JANUARY 2026

DUCTILE IRON SOCIETY NEWSLETTER

IN THIS ISSUE

DIPS 2026

DUCTILE IRON PRODUCTION SEMINAR

The Ductile Iron Production Seminar is filling fast!

It will be held at Betz Industries in Grand Rapids February 3-4, 2026. The schedule is packed with some of the industry's finest! This is a great opportunity to learn more about how ductile iron is produced and the basic metallurgy of Ductile and Compacted Graphite Iron.

REGISTRATION

FOUNDRY MEMBERS: $35
Our aim is to keep the cost low for foundry members!

ASSOCIATE MEMBERS: $600

SPONSORING COMPANY ATTENDEE: $35

SPONSORSHIP: $300

- Sponsor companies can register their employees at a rate of $35 per attendee ticket.
- Logo included in all DIPS e-mails, on the event page, and in the program.
- Logo displayed at the seminar on easel signs.
- Sponsors will receive an attendee list.

REGISTER TODAY

DID YOU KNOW

?

If your foundry is planning to hire a summer intern or student to start post graduation, they are invited to attend DIPS. This gives them a head start on what they will see at the foundry.

SCHEDULE OF EVENTS

TUESDAY FEBRUARY 3 | 12:00PM - 5:30PM

12:00 - 12:15 PM 12:15 - 1:00 PM 1:00 - 1:30 PM	**What is Ductile Iron & Introduction to Mechanical Properties** Microstructures Nomenclature & Mechanical Properties *with Ken Way, Miller and Company*
1:30 - 2:00 PM	**Chemistry and Composition** Primary Elements and Charge Materials *with Trevor Beach, Betz Industries*
2:00 - 2:10 PM	**Break**
2:10 - 2:30 PM 2:30 - 3:00 PM	Least Cost Charge Calculator *with Jay Morrison, Carpenter Brothers, Inc.* Thermal Analysis - Cooling Curves *with David Kesse, Elkem*
3:00 - 3:45 PM	**Treatment Methods** *with Jeremy McLimans, Hickman, Williams & Company*
3:45 - 3:55 PM	**Break**
3:55 - 4:40 PM	**Gating Ductile Iron** *with Josh Gammariello, Foseco*
4:40 - 5:30 PM	**Heat Treating** *with Dr. Kathy Hayrynen, Aalberts surface technologies*
6:30 - 8:00 PM	**Dinner at The Mitten Brewing Company**
10:00 - 11:00 PM	**Betz Tour with Pour (Optional)** (Betz only pours on 3rd shift)

WEDNESDAY FEBRUARY 4 | 8:00AM - 4:30PM

8:00 - 8:45 AM	**Inoculation** *with Jeremy McLimans, Hickman, Williams & Company*
8:45 - 9:45 AM	**Alloys and Secondary Elements:** Pearlite Stabilizers Alloy Factor (Pearlite) Tramp Elements *with Brad Steinkamp, Charter Dura-Bar*
9:45 - 10:00 AM	**Break**
10:00 - 10:40 AM	**Risering Ductile Iron** *with Josh Gammariello, Foseco*
10:40 - 11:10 AM	**What is ADI** *with Dr. Kathy Hayrynen, Aalberts surface technologies*
11:10 AM - 12:00 PM	**Production Refractories** *with Tim Hoyt, Allied Mineral*
12:00 - 1:45 PM	**Lunch & Betz Tour**
1:45 - 2:30 PM	**Coreless Melting - Preventative Maintenance** *with Vince Gallone, Inductotherm*
2:30 - 3:15 PM	**Cupola Melting Ductile Base Iron- Furnace/ Process Overview and Basic Operation** *with John Gatewood, ATD Engineering & Machine - Cupola Division*
3:15 - 3:45 PM	**Filtration** *with Jason LaChance, SELEE Corporation*
3:45 - 4:45 PM	**Casting Defects - Case Studies** *with Jay Morrison, Carpenter Brothers, Inc.*

2025 FEF CIC RECAP

The Ductile Iron Society was proud to award four exceptional students with the Keith Millis Scholarship at this year's College Industry Conference (CIC). These scholarships honor Keith Millis, the inventor of ductile iron, a process that transformed the metalworking world and shaped our industry. Millis served as Executive Director of the Ductile Iron Society and as FEF President in 1967-68, leaving a legacy that continues to impact metalcasters today.

Pictured below are Ryan B. (University of Wisconsin-Platteville) and Tyler K. (SD School of Mines and Technology). Joining them are Sean K. (Trine University) and Isaac S. (University of Northern Iowa).

DIS handed out t-shirts to students and professors. Be sure to attend the DIS Spring Conference to get your catchy (and slightly nerdy) slogan submission in for the 2026 T-shirts!

UPDATE

PAPER REVIEWER PROCESS

We are excited to launch a new initiative designed to recognize and support the vital role of our paper reviewers. Beginning with the Spectrometer reference sample paper, each reviewer who completes a paper review is assigned a Reviewer Number. This number will serve as an anonymous identifier during the review process, while also celebrating your contribution to our society's technical excellence.

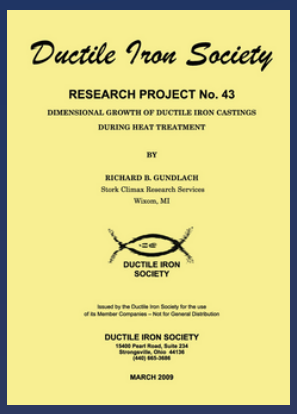
If you've been considering signing up to review a paper, now is the perfect time to get involved and earn a top spot on the list. Thank you to all who help move our industry forward by sharing your time and expertise.

2025 FALL CONFERENCE RECAP

The DIS Fall Conference kicked off with a Tribute to Rick Gundlach and the research he completed throughout his career.

Dr. Kathy Hayrynen (Aalberts surface technologies) highlighted many of the projects, including key takeaways from Project #43:

- Extent of growth in response to heat treatment is directly related to starting microstructure.
- The need to know the direction and magnitude of growth during heat treatment is very important to the foundry and their customers when heat treatment is offered as a remedy to salvage a casting.
- Growth occurs due to decomposition of pearlite and additional graphite formation
- Graphite is less dense than iron carbide so expansion occurs
- Less growth was observed during full anneal because some pearlite was present – a slower cooling rate would have resulted in more ferrite
- The austenite to pearlite transformation has a small amount of graphitization.



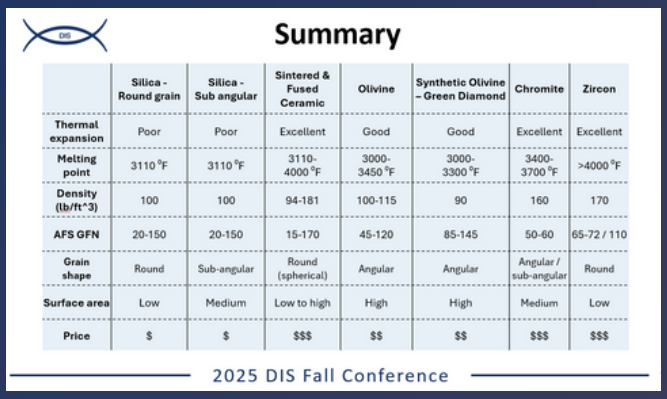
Grade	% Linear Growth	% Pearlite
In Subcritical Annealing		
D7703	0.43%	84.4
D5506	0.29%	50
In Supercritical (Full) Annealing		
D7703	0.32%	84.4
D5506	0.33%	50
In Normalizing		
D4512	0.068%	6.7
D5506	0.177%	50

Visit the DIS website to learn more about project 43:

PROJECT #43

Many members look forward to our ongoing Element Series, which began with Aluminum and Sulfur. Trevor Beach (Betz Industries) presented on Vanadium and explained that Vanadium, often introduced through steel scrap, can strengthen ductile iron through pearlite refinement but requires careful inoculation control to prevent carbide formation and maintain desirable casting properties. He also shared a case study he experienced firsthand.

SAND PANEL SUMMARY



	Silica - Round grain	Silica - Sub angular	Sintered & Fused Ceramic	Olivine	Synthetic Olivine – Green Diamond	Chromite	Zircon
Thermal expansion	Poor	Poor	Excellent	Good	Good	Excellent	Excellent
Melting point	3110 °F	3110 °F	3110-4000 °F	3000-3450 °F	3000-3300 °F	3400-3700 °F	>4000 °F
Density (lb/ft^3)	100	100	94-181	100-115	90	160	170
AFS GFN	20-150	20-150	15-170	45-120	85-145	50-60	65-72 / 110
Grain shape	Round	Sub-angular	Round (spherical)	Angular	Angular	Angular / sub-angular	Round
Surface area	Low	Medium	Low to high	High	High	Medium	Low
Price	$	$	$$$	$$	$$	$$$	$$$

During the Sand Panel, Tanja Parviainen (Romac Industries) discussed different types of sands and some of their physical properties. Dorothy Havlin (The Nugent Sand Company) dove into bulk density and surface area, and the effects of sand casting properties and casting defects. Lastly, Pete Gravunder (Badger Mining Corporation) honed in on how to measure grain fineness, the importance of proper sampling and prep, and new technologies in measuring equipment.

MEASURING CARBON DISSOLUTION

Do you ever wish you had more calculus in your day-to-day life? Rob Umpleby (Miller & Co.) found a way to make calculus and carbon exciting! He shared his work on starting to measure Carbon Dissolution in iron, noting that while more research is needed, he has begun to quantify the rate, taking into account factors like sizing.

TECHNICAL MARKETING

DIS aims to bring relevant topics outside of just metallurgy. Sarah Timm did a phenomenal job discussing the importance of marketing in manufacturing and ways foundries can tell their story. Including how every employee contributes to brand reception and importance of being authentic.

UPDATES IN INDUCTION MELTING

Mike Looby (Inductotherm) presented on modern induction melting systems, highlighting the performance and efficiency benefits of high-power, medium-frequency batch melting compared with line-frequency heel melting.

ADDITIONAL PRESENTATIONS

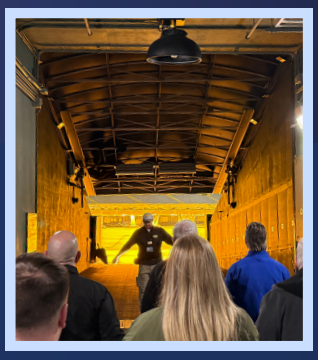
Jack Swanson (Ironton Enterprises LLC) spoke on merchant pig iron, presenting what it is and how it could potentially be developed domestically. Dylan Dickey (Northstar 3D) discussed how to design out finishing steps, highlighting the importance of identifying current and future equipment and processes, and engaging tooling to best match capabilities and resources throughout the entire process.

Wayne Siefert (Oshkosh Corp.) and Kevin Clark (Green Packaging)presented on protecting your casting surface. After all, there's no point in producing a perfect casting only to allow rust or poor paint. Kevin spoke as an OEM who purchases castings and highlighted cleaning, pretreating, priming, and top coating of ferrous and aluminum castings, including both commercial and mil-spec coatings such as spray-applied epoxy primer, e-coat, and powder coat.

The conference wrapped up with the BEST episode of Jeopardy in the history of the show. While contestants were quizzed on their knowledge of ductile iron, Eric Nelson provided additional insights on each topic to help educate the audience.

Thank you to everyone who attended!

LAMBEAU TOUR



THANK YOU FALL CONFERENCE SPONSORS

surface technologies aalberts

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RESEARCH PROJECTS

PROJECT #68: PRODUCTION OF SAMPLES SUITABLE FOR SPECTROMETER REFERENCE MATERIALS

Lyle Heberling, Iron Casting Research Institute, Inc., presented on DIS Project 68 in Owensboro, KY, at the 2025 Spring Conference.

His presentation covered the equipment and methods used in the production and testing of the sample pieces. He discussed the analysis of the data obtained, validating the homogeneity of of the samples, and shared lessons learned along with recommendations for the future use of this work.

The final revision of the paper is currently in process, and we appreciate the efforts of our paper reviewers!

PROJECT #69: EFFECTIVELY UTILIZING HBI IN DUCTILE IRON

This project spearheaded by Dr. Robert Tuttle, is a study on how HBI can be used efficiently in ductile iron production. It will be presented at the 2026 DIS Spring Conference in South Bend, IN this June.

The paper has been submitted and we are looking for 3 more paper reviewers. Reach out to our Tech Director at techdirector@ductile.org if you'd like to review.

AWARD RECIPIENTS

Congratulations to Dr. Kathy Hayrynen on receiving the DIS Lifetime Achievement Award!

With over 30 years of dedication to the ductile iron community, Kathy has demonstrated exceptional leadership and expertise in ferrous metallurgy and ADI. Her decades of service, chairing subcommittees, serving on the Board, presenting at seminars, and mentoring members, continue to strengthen and support the Society.

Congratulations to Rob Logan, Technical Services Manager at Elkem, on receiving the DIS Lifetime Achievement Award!

Rob brings 35 years of metalcasting expertise spanning technical services, R&D, product development, process management, and service on the DIS Board. He has driven innovation, advanced industry best practices, and mentored countless professionals, leaving a lasting impact on the ductile iron community!

WELCOME NEW BOARD MEMBERS

Dorothy Havlin

Technical Sales Engineer at The Nugent Sand Company, Inc.

With over 35 years in the foundry industry, Dorothy brings a wealth of experience in R&D, technical service, product management, procurement, EH&S, and technical sales, offering valuable insight into both the technical and operational sides of the industry.

Anthony Price

Plant Manager at Kent Foundry

Anthony is an experienced plant and project manager with deep expertise in foundry operations, engineering management, and process improvement. He has led cross-functional teams, overseen multimillion-dollar capital projects, strengthened safety cultures, negotiated union contracts, and delivered measurable improvements in productivity, quality, and customer satisfaction.

Mike Riabov

Technical Sales Account Manager at Elkem

Mike brings extensive experience in metallurgy, technical services, and sales management, with previous leadership roles at Neenah Foundry Co. and Citation Corporation. His deep industry knowledge and hands-on experience make him a valuable addition to the Board.

RESEARCH COMMITTEE MEETING

The word of the meeting and sub-committees has been "Galvenized". Whether it is galvanizing ductile iron or remelting galvanized steel.

The committee to continues to generate requests for proposal. The DIS Research Committee has flipped the traditional research solicitation model. Instead of waiting for universities and research partners to propose what they want to study, we are now leading the conversation. This year, our committees have developed a member-driven Requests for Proposals (RFPs)—topics that originated organically from the needs, challenges, and ideas shared by our DIS membership.

This approach ensures that the research we support is directly aligned with the priorities of the ductile iron community and delivers the highest value back to our industry.

To view the full list of current RFPs, please visit the DIS website.

SAVE THE DATE

2026 SPRING CONFERENCE

Join us June 9-11 in South Bend, IN for the 2026 DIS Spring Conference hosted by Rochester Metal Products.

RMP ROCHESTER METAL PRODUCTS

TECHNICAL SESSION TOPICS INCLUDE:

- HBI (Hot Briquetted Iron) Research Project – Final Report
- Element Series: Chromium (Cr) — Negative & Positive Effects
- Thermal Analysis: Connections to Mechanical Properties
- Laser Surface Enhancement Technologies for Ductile Iron
- Foundry 4.0: Case Study Panel
- Heat Treating: Properties, Process Selection & Optimization
- Case Study: Verifying Magnesium (Mg) Treatment
- Correlation Study: Simulation vs. Real-World Properties (Solidification Modeling)
- Human Resources: Apprenticeship Programs, DOE for Manufacturing (pending confirmation).

REGISTER TODAY