SFSA CASTEEL REPORTER

Steel Founders' Society of America

a monthly publication
serving SFSA steel casting industry Members

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September — 2005

Casteel Commentary Highlights:

This month's Casteel Commentary is on the need to recruit and train the next generation for the future of our plants and our industry. We have a systematic failure of the past 20 years to hire staff because of the extreme price pressure that was the result of excessive capacity. Now in a market of limited supply and with an aging near retirement workforce, we need to recruit and train the needed leaders for our future.

SFSA 2005 Annual Meeting

Registrations are high, attendance looks good, the program is valuable, and the location is fun. Why are you not coming to the SFSA 2005 Annual meeting in Lake Tahoe? In this time of strong business demands and uncertain future requirements, what better way to hear what is going on in the industry than to visit with friends at the Annual Meeting? With a program packed with forecasts and business information, what better way is there to think about the strategic requirements of your business?

The details on the SFSA Annual Meeting are here: http://www.sfsa.org/sfsa/annmtg

We are past the deadline and have filled our room block but Sandra will be happy to work with you to find accommodations. If you are interested do not delay!

Performance Benchmarking

We have mailed out an invitation to participate in the free performance benchmarking study. This promises to be a valuable exercise and source of competitive information for the participants. The deadline could be extended if necessary for your participation. Forms and details are also posted here: http://www.sfsa.org/surveys

59th Technical & Operating Conference

Preparations are well underway for this year's SFSA National Technical & Operating Conference; papers are coming in and the program will be of great value to SFSA members.

If you have not already registered for the Conference, please note that the registration fee is reduced for those who register and pay by October 3. Registration information and a preliminary program is available at http://www.sfsa.org/sfsa/toconf

Divisional Meetings

The Southern and Western Divisional meetings were held last month. Both had good attendance and were reported to be productive meetings. The North Central Meeting is scheduled for September 30 in Milwaukee. The topic will be defect analysis and reduction. Basic instruction on inclusions, porosity, and hot tears as well as others will be presented. Attendees are encouraged to bring problems for discussion. This meeting is open to anyone in the membership. Details will be emailed out as available.

SFSA Safety Awards

SFSA is going to recognize members with exceptional safety records at the SFSA National T&O Conference in Chicago on November. Applications are posted here: http://www.sfsa.org/safety We will be soliciting your applications by mail as well.

Schumo Foundation

The Casteel Commentary this month discusses the need to recruit the talented next generation of leader for our industry. The Schumo Foundation was established by Bob Schumo and has sponsored engineering interns in the steel casting industry for the past three years. This year we are slightly changing the schedule and asking for more of your support.

In order to be more timely in recruiting students for interns next summer, we are soliciting applications from member companies to sponsor interns for 2006 with a deadline for applications is October 14. There will be two sponsored interns. Member companies in their applications indicate the project that they would propose for the intern and some details about compensation. The members are selected based both on the project proposed and importantly on the compensation offered. The members selected will then identify a person to work with the Foundation to solicit applications from students and select a suitable candidate. The intern is expected to work through the summer at the member company, present a report on the project at the National T&O Conference and then will receive a $5,000 scholarship. Two interns are presenting at this year's T&O Conference. An application for sponsorship by members is here: www.sfsa.org/foundation/sponsor.html

Our Foundation has approximately $120,000. To present two scholarships requires supplemental funding from SFSA budget. It would be great to have 5 interns each year at member companies. To continue to expand this program we need additional resources. Our Foundation Board is requesting each SFSA member company to voluntarily contribute a tithe, 10%, of their annual SFSA dues to endow the Foundation. We will be soliciting this contribution by mail and email in the next month. This is not a requirement of membership but an opportunity to invest in our future.

Innovation

Penetration of steel into the mold during solidification is a problem in heavy sections, especially in thinner cores or internal angles. SFSA research led by Von Richards at UMR, identified thermal conditions as being crucial to the formation of this type penetration. If the sand temperature exceeds the temperature of solidification and is in contact with liquid steel penetration is likely. The only thing prevent penetration every time is coatings. The reason penetration can sometimes be chipped off is that the coating only failed in a few places so the penetration can be removed if these necks of metal extending through the coating can be broken off.

Preventing penetration requires either faster solidification or better coating performance. Zircon and Chromite sand help by increasing the speed of solidification and reducing the highest temperature reached at the mold metal interface. They also help because they expand significantly less than silica and help the coating survive.

Unfortunately, when we see penetration we try to do a better job coating. While coating is the fundamental defense against penetration, our "better job" at coating often means thicker and dried faster. Unfortunately this thicker coating dried faster is more not less likely to fail. Control of the coating properties, application thickness and drying procedures is critical to coating survival. We also need to prevent damaging the coating when handling the coating or the mold. Finally we need to make sure we do not allow inclusions to form and touch the coating. Reoxidation inclusions can remain liquid and actually dissolve the coating allowing penetration. Specialty sands and better coating performance are the keys to penetration prevention.

Specification

Routinely when a casting fails in the field from product abuse or in test because of inadequate design, the user cuts up the casting. The test bars are tested and fail to meet the material properties requirements of the specification ordered. Then the user thinks he has a gotcha on the foundry. Unfortunately this is a fundamental misunderstanding of the specification. A write up of the relation between test bar properties and casting properties is available online at the SFSA newsletter page:
http://www.sfsa.org/sfsa/news

It is dicey for the foundry because there are normally three or four questions when this occurs. First, did the heat actually meet the standard or was there an internal system failure in the foundry. This is the substantive engineering question of whether or not the material was made to meet the requirements. Second, what terms and conditions were in place for the order and what requirements were agreed in the order? This is the specification question, did we meet the requirements in testing and inspection. Third, there is the commercial question. What is the relationship between the foundry and customer? What are the costs and liabilities involved? Often these three questions are conflated and that makes it difficult to sort out the resolution.

Ohio Technology Showcase

The Showcase is a three-day event, combining technical sessions, plenary addresses by business, political and government leaders, special forums on selected topics, BestPractices training and tours of Showcase plants. Hear from industry leaders, technology experts, government agency staff and suppliers about the latest in managing energy in your facility and technology developments that can improve productivity and reduce energy in your operations. The Showcase will provide specialized breakout sessions in the following industry sectors: Aluminum and Forging, Polymers and Plastics, Glass, Metal Casting, and Steel. More information is available online at
http://www.ohioshowcase.org

Persons Available

A1211is a recent masters graduate who did research into the corrosion resistance of duplex stainless steels, and is seeking a position in the field of metallurgy, manufacturing or Research and development in materials.

A1212is a recent Ph.D. graduate student doing work in high performance high alloy steels, and seeks an engineering position in metallurgy and materials.

Trade Events

The Department of Commerce routinely organizes trade events and a list of upcoming opportunities is at this website:
http://www.buyusa.gov/uppermidwest/events.html
A list of upcoming events is attached.

Market News

Business levels continue to grow strongly in steel foundries. Bookings and shipments have fallen sharply from the frothy unsustainable volatile levels seen through the last year, they remain solidly up. Shipments and bookings are still firmly in excess of double digits showing strong market conditions. Some segments of the industry are operating at capacity and the rest are filling up. This strong market demand is also seen in the continued reported increase in orders and shipments for iron and steel castings reported by the US Census. Steel shipments according to AISI have fallen somewhat. There has been a small slow up in manufacturing growth that may temper demand somewhat but will not likely cause any significant reduction in production. The growth of capital goods orders did see a pause earlier in the year but have resumed a pattern of growth. The ongoing lack of balance of supply and demand in energy with high prices will stimulate capital investment in energy production. Global demand for all basic materials is growing and limited supplies are leading to price increases and capital equipment investment.

Casteel Commentary

One basic constraint that we are facing as an industry is the lack of trained and knowledgeable workers. Even with the closure of 20% of the industry in the past 5 years, there are almost no displaced workers able to step in and fill our needs. In our slow liquidation of the excess capacity installed in the late 1970's, cost cutting was the way to survive. This meant the reduction of staff to the minimum with the elimination of recruiting and training a new generation of engineers, skilled operators, production managers, melters, molders, etc. While we are not yet quite in a panic need, there is no light at the end of this tunnel. Unless we manage a change in hiring practices and staffing levels, we will be unable to recapitalize our business for future success.

Two changes are likely to be forced on us by the market requirements. We will need to recruit and train new younger employees. We will need to increase our salaries to attract the quality and skill level we will need to succeed.

In recruiting and training the next generation, we have an opportunity that is rapidly fading away. In many plants, in many positions, in many skills required, our industry and your plant has a superbly qualified and experienced employee or consultant (retired guy) that is likely to be available for the next five years or so. After that this person may no longer be interested or able to contribute. If the industry had a demographically balanced pool of potential replacements, then you could recruit someone in the next two years to assume those responsibilities with a smooth transition. Absent a pool of qualified replacements, it becomes more urgent to find someone capable of becoming qualified and allow them to work alongside the qualified senior employee. This allows a younger worker to be trained. It is possible to hire a recent graduating engineer to understudy the plant engineer, the foundry engineer or the technical director. If they do not fit, then there would still be some time to locate another potential candidate before the senior employee is no longer available. The candidate replacement is in place if something would force an earlier need due to growth in the business or a change in plans. You are able to take a less senior candidate and allow them to grow into the job under the guidance of a seasoned expert.

Expanding the staff in the current frenetic demand for steel castings in many market is appropriate. More people are required to maintain, plan, organize, etc. when demand exceeds supply. Unlike the cost cutting required during times of overcapacity, increasing throughput is the most important constraint in times of limited supply. If added staff can increase production, they are a cost effective expense. Many plants have already upgraded their maintenance staff to deal with the increased demands of higher production levels. We will need to do the same thing in production and engineering.

For a few key positions, we will also need to dramatically review our compensation policies. In the time of excess capacity, maintaining the business through the management of costs was key. A stable workforce could see the need for restraint in salaries and benefits if the business was to survive and they could keep their jobs. Recruiting to handle the current high levels of demand will require that we pay at or above market rates to recruit talented staff. In a situation of short supply, the market begins to bid up the price of our products. The pricing point goes from the cost of production plus a small margin during overcapacity to the cost of alternate products in a limited supply. This big swing in pricing creates a much higher margin that creates the capital needed for reinvestment and the cash flow to support the staffing needed.

Often in staffing, you get what you buy. If your compensation is low compared to other industries, it is difficult to get talented staff. The best candidate may cost 20-40% more but will have twice the contribution. Our industry will need a new generation of leaders, innovators, and producers. We have only a limited window to benefit from the senior staff to equip the next generation.

Raymond

STEEL FOUNDERS' SOCIETY OF AMERICA

MEETINGS CALENDAR

2005

September	
10/14	SFSA Annual Meeting, Incline Village, NV
30	North Central Meeting, Milwaukee, WI
November	
2/5	National Technical & Operating Conference, Chicago, IL

STEEL FOUNDERS' SOCIETY OF AMERICA
BUSINESS REPORT

SFSA Trend Cards (%-12 mos. Ago)	3 Mo Avg	Jun	May
Carbon & Low Alloy			
Shipments	15.6	18.0	32.8
Bookings	31.6	40.5	40.3
High Alloy			
Shipments	18.4	20.9	8.3
Bookings	18.7	-10.0	-23.0

Department of Commerce
Census Data

Iron & Steel Foundries (million $)

Shipments	1,719	1,717	1,709
New Orders	1,796	1,728	1,822
Inventories	2,149	2,145	2,155

Nondefense Capital Goods (billion $)

Shipments	69.1	69.3	68.8
New Orders	77.2	80.3	80.6
Inventories	113.1	112.6	113.6

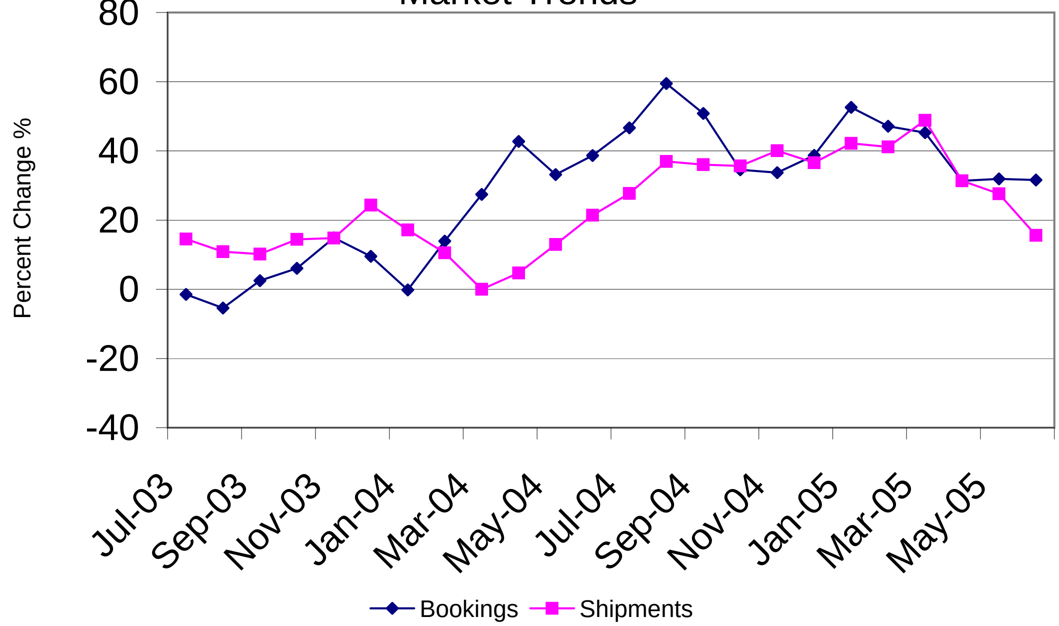
Nondefense Capital Goods
less Aircraft (billion $)

Shipments	65.9	66.1	65.9
New Orders	67.0	68.9	65.1
Inventories	96.2	96.1	96.5
Inventory/Orders	1.44	1.39	1.48
Inventory/Shipments	1.46	1.45	1.46
Orders/Shipments	1.02	1.04	0.99

American Iron and Steel Institute

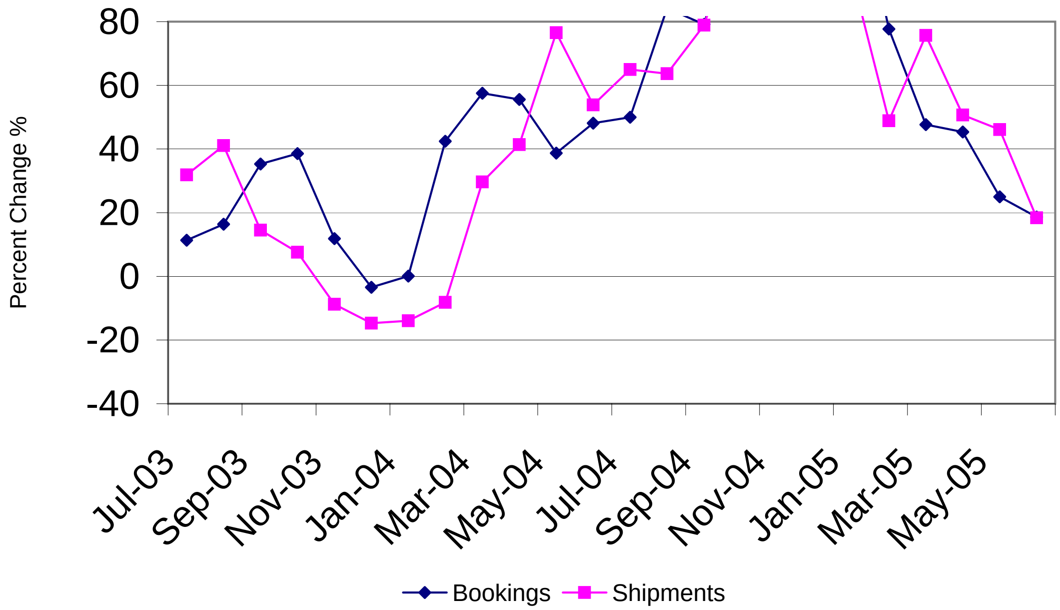
Raw Steel Shipments (million net tons)	8.4	8.2	8.4

Carbon & Low Alloy Casting Market Trends



SFSA Postcards

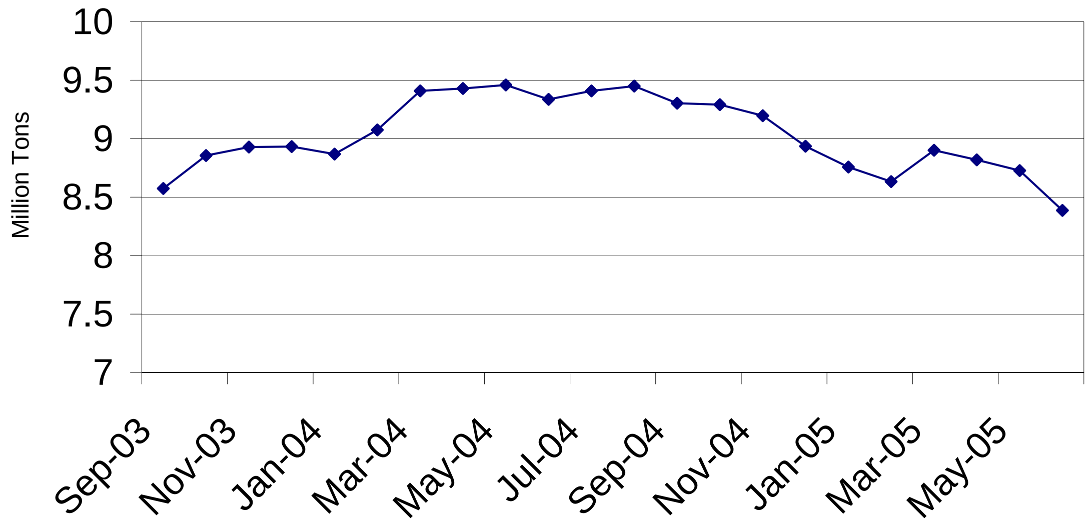
High Alloy Casting Market Trends



SFSA Postcards

Raw Steel Shipments

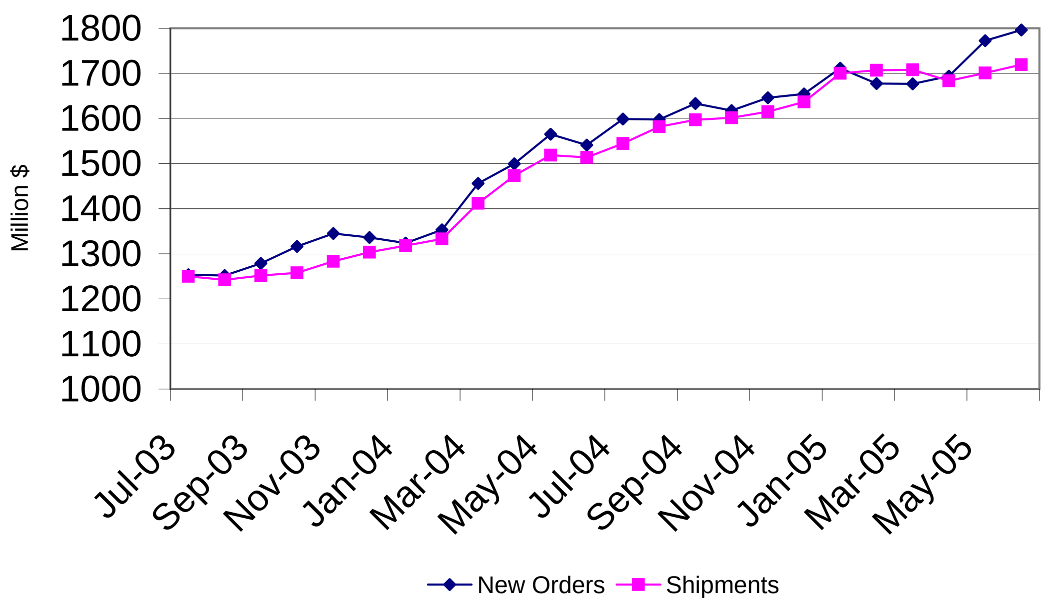
3 month average



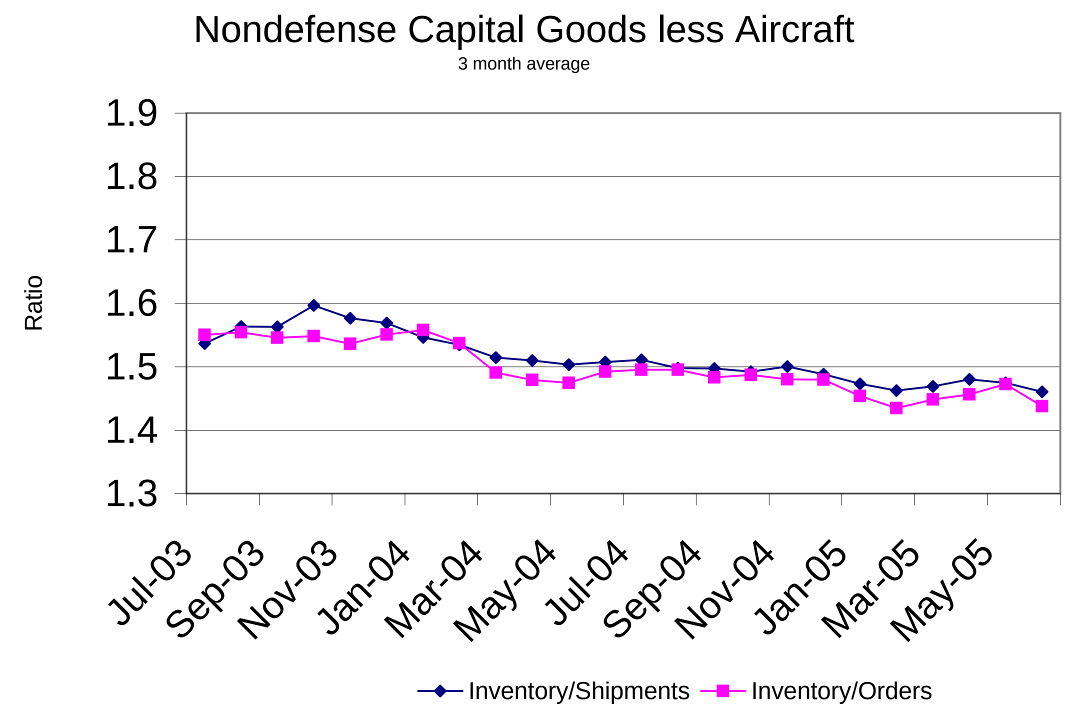
AISI Data

Iron and Steel Castings

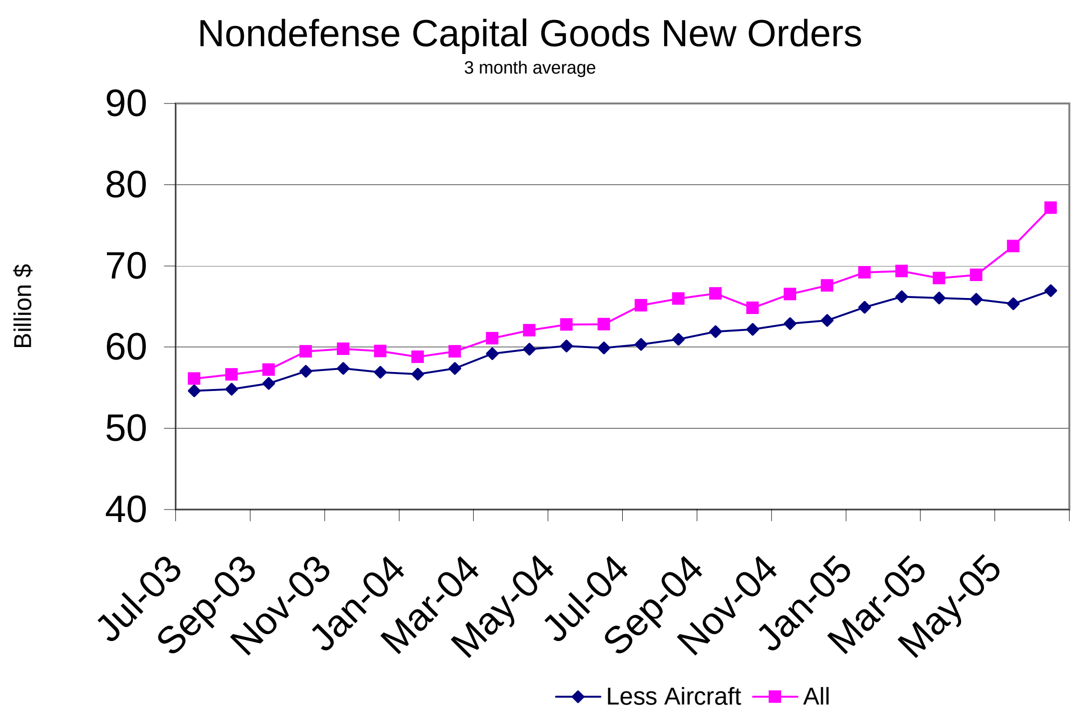
3 month average



SFSA



Department of Commerce



Department of Commerce

Subject: ***Upcoming Illinois Trade Events***

Below is a list of upcoming int'l trade events, many of which our office is organizing or co-sponsoring. We hope that you will be able to join us for at least one of them! You can also access this list as well info on other upcoming int'l events & missions at http://www.buyusa.gov/uppermidwest/events.html

Best Regards,

Debra H. Rogers
International Trade Specialist
U.S. Export Assistance Center – Chicago
US Dept of Commerce
T: 312-353-6988

September 8, 2005: Minority Enterprise Development (MED) Week, Global Trade Workshop - Chicago
The workshop will focus on how to take advantage of government financing programs and free trade services. Exporting questions will be answered by a panel of government experts from the U.S. Department of Commerce; Small Business Administration; Export - Import Bank; Illinois Department of Commerce, & Economic Opportunity, International Trade Office & the International Entrepreneurship Network/ITC. Venue: Hyatt Regency, Chicago. Register at [www.chicagomedweek.com] or (312) 353-0182 for this and other MED Week events September 7-9. For questions specifically regarding this workshop, contact Constance Green at constance.green@mail.doc.gov or 312-353-4798.

September 9, 2005: China Intermodal Transport Visit & Briefing - Chicago
The U.S. Trade Development Administration (TDA), working together with the U.S. Commercial Service, is organizing an orientation visit for a delegation of officials from the China Railways Container Transport Company (CRCTC), which is embarking on a program to construct rail intermodal terminals in several strategic locations in China. The CRCTC also plans to procure new terminal container handling equipment, containers, and rail platforms; restructure its organization into a more market-oriented establishment; install IT and other systems for entering customer orders, managing terminals, tracking container shipments and CRCTC assets, and responding to customer inquiries on shipment status. During the Chicago leg of the trip, the delegation will hold a briefing for U.S. companies on CRCTC plans and interests. There will also be an opportunity for U.S. companies to meet one-on-one with the delegation members. Union League Club, 65 W. Jackson Blvd., Chicago, 8:30 a.m. - 4:30 p.m. For information and registration, contact Jonathan Angerer, TERA International Group, at 703- 406-4400 or jangerer@teraus.com

Sept. 9 - Nov 4, 2005: Illinois Certificate in International Business- Chicago
The State of Illinois Certificate in International Business trains executives through entrepreneurs in the theory and practice of international business. The 5-day program is taught by leading experts and practitioners and covers topics such as international

marketing, finance, and supply chain management while also preparing candidates to take the NASBITE Certified Global Business Professional (CGBP) national exam. It will be offered alternating Fridays from September 9 to November 4 at the James R. Thompson Center in Chicago, IL. For more information, go to http://www.bradley.edu/turnercenter/cib/index.html or contact the International Trade Center at Bradley University at (309) 677-3075.

September 13, 2005: Make America's Trade Agreements Work for You - Northbrook
North Shore Exporters Get-Together hosted by the Libertyville Export Assistance Center, Illinois District Export Council & Northbrook Chamber of Commerce & Industry. Speakers Louisa Elder and Hugo Villarreal of GPO Customs & Trade Compliance at Abbott Laboratories will discuss the benefits of trade agreements to exporters and their supply chains. 7:30 - 9:00 a.m. at the Northbrook Chamber of Commerce, 2002 Walters. For information and RSVPs contact Robin Mugford at 847-327-9082 or robin.mugford@mail.doc.gov.

September 22, 2005: The CEO Guide to Innovation and New Product Development - Crystal Lake
2nd in the Manufacturing Seminar Series aimed at CEOs and upper management of manufacturing companies facing offshore competition and seeking to accelerate innovation. CEO Speaker Bob Deprez, CEO and Owner of Martinez Group International; Keynote Speaker: Michael Collins, hosted by McHenry County College,8900 US Highway 14, Crystal Lake, IL. 8 AM to Noon. Cost: $65.00. Register on line at www.cmcusa.org/events/ceoseries.cfm.

September 28, 2005: Indonesia Infrastructure Development Mission - Chicago
The U.S. Trade and Development Agency is sponsoring four U.S. business briefings to highlight over $22 billion in infrastructure development opportunities in Indonesia’s telecommunications, transportation, energy and mining, and water and sanitation sectors. The event series will bring ten senior Indonesian officials to the United States to meet with U.S. private sector and government officials as they pursue implementation of Indonesia’s infrastructure priorities. The Chicago leg of the mission will focus on transportation. Additional information, including on-line registration, can be found at www.infrastructuremission.com, or by contacting Pam Miller at 703-255-1101, x 116, or pmiller@decisionanalysis.net

October 19-23, 2005: Nigerian Reverse Trade Mission, Chicago
A fifty member delegation from Nigeria whose primary interests include Information Technology, Ports and Transportation, Pharmaceutical/Healthcare, Printing, Plumbing and Building Construction, Cosmetics & Toiletries, Energy, Security and Safety Equipment, Shipping and Hauling and services which entail Real Estate and Management, Legal and Media Consultancy are being hosted by the Continental African Chamber of Chicago (CACC), October 19-23. The purpose of the trip is to enhance the growing inflow of business and investment opportunities that exist in Nigeria. CACC is organizing a seminar on 'Doing Business in Nigeria' scheduled for

October 20th. One-on-one meetings will be conducted with the delegates on October 21 and 22. For further information contact CACC via telephone at 312/987-1889 or 312/987-1890 or via email at: gdada@kofainternational.com.

February 7-9, 2006: BIS Export Regulations Seminar - Chicago ***Save the date***

UPCOMING TRADE MISSIONS

October 16-22, 2005: CAFTA Business Development Mission—Guatemala, Honduras and El Salvador
The CAFTA region is the seond-largest export export market in Latin America and the 10th largest market in the world for U.S. exports. Secretary Carlos M. Gutierrez's CAFTA Business Development Mission is an opportunity to highlight the new regional opportunities for U.S. businesses in the promising sectors of Central America that have emerges as a result of the successful passage of the Central American-Dominican Republic Free Trade Agreement, commonly referred to as CAFTA. Members of this offifical U.S. trade delegation will receive in-depth market briefings, prescreened government and business apointments tailored to your interests and market strategies, individualized counseling sessions, full logistical support including interpreters, reduced hotel rates, and in-country transportation, and in-country market promotion. For information and registration, please visit www.buyusa.gov/centralamerica/en or contact the the Office of Business Liaison at (202) 482-1360 or obl@doc.gov.

November 6-10, 2005: Illinois Food Processing and Packaging Machinery Trade Mission to Chile
As one of the fastest growing markets in Latin America, Chile is a particularly promising market for food processing and packaging machinery and equipment, with Chilean processed food exports surpassing a record $1 billion in 2004, a figure expected to double during the next six years. The Illinois Department of Commerce and Economic Opportunity (DCEO)- Office of Trade and Investment’s Trade Mission to Chile goal is aimed at helping Illinois suppliers of these goods and services and others in the processed food industry an opportunity to enter the Chilean market. The Illinois Office of Trade and Investment and the U.S. Commercial Service in Santiago will arrange one-on-one appointments with potential agents, distributors and representatives; mission members will also receive business briefings, networking opportunities and hospitality and logistical support. For information and registration, contact Mark Harris, Deputy Chief of Staff at DCEO, at (312) 814-8318 or mharris1@ildceo.net by September 10.