processes and products in a global business environment. The event is sponsored by CAEF, the European foundry association, and CEMAFON, the European foundry equipment suppliers association. Five member

foundries participated in the event which was held in Italy. Presentations on global supply chains, the foundry industry image, China forecast, and trends for pump/valve steel castings are available here: <http://www.sfsa.org/sfsa/news/index.php#iff2014>.

Safety News

Safety Awards

SFSA presented several members safety awards at the T&O conference last month for demonstrating an exemplary safety record for 2013. The awards are to recognize members that set the standard in safety practices and contribute to the improvement of the overall safety record for our industry.

The following two members achieved a “Perfect Safety Record” with a DART rate of 0:

- ME Global – Tempe, AZ
- Southwest Steel Casting – Longview, TX

The following six members achieved an “Outstanding Safety Record” with a DART rate less than the industry average and for all manufacturing:

- Eagle Alloy – Muskegon, MI
- Fimex, SA de CV – Guadalajara, Jalisco Mexico
- Metaltek Wisconsin Centrifugal – Waukesha, WI
- Metaltek Wisconsin Investcast – Watertown, WI
- Southern Cast Products – Meridian, MS
- Stainless Foundry & Engineering – Milwaukee, WI

OSHA’s Recordkeeping Rule

OSHA's updated recordkeeping rule expands the list of severe injuries and illnesses that employers must report to OSHA. Effective Jan. 1, 2015, the revised rule retains the current requirement to report all work-related fatalities within 8 hours and adds the requirement to report all work-related in-patient hospitalizations, amputations and loss of an eye within 24 hours to OSHA.

Among the changes, employers will now have the option to file online reports of fatalities and severe injuries and illnesses via a web form. The electronic form is currently under development and is expected to be available later this month.

Lockout/Tagout Review

In 2013, LOTO was #8 on OSHA's Top 10 citation list and #1 for steel foundries. To better protect your employees, reduce costs and improve productivity, make it a priority to review your LOTO program to ensure that you are in compliance. Organizations are commonly cited for noncompliance not for LOTO equipment issues but rather for compliance program deficiencies such as failure to provide training or establishing and enforcing written programs and procedures.

As a starting point, review your LOTO written program and training practices. OSHA 29 CFR 1910.147 (c)(4) covers the minimal acceptable written program procedures. A written program must include:

1. A specific written statement of the intended use of the procedure.
2. Specific procedural steps taken for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy. This must be done for each piece of equipment unless it is a duplicate.
3. Specific procedural steps for placing, removing and transferring lockout devices and the responsibility for them.
4. Specific requirements for testing lockout devices, tagout devices and other energy-control measures.

As for training, authorized employees shall be provided worker training [29 CFR 1910.147 (c)(7)(I)]. Training must include the energy-control procedure uses and purposes, and all workers in the area where the energy-control procedures are used. When tagouts are used, employees must be taught of the devices' limitations. All employees must be retrained whenever job assignments, machines, equipment or processes change or present new hazards.

The [Department of Labor OSHA website](#) has a wealth of information on LOTO compliance and training.