



SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication
serving SFSA steel casting industry Members

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July — 2012

Casteel Commentary

One of the key challenges facing the steel casting industry is recruiting and retaining the next generation of staff. While finding talented technical people is difficult, developing skilled workers must be done by us. The SFSA Board has committed to developing an apprenticeship program for members to use to develop skilled workers for our plants. This month's Casteel Commentary outlines the approach proposed for this effort.

SFSA Annual Meeting

The Board of Directors of the Steel Founders' Society of America cordially invites you to attend the 110th Annual Meeting, which will be held in Park City, UT, September 8-11, 2012. The Board of Directors looks forward to your attendance and participation in this valuable educational and networking meeting and welcomes the opportunity to share new knowledge of the steel casting industry with you. Park City is easily accessible, located just 40 minutes from Salt Lake City International Airport.

The meetings will be held at [Montage Deer Valley](#), which opened in December 2010 and is one of North America's finest mountain resort destinations. Reminiscent of the great mountain lodges of the West, this refined Mountain Craftsman resort promises a classic on-mountain getaway.

This meeting will offer you and your spouse the chance to retreat to picturesque Park City while giving you the opportunity to network and build industry knowledge. Overlooking Park City, the [Montage Deer Valley](#) is nestled in the mountains with 75-mile panoramic views of pine cloaked valleys and peaks. Come for the business meetings and networking opportunities and also enjoy the mountain trails for hiking and biking along with Park City's championship-caliber golf and historic Main Street's eclectic array of al fresco cafes, local art galleries, gourmet restaurants, and specialty boutiques.

Registration information is available at <http://www.sfsa.org/meetings/annmtg12>

Future Leaders Group

The next Future Leaders meeting is scheduled for Spokane, WA on 8/14-16. The meeting will include a one day seminar on aspects of steel castings that will better enable communication with your customers. The meeting will also include a tour of Spokane Steel Foundry, graybeard presentations, and roundtable discussions. For further details and to register, please contact David Poweleit at poweleit@sfsa.org.

Investment Casting Product Group Meeting

SFSA Investment Casting Meeting will be in Watertown, WI on August 22/23. MetalTek International have kindly agreed to allow us to tour their facility on 8.23.12.

The Program is as follows;

8.22.12 1:00 to 5:00 pm

Meeting at the Holiday Inn Express, 101 Aviation Way, Watertown, WI 53094

Rather than have a set series of presentations it was thought that the best way to encourage a free discussion this meeting will be a "show and tell" session. You will need to bring at least one casting and one wax which exhibit defects or surface problems that the group can discuss to determine possible reasons and solutions for these occurrences. In addition we should include a period to discuss shells, tools and cleaning issues. Here is the topics list:

Show and Tell - problems

Castings - examples

Waxes - examples

Open discussion on

- What are the biggest problems you face in producing investment castings?
- Tooling - lead time, draft, dimensional control (using tools you did have made), surface finish.....?
- Gating - how do you determine location and size of gate(s)?
- Waxes - dimensional control, do you have wax suppliers compete for your business, how do you compare their performance? Why do we think we need a special wax and not like the one somebody else may use? Shouldn't there be specifications for waxes?
- Cleaning - what improvements have you seen here- abrasives, fixturing, cleaning, how do you prevent "rouging"?
- Other problem issues.

All attendees need to contribute to the discussions.

We will arrange for a Dutch Treat dinner for the group.

8.23.12 - 8:30 am

Tour of MetalTek International, Wisconsin Investcast Division, 661 S. 12th Street, Watertown, WI 53094-4928. Phone 920 261 2114.

Holiday Inn Express, 101 Aviation Way, Watertown, WI 53094, 920-262-1910

Group Rate \$85.95/night good for the night of 8/22/12

Reservations:

- a. Call the hotel directly at (920)262-1910
- b. On the internet at www.hiexpress.com/watertownwi Enter the 3 letter group code of STE

Please register your intention to attend the meeting with Malcolm Blair (blairm@sfsa.org). There is no registration fee for attendance at the meeting.

Steel Casting Seminar

SFSA is proud to offer "The Good, The Bad, and The Ugly" seminar on Tuesday, August 14th presented by Raymond Monroe, Malcolm Blair and David Poweleit to its members. Education of our customers is critical to establishing a good business relationship. SFSA offered training to assist with this in years past; thus, you will not want to miss this opportunity that is perfect for a new design engineer, quality manager, salesperson, or anyone else new to the steel casting industry. The seminar is free; however, in order to insure available space and to receive the latest updates, please register your attendance with David Poweleit at poweleit@sfsa.org or 815-455-8240 x204. Further details for the event will only be sent to registered attendees.

Marketing Committee

The SFSA Marketing Committee meeting is scheduled for the afternoon of August 7 in Chicago near the airport. This meeting is where the committee drafts the forecast for the coming year. For more details or to join the meeting contact R. Monroe at monroe@sfsa.org.

Safety/HR Meeting

The Safety/HR meetings will be held at Harrison Hills Golf and Country Club, 413 East New Street, Attica, IN 47918 and includes a tour of Harrison Steel Castings Company, 900 Mound Street, Attica, IN 47918, Tel 765 762 2481 Fax 765 762 2487

8.8.12 - 8:30 am to noon - HR

1. Workers Comp Investigations - Attorney - Faergre Baker and Daniels
2. How to recruit engineers, welders, mechanics, patternmakers and machinists - Ken Kurek, President/CEO, Waukesha Foundry
3. Apprenticeships - Raymond Monroe

8.8.12 - 1:00 pm

Plant tour of Harrison Steel

6:00 pm - Group dinner (Dutch Treat / separate checks)

8.9.12 - 8:30 am - Safety - Harrison Hills Golf and Country Club, 413 East New Street, Attica, IN 47918

1. Verbal feedback from the plant tour - observations that might be useful to Harrison Steel
2. Harrison Steel Safety Program
3. You could be next - OSHA National Metals Emphasis Program - Michelle Harms, Waukesha Foundry
4. Roundtable discussion - topics to be raised by attendees on issues they have and may have dealt with.

Other items that may be included in the Roundtable are:

- Job training for new employees “on-boarding”
- Job training for existing employees
- Cross-training and employee development – how do we support an employee’s development and cross-train and still ensure that the daily work gets done
- Employee Recognition Programs
- Recruitment and Selection of quality candidates
- JSA's & Ergonomic Job Reviews
- Interactive / Proactive Safety Committees
- Implementation of a PPE Assessment
- Strategies used to assist in reducing turnover

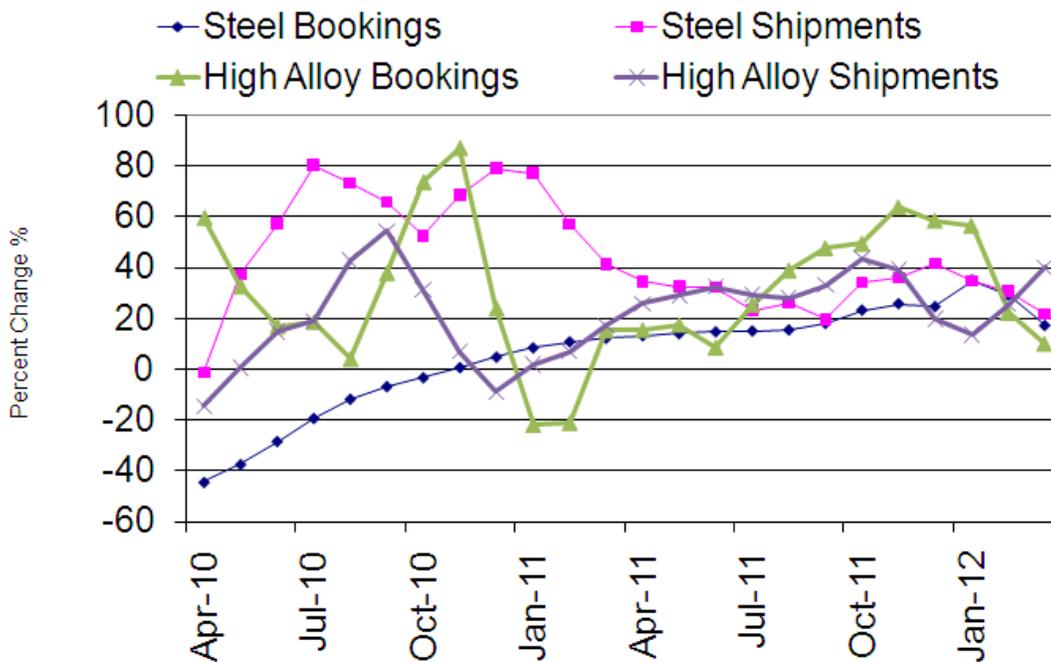
12:00 noon - Adjourn

A specific hotel has not been recommended a list of hotels is shown on the SFSA website.

Please confirm your attendance at the meeting with Malcolm Blair blairm@sfsa.org

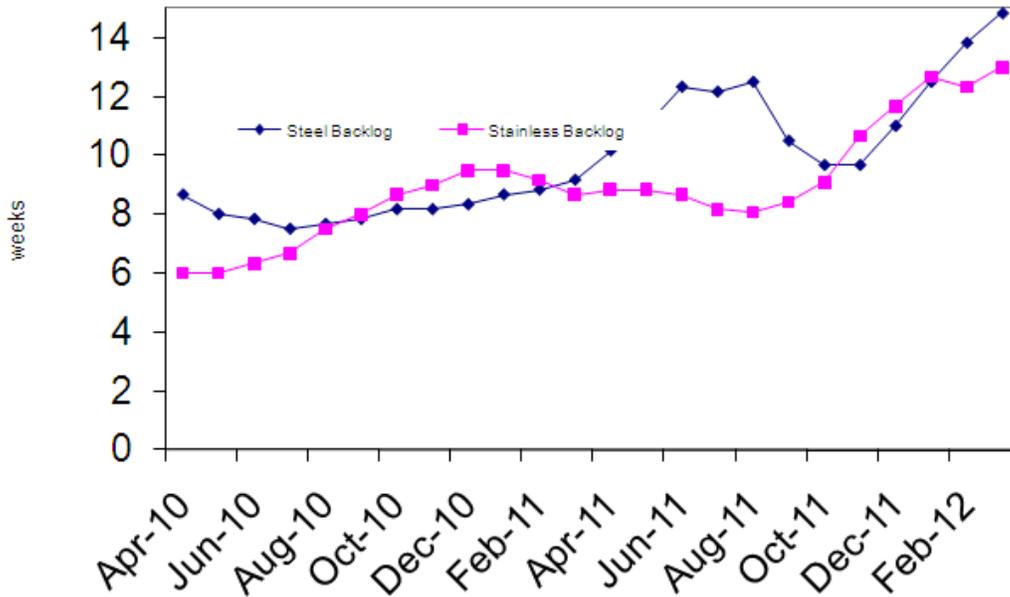
Market News

SFSA trend graphs show continued strong activity in the 3 month average shipments of steel and high alloy cast products. The 3 month average for bookings remains solidly high but booking for March are down for both.



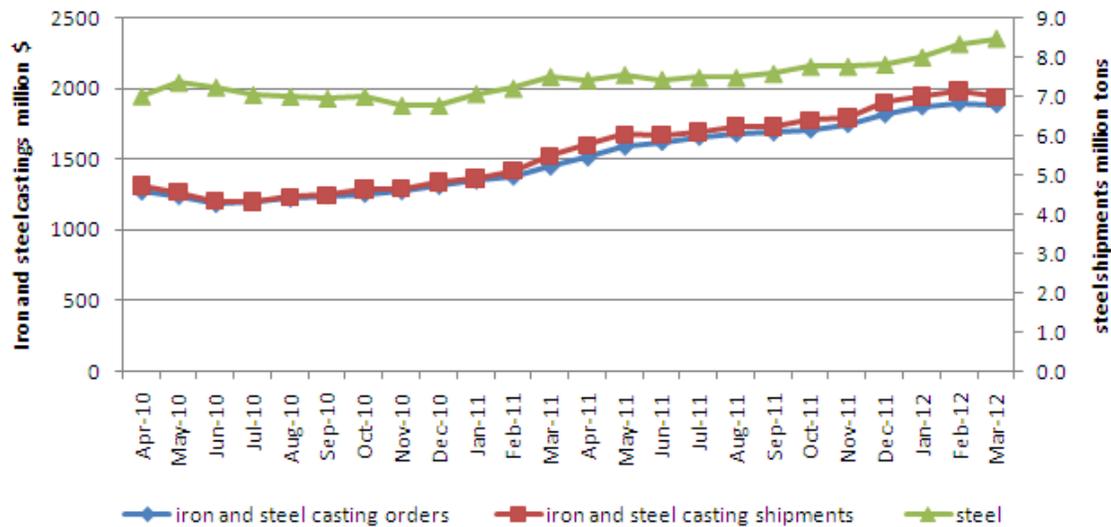
In the same way steel and high alloy product backlogs have increased. The levels of backlog exceeding 12 weeks were last seen in 2008 in the industry.

Casting Backlog



Confirming this expanding market for steel castings reported in the SFSA trend cards is the growth of demand for both iron and steel casting orders and shipments as well as the continued increase in shipments of steel mill products.

Iron and steel casting shipments and AISI steel shipments



A less positive sign is seen in the activity for capital goods new orders excluding aircraft. The orders have fallen and inventories have expanded suggesting a correction in the future. This possible slowdown in activity is also seen in the falling PMI now below 50% and consistent with slowing manufacturing activity in the rest of the world. Excessive debt in the world's economies is growing as slow growth, unemployment, lagging tax receipts, and financial uncertainty take a toll on growth. Market prices for equities are likely unsustainable at the current levels and a sharp reduction in market values and slowing economic activity should result in a slowing market for steel castings. The slowdown will be heavily influenced by the degree of drop in commodity prices. As the price of oil drops below \$80 a barrel and copper approaches \$2.50/lb, capital investment will slow.

This slowdown in activity should be short lived in our markets but not in the economy as a whole. Global economic growth has created strong ongoing demand for more goods and the current capital

infrastructure is incapable of providing the required production. So while we are likely to see a slowdown for the balance of the year, perhaps even 20%, the demand for steel castings should pick up by mid next year.

Casteel Commentary

The SFSA Board has recognized the need to develop in our plants, skilled foundry workers. This need for skilled workers was traditionally accomplished with apprenticeship programs. These apprenticeship programs were focused on developing the hands on skills needed to make a mold, melt a heat or construct a pattern. The emphasis was on the skills of using the tools and the craft to achieve the required results. Some knowledge was required but much of the effort was directed at skill development. In many ways it was a legacy of the European guild system where a skilled master mentored skilled journeymen who were supported by learning apprentices.

This system dismantled with the economic collapse of manufacturing starting in the mid 1980s. Even if it could have been sustained, radical changes would have been needed to accommodate the changes in the skills needed and the employment expectations of the entering workforce. For example, patternmaking requires more than a ruler and a plane and a gouge. It now requires an ability to understand solid models and to integrate CNC machinery. The state and federal government with their interest in employment developed job retraining for displaced skilled workers but these programs were institutional, often at community colleges, and did not often develop the skills required or the knowledge needed for effective productive work.

The SFSA apprenticeship program is designed to create a system that can be used at the plant level to develop the skill workforce required. The program is intended to set national requirements that can be adopted and used by member plants. The goal is a program simple and light enough, for the smallest plant but comprehensive enough for the largest operation.

One way to understand what SFSA hopes to do with its apprenticeship program is to compare it to the Boy Scouting Program. The national BSA organization maintains the requirements for advancement in Scouting, the local troop organizes and recognizes the achievements of scouts and the scout is responsible for his own progress in the program. Individuals voluntarily become scouts and voluntarily work toward rank advancement. The national Scouting organization provides the requirements for each rank, but it is up to the local organization to monitor the achievement of each rank. The national organization publishes literature that may be used as an aid in gaining the knowledge and skills needed to pass requirements, but they do not oversee the learning process. Local troops facilitate the attainment of knowledge and skills in any creative way they deem best which may include use of the national organization's printed literature, but is not limited to that. Individual scouts may use the national organization's printed literature, learn from mentors, or do independent study to gain the knowledge and skills needed to pass requirements. It is the responsibility of the scout to let a leader know when he has achieved knowledge or acquired a skill and the leader then assesses that achievement.

In our apprenticeship program, SFSA will be responsible for managing and maintaining the requirements. The program will not directly train individuals. It will not directly provide curricula. It will identify the list of knowledge and skills in specific areas for individual plants and their participating employees to use as a standard for evaluating and encouraging steel casting knowledge and skills. We plan to provide an extensive steel Wikipedia, a sort of Steel Casting Handbook online, with sections specifically designed for the novice. The wiki will include technical papers, instructional videos, links to lectures and courses available through SFSA and AFS, and an index of teachers and industry leaders willing to share their knowledge. Members will be encouraged to contribute to the bank of knowledge. (A "How to Add Your Two-Cents Worth" instructional video will be available.)

Individual companies will be responsible for recognizing the attainment of skills and knowledge by employees based on their particular plant, i.e. type of mixer, binders, etc. To participate, individual plants will post the list of requirements for interested employees. They will help the employee make a "first steps" plan toward fulfilling the requirements. This can include job shadowing, mentoring, taking appropriate classes at a community college or AFS or consulting with someone from SFSA. Ultimately, the individual employee will be responsible for completing requirements by finding the training and information needed to attain the skills and knowledge and then competently demonstrating that he or she has met the requirements. Then the company will recognize the employee's achievement.

The SFSA program will recognize apprentices that are capable of productive work and knowledgeable about their area. When an employee has demonstrated mastery in an area both, demonstrating the skills required and knowledge needed, they will be recognized as a journeyman. For some motivated and capable staff, they can continue to acquire management, quality and foundry skills to become a master. The apprentice and journeyman level are recognized by the plant, but the master level will be given nationally by SFSA. It will include a major project planned and completed by the journeyman applicant.

Existing skilled employees with years of experience can demonstrate that they are already capable and can be evaluated at the plant and become a journeyman directly without completing the apprentice requirements. Capable employees with experience and skill can also directly apply to SFSA with the approval of their plant to become masters.

The SFSA program is developing requirements for molders, melters, heat treaters, patternmakers, welders, finishers, investment casters, rigging engineers, and maintenance workers. The Board and the HR group are supporting the effort. The qualifications will be circulated to all members prior to adoption for comments.

It is expected that this effort will help member companies recruit, retain, train, evaluate and develop workers for the future.

Raymond

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

SFSA Trend Cards (%-12 mos. Ago)	12 Mo Avg	3 Mo Avg	Mar	Feb
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Carbon & Low Alloy

Shipments	28.8	21.7	4.8	31.9
Bookings	18.6	17.1	-16.3	5.7
Backlog (wks)	12.2	14.8	15.0	16.0

High Alloy

Shipments	31.4	40.2	40.7	50.0
Bookings	31.3	10.2	-10.0	-10.0
Backlog (wks)	10.4	13.0	14.0	12.0

**Department of Commerce
Census Data**

Iron & Steel Foundries (million \$)

Shipments	1,751.0	1,884.0	1,872	1,873
New Orders	1,808.5	1,937.3	1,860	1,961
Inventories	2,043.3	2,090.3	2,088	2,066

Nondefense Capital Goods (billion \$)

Shipments	69.6	70.0	69.9	69.0
New Orders	75.4	76.9	70.0	79.8
Inventories	165.8	166.9	165.0	163.9

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

Shipments	64.8	64.2	64.3	63.1
New Orders	67.0	66.1	65.0	66.5
Inventories	114.4	117.2	117.8	117.2

Inventory/Orders		1.77	1.81	1.76
Inventory/Shipments		1.83	1.83	1.86
Orders/Shipments		1.03	1.01	1.05

American Iron and Steel Institute

Raw Steel Shipments (million net tons)	7.8	8.5	8.5	8.4
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