Ductile Iron News - Issue 2 – July 2017

The Ductile Iron Society held the 59th Spring Annual 2017 Meeting at the Marriott Downtown in Chattanooga, TN from May 31 to June 2nd. This meeting was a joint meeting of the DIS and the Iron Casting Research Institute.

The DIS Research Committee Meeting was held on the Wednesday morning, May 31st with 44 members and 2 guests attending, and was then followed by the four Operating Committee Meetings that same afternoon.
At 3pm, the Board of Directors held their Spring Board meeting and at the same time the DIS MetalCasting Forum was held. The Board approved a new budget for the fiscal year 2017/18 effective July 1, 2017. At the same time they elected 4 new Board Members to replace the retiring Board members, Mark Fields of Glidewell Specialties Foundry Company, Dave Gilson of SinterCast, John Lewensky of Farrar Corporation and Brandon Reneau of Caterpillar. The Board elected Lenny Basaj of Metal Technologies, Brian Johnson of Hickman, Williams & Company, Rick May of Cadillac Castings and Eric Nelson of Dotson Foundry.

On Thursday morning the technical session began with three speakers and a panel on Practical Cleaning Maintenance of Pressure Pours. In the afternoon we started with a panel on "Converting Iron Types in Production". Thanks to Lyle Heberling and Susie Lambert in assisting in putting this panel together. We concluded the technical session with three speakers after the panel.

You can find more about the presentations attached to this newsletter. If not available, you can contact Jim Wood, the DIS Executive Director at jwood@ductile.org.

At the luncheon on Thursday, June 1st, the President of the DIS, Mike Galvin of Buck Company proceeded to hold the Annual Meeting for the members who were in attendance.
Here are the notes from Mike’s presentation;

At this time I will recap the society’s activities during this past year before proceeding with the annual business meeting and the election of new officers.

On April 25 to 27, 2017 we exhibited at the AFS CastExpo & Metalcasting Congress in Milwaukee, WI. Our booth and the volunteers, who manned it, were busy during the whole show. Thanks to Jim Wood of DIS, Mike Galvin the DIS President, Jim McMinn of Allied Mineral Products, Dave Gilson of Sintercast, Lizeth Medina of Neenah Foundry, Rob Logan of Elkem Foundry Products and Mark Fields of Glidewell Specialities Foundry.

We are striving to make our library available to the members through the website. There is a link to the Lyle Jenkins library under
the Members Only area. These books were a collection of Art Spangler, Lyle Jenkins, P. H. Mani and Keith Millis.

In this current fiscal year, we gained eight new members.

POITRAS DRIVETRAIN CASTINGS(CANADA) (FOUNDRY MEMBER)
INDIANA CASTINGS (FOUNDRY MEMBER)
NORTH ATLANTIC IRON CORPORATION (ASSOCIATE MEMBER)
GTP SCHAFER GmbH(GERMANY) (ASSOCIATE MEMBER)
ASBURY CARBONS INC (ASSOCIATE MEMBER)
RENO REFRACTORIES, INC. (ASSOCIATE MEMBER)

RE-JOINING THE DIS;
AVALON PRECISION METALSMITHS (FOUNDORY MEMBER)
BLUE WATER THERMAL (ASSOCIATE MEMBER)

WE LOST 3 FOUNDARY MEMBERS AND 3 ASSOCIATE MEMBERS.

During this past year we held two general meetings. The first one was our annual meeting held in Perrysburg, OH in conjunction with a tour of General Motors Foundry in Defiance, OH with 120 attending including 9 guests.

The second meeting held last October was the 2016 World Conference on Austempered Ductile Iron at the Westin Peachtree in downtown Atlanta, GA. The attendance for that conference was 112 including 9 guests. We also had 10 university students attend this conference.

The Ductile Iron Marketing Group was once again busy by attending the 2017 CON/AGG show at the Las Vegas Convention Center from
March 7-11, 2017. Thanks to Dave Gilson of Sintercast, Dylan Bruins and Mark Mundell of Lethbridge Iron Works, Matt Schindle of Dotson foundry, Vadim Pikhovich of Magma Foundry Technologies, Mark Fields of Glidewell Specialties Foundry, and Kirk McCullough of Seneca Foundry for volunteering their time to man the DIS booth.

Four Keith D. Millis scholarships were awarded at the 2016 FEF College Industry Conference held on November 17 & 18, 2016 at the Westin Hotel in Chicago. I would like to thank John Keough of Joyworks LLC and Gary Gigante (retired) from Waupaca Foundry for selecting the students. They were Mattie Laprade of Virginia Technology University, Gabrielle Martin of the University of Alabama-Birmingham, Nathan Peplinski of the University of Wisconsin-Platteville, and Connor Rittman of the University of Michigan. Each student received $3000.

Once again this year’s CIC conference is November 16 & 17, 2017 at the Westin Downtown Chicago and we will again hand out $12,000 in scholarships to 4 deserving students.

Your society continues to make a donation to the Keith Millis scholarship fund every year so it will continue to grow. This past year we made a one time donation of $20,000 to bring our total giving to $328,440.13.

Jim Wood and Pete Guidi attended this past year’s awards luncheon. We also had a table-top booth for the industry information session where we distributed the “Ductile Iron - Born in the USA” T-shirts.
We would like to thank those members who sponsored these T-Shirts. They are ASI International, American Colloid Company, ASK Chemicals, Allied Mineral Products, Applied Process, Buck Company, Caterpillar, Inc., Dura-Bar, Elkem Foundry Products, Foseco, Green Packaging, Hickman, Williams & Company, Inductotherm, Midvale Industries, Neenah Foundry, OmniSource, Rochester Metal Products, Rex Heat Treat, Superior Graphite, and St. Marys Foundry. Also I should mention the hard work by your University Relations Committee Members. Thanks to Brian Lewis and Pam Lechner for their invitation to attend this important conference.

The Research Committee met three times during the past year. We completed two projects and they are posted on the DIS website. They are #53 - “Effect of Pouring Conditions on Degenerated Graphite on the Cast Surface of Ductile Iron Castings by Robin Foley, John Griffin and Charles Monroe of the University of Alabama at Birmingham. The second project was #55-s "Universal Ductile Iron Tensile Bar 2016 by Jeremy Lipshaw of Joyworks LLC. The Research Committee also approved a project #56 that is "Atom Probe Tomography Study of Magnesium in Ductile Iron by Jingjing Ging of the Missouri University of Science & Technology." It should be completed by August 2017.

The Research Committee has requested that the board approve $62,450.00 for three new projects for the next fiscal year 2017/18.

In February 2016, Rio Tinto signed over the rights to their Ductile Iron Data Book to the Ductile Iron Society. The DIS has approved that Rick Gundlach review and edit the original work. Once completed it will be the property of the DIS. Thanks to Rio Tinto.
Also the DIS has approved that Bob O'Rourke will edit and update the DIS Quality Manual. Once completed, it will be posted on the home page of the DIS website.

WE WILL NOW PROCEED WITH THE ANNUAL BUSINESS MEETING.

We have 1 Associate Member and 3 Foundry Members retiring from the Board of Directors as of June 30th. They are Dave Gilson of Sintercast, Mark Fields of Glidewell Specialities Foundry Company, John Lewensky of Farrar Corporation and Brandon Reneau of Caterpillar, Inc. We would like to thank Dave, Mark, John and Brandon for their participation and dedication to the society over the past 3 years.

If there is anyone who might be interested in volunteering their time to join the DIS Board of Directors, please let Jim Wood know.

To replace those retiring board members, the nominating committee recommends the following slate to serve on the Board of Directors for a 3 year term effective July 1, 2017;

Lenny Basaj, Metal Technologies Inc.  (Foundry Member)
Brian Johnson, Hickman, Williams & Company  (Associate Member)
Rick May, Cadillac Castings  (Foundry Member)
Eric Nelson, Dotson Foundry  (Foundry Member)

The attendees voted unanimously to approve the slate.

THANKS,

MIKE GALVIN, JUNE 1, 2017
At the banquet on Thursday evening, Mike Galvin introduced Lyle Heberling the Executive Director of the Iron Casting Research Institute.

This was a joint meeting and Lyle offered a few comments about the relationship between the DIS and ICRI. Mike then introduced the guests who attended this meeting. They were Dan Fuller of Customized Energy Solutions, David Fletcher and Larry Redo of Lodge Manufacturing, Randy Smith and Bill Bush of Porter Warner, Darrian Patterson of Mueller-Chattanooga, David Petry of Consolidated Mill Supply and John Burke of OSCO Industries.

Mike then presented membership certificates to the following new members of the DIS since the 2016 October meeting and the representative from the company attending the meeting.
From left Jason Robitaille, Claude Masse, Mike Galvin & Jim Wood

Poitras Drivetrain Castings - Claude Masse and Jason Robitaille
Indiana Castings - no representative
GTP Schafer GmbH - no representative
Asbury Carbons Inc. - no representative
Reno Refractories, Inc. - no representative

Mike then introduced Jim Csonka (Hickman, Williams & Company) the Thursday morning technical chair to come to the front for presentations of speaker gift to the morning speakers.
Kirk Kallio of Waupaca Foundry

Doug Trinowski of HA International
Bryant Esch of Waupaca Foundry

Back to Basics Panel on Cleaning and Maintenance of Pressure Pour Furnaces

Jonathan Stein of Mueller - Albertville, AL
Ross Risner, Waupaca Foundry - Marinette, WI

Tony Chubb, Lodge Mfg - South Pittsburg, TN
Mike then asked Kathy Hayrynen of Applied Process, the Thursday afternoon session chair to assist in handing out the speaker gifts.

**Back to Basics Panel on Converting Iron Types in Production**

![Art Boehme of Castings Solutions](image)

Art Boehme of Castings Solutions

![Tom Biles of Hodge Foundry](image)

Tom Biles of Hodge Foundry
Joe Eakin of Quality Castings

Robb Schmidt of AAM St. Cloud, MN
Paul Kurtz of Ward Manufacturing

Dan Weiskopf of Neenah Foundry
Tyler Hill of AAM-Reedsburg, WI

The other speakers in the afternoon were,

Dave Gilson of SinterCast
Steve Snell of Hickman, Williams & Company

Jeremy Lipshaw of Joyworks LLC
Mike then asked the following Board of Directors who were retiring to come to the front to receive their certificates of appreciation for serving on the Board for the last 3 years. They are Mark Fields of Glidewell Specialties Foundry, Dave Gilson of SinterCast, John Lewensky of Farrar Corporation and Brandon Reneau of Caterpillar. Mike also introduced the new directors as mentioned earlier in this article.

**DIS LIFETIME ACHIEVEMENT AWARD**

The "Lifetime Achievement Award" is awarded to a DIS Member who has shown over the years their service and dedication to the Society. This year's award goes to Doug White of Elkem Foundry Products in Pittsburg, PA. Mike Galvin asked Kevin McMahon of Elkem Foundry Products to introduce Doug.

![Doug White of Elkem Foundry Products](image)

**Note:** To return to the newsletter after viewing a presentation, go to the end of the presentation and click "Return to DI News" link.

**DIS LIFETIME ACHIEVEMENT AWARD**

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A graduate of McMaster University in Hamilton, Ontario, Mr. White started his metals career in 1970 and joined the Elkem organization in 1983. Located at Elkem’s plants and sales offices in Canada, the United States, and Europe, Mr. White focused on the production and effective use of Elkem’s unique inoculants, nodulizers, and desulfurizing agents in iron-foundry melting practices.

"Through innumerable papers, seminars, and foundry visits around the world, Doug White helped iron foundries develop technical improvements and optimum practices that are still used in their operations today," said Chris Lisso, Elkem’s Sales and Marketing Manager – Americas. "By working closely with Elkem’s technical-sales organization, Doug has helped customers maximize the benefits provided by Elkem’s unique line of specialty products. Doug’s achievements have been widely recognized by the trade organizations that represent gray and ductile iron foundries globally."

In June 2017, Mr. White received the Ductile Iron Society’s Lifetime Achievement Award, and in 2013, he received the American Foundry Society’s Award for Scientific Merit. He has been very active in both societies, serving or chairing several committees and giving the Honorary Lecture at the 2014 AFS Metalcasting Congress. He also was the former Chairman of the Ontario Chapter of the American Foundry Society.
CONGRATULATIONS to Doug!!!

On Friday, June 2nd the group went on a tour of Waupaca Foundry Plant #6 in Etowah, TN. The DIS wants to thank Sam Green, Plant Manager of Waupaca Etowah and the other employees for their hospitality in hosting this tour.
AM Meeting Speakers and Links to Presentations (if available).

Best Practices for Hiring Millennials for the Metalcasting Industry, Kirk Kallio-Waupaca (Available on Request from DIS)

The Power of and Need for Research in Metalcasting, Doug Trinowski - H.A. International

Silica Rule and Impact, Bryant Esch - Waupaca

Panel - Practical Cleaning Maintenance of Pressure Pour Furnaces
Jonathan Stein - Mueller-Albertville (Presentation not available)
Ross Risner - Waupaca-Marinette (Presentation not available)
Tony Chubb - Lodge Manufacturing

PM Meeting Speakers and Links to Presentations (if available).

ICRI Panel - Converting Iron Types in Production
GI to DI via Wire Injection, Art Boehme - Casting Solutions
GI to DI in Channel Fces, Tom Biles - Hodge Foundry
DI to High SiMo Grades in Pressure Pours, Tyler Hill - AAM-Reedsburg
Changing Between Grades of DI in Pressure Pours, Robb Schmidt - AAM-St. Cloud
DI to GI in Pressure Pours, Dan Weiskopf - Neenah
GI to Ductile and Ductile Back, Joe Eakin - Quality Castings
GI to Malleable, Paul Kurtz - Ward Mfg.

Tracking Technologies for Improved Foundry Operations, Dave Gilson - SinterCast (Presentation not available)

Micro-Alloying in Steel, Steve Snell - Hickman Williams & Company

Universal Ductile Iron Tensile Bar, Jeremy Lipshaw - Joyworks, LLC

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This concluded the 2017 Spring Annual Meeting. There were 140 in attendance and we wish to thank them and their companies for allowing them to attend. We hope to see everyone at the Fall 2017 T&O Meeting at the Swan Lake Resort in Plymouth, IN. This is being done in conjunction with a plant tour of Rochester Metal Products in Rochester, IN.  

Jim Wood, DIS Executive Director, July 12, 2017
Tupy expands Compacted Graphite Iron production capability in Mexico

- High volume CGI series production order secured
- System 3000 Plus upgrade at Tupy foundry in Saltillo, Mexico
- SinterCast-CGI series production capability on five different production lines

Tupy, the world’s largest cast iron cylinder block and head foundry group, has received a new order for a high volume Compacted Graphite Iron (CGI) passenger vehicle cylinder block, to be produced at its North American production base in Saltillo, Mexico. In order to support pre-production activities, and in preparation for the start of series production, Tupy has decided to upgrade its CGI production capability on its Heavy Duty Moulding Line 4 in Saltillo to the full System 3000 Plus standard. Based on joint Tupy and SinterCast CGI series production experience since 2003, the System 3000 Plus upgrade has been specified to automatically control the base treatment, the process control measurement and the final optimization of magnesium and inoculant prior to casting. The Line 4 CGI installation is compatible with both passenger vehicle and heavy-duty engine components.

“In order to support the growing demand for Medium and Heavy Duty on-road CGI programs in North America, we initially installed SinterCast-CGI capability on Line 4 at our Saltillo facility, in 2012, to
NEWS BRIEFS, Cont'd

support the product development requirements of our customers. Now, as those development efforts have led toward a new high volume series production order and intensified pre-production support, we are pleased to upgrade to the fully automated System 3000 *Plus* standard.” said Mr. Luiz Tarquínio, President and C.E.O. of Tupy. “The new CGI cylinder block will result in high volume CGI series production on five different moulding lines at Tupy, further reinforcing our global leadership position for CGI product development and series production.”

“The System 3000 *Plus* upgrade has been designed from a clean sheet of paper, incorporating Tupy’s high volume CGI production experience in Brazil and Mexico, and taking advantage of the latest technology in every aspect of the foundry process” said Dr. Steve Dawson, President & CEO of SinterCast. “Together, Tupy and SinterCast have ushered more than 25 CGI programmes from the product development phase into series production. We are pleased that this track record of reliability and success has led to another series production commitment, and to our fifth high volume series production installation at Tupy.”

For more information:

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FEATURES

- 2017 Annual Meeting Highlights
- DIS Lifetime Achievement Award
- Best Practices for Hiring Millennials for the Metalcasting Industry - Kirk Kallio
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- Various Grades of DI in Pressure Pours - Robb Schmidt
- GI to Gl in Pressure Pours - Dan Weiskopf
- GI to DI and Back - Joe Eakin
- GI to Malleable - Paul Kurtz

DEPARTMENTS

- News Briefs
- Back Issues
- DIS Home Page

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NEWS BRIEFS

FEF Internship / Co-Op Scholarships Available

2017 SCHOLARSHIPS

Many employers are more inclined to hire students that not only have good grades, but have some work experience. This scholarship directly focuses on those students that have taken the initiative to participate in an internship or co-op to further their knowledge of the casting industry. These on-the-job experiences give the student a hands-on perspective of the casting industry. The goal of this scholarship is to reward the work experience gained in the industry with a focus on project work, lessons learned, and leadership development.

STUDENTS...
If you are an FEF registered student and have an internship or co-op, you can apply for a scholarship. Please complete the application, submit a report (minimum of 250 words) about your internship/co-op experience; your supervisor will also need to submit an evaluation. The application forms are located here.

EMPLOYERS...
If you have an FEF registered student who is an intern or co-op with your company, you can initiate the scholarship application process by having the student complete an application and submit a report (minimum of 250 words). The student's supervisor will also need to submit an evaluation. The application forms are located here.

DEADLINE FOR SUBMISSIONS IS OCTOBER 1, 2017
UP TO 5 SCHOLARSHIPS OF $2,000.00 ARE AVAILABLE
RECIPIENTS WILL BE NOTIFIED IN NOVEMBER
NEWS BRIEFS

Teksid upgrades Compacted Graphite Iron production capability in Mexico

- System 3000 Plus upgrade at Teksid foundry in Monclova, Mexico
- Product development for commercial vehicle and industrial power applications
- System 3000 Plus capability at Teksid foundries in Mexico and Brazil

[Monclova, Torino and Stockholm, 5 July 2017] – The Teksid group has ordered a capacity and functionality upgrade of the SinterCast Compacted Graphite Iron (CGI) process control system at its foundry in Monclova, Mexico. The order specifies the installation of automated base treatment to support intensified pre-production of industrial power components and ongoing product development of commercial vehicle components. The upgrade to the full SinterCast System 3000 Plus automated series production capability is planned for the autumn of 2017.

“The investment to upgrade the SinterCast technology at our Monclova facility is a further signal to the marketplace of Teksid’s commitment to industry-leading technology for CGI series production” said Dr. Paolo Airaldi, President and C.E.O. of Teksid, S.p.A. “Together, the Monclova upgrade; the System 3000 Plus installation at our foundry in Belo Horizonte, Brazil; and, the Mini-System 3000 installation at our Funfrap foundry in Aveiro, Portugal, have positioned Teksid to supply the CGI product development and
series production needs of our global customer base.”

“As a specialist foundry for the production of heavy-duty engine components, the Monclova investment reflects the growing demand for CGI in commercial vehicle and industrial power applications” said Dr. Steve Dawson, President & CEO of SinterCast. “The upgrade reinforces the longstanding outlook for heavy-duty engine components to provide the best long-term growth opportunity for Compacted Graphite Iron. We look forward to developing and supplying this market opportunity together with Teksid.”

For more information:
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NEWS BRIEFS

NEWS RELEASE

Innovative Elkem Technical Services Manager Retires

Doug White, Technical Services Manager for Elkem Foundry Products, has retired following a distinguished 47-year career in the metals industry, mainly providing research and technical assistance designed to improve the operations of gray and ductile iron foundries.

A graduate of McMaster University in Hamilton, Ontario, Mr. White started his metals career in 1970 and joined the Elkem organization in 1983. Located at Elkem’s plants and sales offices in Canada, the United States, and Europe, Mr. White focused on the production and effective use of Elkem’s unique inoculants, nodulizers, and desulfurizing agents in iron-foundry melting practices.

“Through innumerable papers, seminars, and foundry visits around the world, Doug White helped iron foundries develop technical improvements and optimum practices that are still used in their operations today,” said Chris Lisso, Elkem’s Sales and Marketing.
NEWS BRIEFS, Cont'd

Manager – Americas. “By working closely with Elkem’s technical-sales organization, Doug has helped customers maximize the benefits provided by Elkem’s unique line of specialty products. Doug’s achievements have been widely recognized by the trade organizations that represent gray- and ductile-iron foundries globally.”

In June 2017, Mr. White received the Ductile Iron Society’s Lifetime Achievement Award, and in 2013, he received the American Foundry Society’s Award for Scientific Merit. He has been very active in both societies, serving or chairing several committees and giving the Honorary Lecture at the 2014 AFS Metalcasting Congress. He also was the former Chairman of the Ontario Chapter of the American Foundry Society.

July 11, 2017

For further information on this press release, please contact John Crane at 212-302-3344.
NEWS BRIEFS

U.S. Manufacturing Technology Orders continue to gain strength

The U.S. Manufacturing Technology Orders report for May 2017 showed gains for the month and year over year, according to AMT – The Association For Manufacturing Technology. May orders were up 3.1 percent over April, and 21.8 percent over May 2016.

Automotive customers made some significant orders in the month, and continued investment from machine shops indicates that manufacturers are seeking additional capacity. The gains in manufacturing technology orders are in line with other positive economic indicators for the manufacturing industry: industrial production, rising exports, continued industry expansion as indicated by the PMI, and strong consumer sentiment.

“As we’ve now seen year-over-year growth for four consecutive months, and with that growth acceleration, all signs indicate a continued trend of strength for the manufacturing technology industry,” said AMT Vice President – Strategic Analytics Pat McGibbon. “With activity growing in many geographic regions and continued strengthening in key industries like job shops, autos and aerospace, all
NEWS BRIEFS, Cont'd

of this suggests the market will continue to grow and stay strong for the coming months.”

Orders for May 2017 totaled $351.85 million, compared to $341.33 million in April and $288.93 million in May 2016. Year to date, orders are valued at $1,667.18 million, compared to $1,552.37 million for the same point in 2016. USMTO is a reliable leading economic indicator as manufacturing companies invest in capital metalworking equipment to increase capacity and improve productivity.

Link to Full Report
Why FEF... 2017 College Industry Conference (CIC)

Connect with the best and brightest technical talent
Attend the largest recruitment conference focused on the metalcasting industry

Top Students

Career Fair

Networking

Less than 90 days away...
November 16-17, 2017
Chicago, IL
Westin Michigan Ave.

2017 CIC

Partnerships available-showcase your company

847.490.9200
Foundry Educational Foundation
www.fefinc.org/2017CIC