
**FundiExpo, Monterrey, Mexico**

Back on September 24-26, 2014 the Ductile Iron Society booth was on the road again. We were attending the 2014 FundiExpo in Monterrey Mexico at the Monterrey Convention Center. Thanks go out to Patricio Gil and his fellow employees at Blackhawk de Mexico for assisting in making this a safe and enjoyable exhibition. Also we want to make a special shout-out to Carlos de la Garza, Rodrigo Calderon and Luis Macias of Blackhawk for helping out in the booth and looking after the logistics of getting the booth delivered and ready. Also Gene Muratore (retired Rio Tinto) along with Dave Williams (ASI International) and Al Alagarsamy (consultant) accompanied us to this show. All three volunteered to make presentations at the show. All three presentations were very well attended.

This year’s chairman was Fernando Morales, one of our DIS members, Fundicion Aguilas in Santa Catarina. We also would like to thank Fernando for his assistance in getting the DIS to display at FundiExpo.
From L to R, Jim Wood (DIS Executive Director) Gene Muratore (retired Rio Tinto and DIS Consultant), Christof Heisser (MAGMA) and Dave Williams (ASI International)

As we all know here at the Ductile Iron Society, whenever you are visiting Mexico they always like to close events big. Here is a picture of the closing ceremonies at the FundiExpo and let me tell you it was loud!!

Al Alagarsamy (Consultant)
At the end of this show the DIS picked up 2 new members. Both were Associate Members. They are Badger Mining and Auburn Analytical. More on both of these, later in the news in the Decatur meeting section.

Closing Ceremonies

Design with Ductile Iron Seminar

The Ductile Iron Society’s DIMG (Ductile Iron Marketing Group) held their first ever design seminar the day before the Fall DIS Meeting at the Decatur Conference Center in Decatur, IL. There were 39 attendees and we felt that it was a great success being the first time.

John Lewensky (Pure Power) Kicks the seminar off
The instructors were John Lewensky (Pure Power Technologies) who is the chair of the DIMG and provided the introductions and kick-off to this seminar. Gene Muratore (retired Rio Tinto) covered metallurgy and standards, Dave Gilson (SinterCast) covered Compacted Graphite Iron, Casting Design for Ductile Iron and Conversions were covered by Vadim Pikhovich (MAGMA), Tim Heagney (Dura-Bar) covered Machining Ductile Iron, Kathy Hayrynen (Applied Process) covered Heat Treating and Jim Wood of the DIS concluded with an introduction to the Ductile Iron Society.

**DIS Fall T&O Meeting – Decatur, IL**

The Ductile Iron Society held their Fall T & O Meeting in Decatur, IL at the Decatur Conference Center and Hotel from October 29 to 31, 2014. On Wednesday October 29th, we started the 3 days with the DIS Research Committee meeting from 8am to 12 noon.

**DIS Research Committee Meeting**

There were 46 members and 2 guests that attended. The other 4 operating committees held their meetings from 1:00pm to 3:00pm and the newly formed DIS MetalCasting Forum was held from 3:00pm to 5:00pm. At the same time the DIS
Board of Directors held their meeting to review the past fiscal 2013/14 year’s closing financial report. The Board approved it as presented.

On Thursday October 30th was the technical presentations session. The attendees heard from 5 different speakers in the morning and our Jim Csonka from Hickman, Williams & Company was our technical chair. In the afternoon the attendees received 1 individual presentation and then 2 different panel presentations. Our technical chair for the afternoon session was Kathy Hayrynen of Applied Process. THANKS to both Jim & Kathy for helping out. Also a “shout out” to Lyle Heberling of ICRI, for looking after the audio and video for the day. That completed the technical presentations and a sample is attached to the news. Then the evening was completed with the banquet and a few celebrations.

Mike Galvin (Buck Company) the vice-president of the DIS was our master of ceremonies for the banquet. Mike was filling in for President Bob O’Rourke of Dura-Bar as he was unable to attend this meeting because he was out of the country. Mike introduced our guests for the meeting. They were Tony Clark of Midvale Industries, Brandon Leatherberry of C.A. Lawton (as of the writing of these minutes, C.A. Lawton has joined the DIS) Sean Betty, Blake Albritton and Perry Nuernberger of...
Nortrak Inc, Jean-Francois Moreau of Soucy-Belgen Foundry from Quebec, Canada and the Board of Directors of our host foundry member, Decatur Foundry.

Mike then introduced and presented the DIS Membership Plaque to Associate Member **Badger Mining Corp** and Mike Rockney. Accompanying Mike was also Steve Ryan who is not in the picture.

L to R, are Jim Wood, Mike Galvin and Mike Rockney

The next new member is **H-Bar USA** (Foundry is located in China) and they are an overseas member due to the location of the foundry and were unable to attend this meeting. Mike then presented **Ancast Industries Ltd** located in Winnipeg, Manitoba, Canada with their DIS membership plaque.

L to R, are Darren Henaire, Jeff Herdman, Mike Galvin, Randy Penner and Jim Wood
Next to receive their DIS new membership plaque was Auburn Analytical and the representative was Matt LaFramboise.

From L to R, are Mike Galvin, Matt LaFramboise and Jim Wood.

Also re-joining the DIS after a short absence were Hunter Machine and Mid-City Foundry.

Mike then asked Jim Csonka (Hickman, Williams & Company) to accompany him and hand-out the DIS token of appreciation to all the morning speakers.

From L to R, are Mike Galvin, Kathy Hayrynen (Applied Process), Jim Csonka and Eric Nelson (Dotson Foundry)
Mike then asked Kathy Hayrynen of Applied Process to accompany him to hand out the DIS token of appreciation to the afternoon speakers. The first was a panel on Pressure Pour Furnace Maintenance.
From L to R, are Jason Wahl of Grede St. Cloud, Kathy Hayrynen, Chad Moder of Brillion Iron Works and Jim McMinn of Allied Mineral Products Also in the panel and missing in the above picture was Mike Cole of Waupaca Foundry #4. Here he is during his presentation.

Mike Cole of Waupaca Plant #4
The next panel was Pouring Methods for Treated Ductile Iron.

From L to R, are Kathy Hayrynen, Bob Vouk of Grede St. Cloud, Greg Selip of Ellwood Engineered Castings, Brandon Reneau of Caterpillar and Jay Zins of Dotson Foundry

Mike then had the honor to ask Doug White (Elkem Metals) to come to the front for his DIS Research Committee - Process Sub-Committee Chair service award.

Doug White
Next up was Rob Logan (Elkem Metals) who received his service award as the DIS Research Committee - Properties Sub-Committee Chair. Big THANKS go out to both gentlemen for serving at this capacity for the last three years.

From L to R, Mike Galvin, Rob Logan and Jim Wood

Jim Wood introduced Jim Csonka of Hickman, Williams & Company as the **2014 DIS Member of the Year**. Jim graduated from Case Western Reserve University in Cleveland, Ohio with a degree in Metallurgy and Materials Science Engineering in 1984. He started his career in the foundry business as the metallurgist at EMI Company (renamed from Erie Malleable Iron) from 1984 to 1988. Then in 1988 to 1989, he moved to Ward Manufacturing as the chief metallurgist. After Ward, Jim moved on as the Technical Service Engineer/Sales at American Alloys from 1989 to 1993. He then was hired at Hickman, Williams & Company in 1993 and currently is part of the Technical Group and responsible for managing Ferrosilicon Alloys, Inoculants and Ceramic Filters. He was on the Board of Directors of the DIS from 2007 to 2010, has been on the DIS Research Committee since 1989, and since 2007 to current day he is the Chair of the DIS College and University Relations Committee.
Jim has presented at AFS local chapters, AFS National Conventions, and DIS meetings multiple times. CONGRATULATIONS Jim!

Kathy Hayrynen of Applied Process introduced Eugene Muratore, retired Rio Tinto, who received the DIS Lifetime Achievement Award. Gene also graduated from Case Western Reserve University in Cleveland, Ohio with a Bachelor of Science in Metallurgy in 1970. Gene spent 20 years as an operating metallurgist for three foundries in the production of gray and ductile iron castings. Gene was the senior foundry metallurgist for Rio Tinto Iron and Titanium from 1991 to his retirement in the spring of 2013. Gene was responsible for technical service to the US, Canada, Mexico and parts of Asia. He is active on 6 AFS technical committees, a board member of the Chicago chapter of the AFS, and a member of the AFS Research Board.
From L to R, Kim Blackmar, Gene Muratore, Mike Galvin, Jim Wood and Kathy Hayrynen

Award Recipients Gene Muratore & Jim Csonka

Mike then asked our host foundry for this Fall T&O Meeting, Terry Young, President of Decatur Foundry to come to the front and make a brief presentation about the history of the family owned Decatur Foundry.
Thanks to all the folks from Decatur Foundry who helped organize the tour and hospitality that was given to all our attendees.

Please keep an eye on the DIS website at [www.ductile.org](http://www.ductile.org) for more events for 2015. The DIS will be holding its next Production Seminar on February 10 & 11, 2015 at the Hilton Garden Inn at Chicago O’Hare Airport. The DIS will also be exhibiting (Booth #125 at the 119th AFS Metalcasting Congress in Columbus, OH from April 21-23, 2015. Also mark your calendar now for the DIS Annual Meeting at
the Grand Geneva Resort & Spa in Lake Geneva, WI in conjunction with a tour of Dura-Bar in Woodstock, IL.

Also the DIS had 6 students attend the Fall Meeting from 4 different Universities. It is a tradition where the DIS invites students to attend the Fall Meeting and pay 100% of their travel expenses. Each student was required to make a very brief presentation about themselves and their past work experience. Those students were Jared Kerker of Missouri University of Science & Technology, Dika Handayani of Penn State University, Edgar Guzman and Kyle Patterson of the University of Northern Iowa and David Bruenig and Nathan Peplinski of the University of Wisconsin-Platteville.

A.M. SESSION SPEAKER BIOS

DIS RESEARCH PROJ. #28 MECHANICAL PROPERTIES OF DUCTILE AFTER LONG TIMES AT ELEVATED TEMPERATURES LINK

KATHY HAYRYNEN
KATHY HAS A BSc, MS AND PhD IN METALLURGICAL ENGINEERING FROM MICHIGAN TECHNOLOGICAL UNIVERSITY. HER GRADUATE WORK FOCUSED ON PRODUCTION OF DUCTILE IRON AND ADI. FOLLOWING A POST-DOCTORAL RESEARCH POSITION ON AUSFORMED/AUSTEMPERED DUCTILE, KATHY JOINED THE AP COMPANIES IN 1995. SHE IS CURRENTLY THE DIRECTOR OF RESEARCH & DEVELOPMENT.

KATHY HAS BEEN AN ACTIVE MEMBER OF THE DIS FOR MANY YEARS. SHE IS A MEMBER OF THE RESEARCH COMMITTEE AND IS A PAST CHAIR OF THE PROPERTIES SUBCOMMITTEE. SHE IS ALSO A FORMER DIRECTOR OF THE DIS.
KATHY HAS RECEIVED SEVERAL INDUSTRY/ACADEMIC HONORS INCLUDING: AN AFS AWARD OF SCIENTIFIC MERIT, AN AFS RAY H. WITT MANAGEMENT AWARD, 4 BEST PAPER AWARDS FROM THE AFS CAST IRON DIVISION, THE DUCTILE IRON SOCIETY ANNUAL AWARD, ASM FELLOW, ASM EDUCATION FOUNDATION GEORGE ROBERTS AWARD AND INDUCTION INTO THE MATERIALS SCIENCE & ENGINEERING ACADEMY AT MICHIGAN TECH. SHE IS ALSO A PAST PRESIDENT OF THE FOUNDRY EDUCATIONAL FOUNDATION.

ERIC NELSON

ERIC GRADUATED IN 2000 WITH A DEGREE IN METALLURGICAL ENGINEERING FROM THE SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY. HE TOOK A TWO YEAR STINT AS A PEACE CORPS VOLUNTEER IN THE REPUBLIC OF VANUATA, SPENT A SHORT TIME AT US STEEL AND IN R&D AT RED WING SHOE COMPANY BEFORE LANDING AT DOTSON.

ERIC HAS WORKED THROUGHOUT THE FOUNDRY INCLUDING POURING IRON, OPERATING FURNACES, WORKING IN THE LAB, QUALITY AND SAND AND METALLURGY. HIS CURRENT ROLE IS THE TECHNOLOGY MANAGER, WHO’S TEAM IS RESPONSIBLE FOR SAND AND METALLURGY, PLANT ENGINEERING AND MAINTENANCE.

THE DIS WELCOMES KATHY WHO IS HERE WITH ERIC NELSON OF DOTSON FOUNDRY TO TALK ABOUT “DIS RESEARCH PROJECT #28 – MECHANICAL PROPERTIES OF DUCTILE AFTER LONG TIMES AT ELEVATED TEMPERATURES”
PAOLO PERRUCCI

PAOLO GRADUATED IN 2006 WITH HIS DEGREE IN INDUSTRIAL ENGINEERING FROM THE UNIVERSITY OF PADOVA IN ITALY. HE THEN WENT TO FIRST JOB AS TECHNICAL SALES ENGINEER, APPLICATION ENGINEER, PROCESS ENGINEERING CONSULTANT, PROJECT MANAGER AND THERMAL ANALYSIS SPECIALIST AT PROSERVICE TECHNOLOGY FOUNDRY DIVISION IN ITALY. THEN IN 2013 HE BECAME THE PRODUCT MANAGER FERROUS METAL TREATMENT AT FOSECO IN SAO PAULO IN BRAZIL. PAOLO THEN MOVED TO THE USA IN AUGUST OF 2014 AS THE FLOW CONTROL SYSTEMS MANAGER AT FOSECO IN CLEVELAND, OHIO. PAOLO HAS TRAVELED ALL OVER THE WORLD TO 17 DIFFERENT COUNTRIES. HE CAN SPEAK 5 DIFFERENT LANGUAGES INCLUDING ENGLISH, PORTUGUESE, SPANISH, FRENCH AND GERMAN. HE HAS CURRENTLY ONE FORMAL PUBLICATION AND IS WAITING FOR PERMISSION ON THE SECOND ONE TO PUBLISH.

THE DIS WELCOMES PAOLO WHO IS HERE TO TALK ABOUT “DYNAMIC CONTROL OF CAST IRON TECHNOLOGY”

GAIL STULTZ

GAIL IS CURRENTLY THE NDT PRODUCT MANAGER FOR THE MODAL SHOP LOCATED IN CINNCINATTI, OHIO. GAIL HAS 32 YEARS OF EXPERIENCE WITH SOUND AND VIBRATION MEASUREMENT. HE ALSO HAS 20 YEARS OF EXPERIENCE WITH NDT RESONANT METHOD.
THE DIS WELCOMES GAIL WHO IS HERE TO TALK ABOUT “RESONANT INSPECTION OF DUCTILE IRON COMPONENTS – NODULARITY INTERNAL/EXTERNAL FLAWS, AND NVH”

(PRESENTATION NOT AVAILABLE)

RICK GUNDLACH


THE DIS WELCOMES RICK BACK TO TALK TO US ABOUT “DIS RESEARCH PROJECT #49 – ANALYSIS OF PEARLITIC DUCTILE IRON WITH ENHANCED MECHANICAL PROPERTIES”

(PRESENTATION NOT AVAILABLE)

PETER PAULIN

PETER GRADUATED WITH A BSc IN AERONAUTICAL SCIENCE FROM EMBRY RIDDLE UNIVERSITY IN PRESCOTT, AZ AND IS CERTIFIED AS AN ACCREDITED ASSET MANAGEMENT SPECIALIST. PETE IS A PRODUCTIVE ENTREPRENEUR AND INVENTOR BASED IN CENTRAL ILLINOIS. PREVIOUSLY EMPLOYED AS A PILOT FOR MEDEVAC, HE WAS FLYING LEARJETS IN THE EARLY 1990’S BEFORE READING AN ARTICLE ABOUT THE INCREASE IN TOOL LIFE FOLLOWING CRYOGENIC FREEZING PROCESS. HE DECIDED TO WRITE A COMPUTER PROGRAM TO ENSURE CONSISTENCY IN THE PROCESS RESULTS, AND SUBSEQUENTLY CREATED THE WORLD’S FIRST COMPUTER-CONTROLLED CRYOGENIC PROCESSOR. PAULIN’S INVENTION FOUNDED A WORLDWIDE INDUSTRY IN DEEP CRYOGENIC PROCESSING, RESULTING IN A CONSISTENT VALUE PROPOSITION OF STEEL LASTING 300% LONGER FOR 20% COST. HIS
INVENTION WAS FEATURED ON THE DISCOVERY CHANNEL IN 1996 WITH A SEGMENT ON ITS “NEXT STEP” SHOW, WHICH SET THE ALL TIME VIEWER RESPONSE RECORD FOR THE SHOW. PETE IS MARRIED AND HAS 2 DOGS AND ENJOYS SMOKING BARBEQUE RIBS AND OTHER CULINARY RECIPES FOR HIS FRIENDS AND FAMILY AT HIS FAMILY CABIN.

THE DIS WELCOMES PETE TO TALK TO US ABOUT “CRYOGENICS DEMYSTIFIED: SPEND A DIME, SAVE A DOLLAR”

P.M. SESSION SPEAKER BIOS

PRESSURE POUR FURNACE MAINTENANCE PANEL

PRESSURE POUR MAINTENANCE LINK
JASON WAHL

JASON STARTED HIS CAREER AT GREDE ST. CLOUD IN 1998 AS THE “WEEKEND MELT UTILITY”. THE MAJORITY OF HIS RESPONSIBILITIES WERE TO MAINTAIN THE PRESSURE POUR FURNACES AND ENSURE THE MELT DEPARTMENT WAS READY FOR START UP. HE WAS PROMOTED TO THE “WEEKEND CREW LEAD” AND DURING THIS TIME HE WAS ABLE TO INVENT TOOLS AND PROCEDURES ALONG WITH EQUIPMENT UPGRADES THAT HAVE INCREASED EQUIPMENT AND EMPLOYEE EFFICIENCY, AS WELL AS MAJOR ERGONOMIC IMPROVEMENTS. IN FEBRUARY OF THIS YEAR HE WAS PROMOTED TO THE SECOND SHIFT MELT SUPERVISOR POSITION.

THE DIS WELCOMES JASON WHO IS HERE TO TALK ABOUT “PRESSURE POUR MAINTENANCE”
MIKE COLE

MIKE, OR BETTER KNOWN BY HIS FELLOW EMPLOYEES AS “MICK”, HAS BEEN EMPLOYED AT WAUPACA FOUNDRY MARINETTE, WI FOR 20 YEARS. DURING THIS TIME HE HAS BEEN A MEMBER OF THE MELTING DEPARTMENT FOR 18 YEARS. HE WAS THE 3\textsuperscript{RD} SHIFT MELT DECK FOREMAN FOR 8 YEARS THEN 1\textsuperscript{ST} SHIFT REFRACTORY FOREMAN FOR 7 YEARS AND HE IS NOW BACK TO THE 1\textsuperscript{ST} SHIFT MELT DECK FOREMAN. MICK IS MARRIED WITH 3 KIDS.

THE DIS WELCOMES MICK WHO IS HERE TO TALK ABOUT “REFRACTORY MAINTENANCE OF A THROAT LESS PRESSURE POUR FURNACE HOLDING TREATED DUCTILE IRON”

CHAD MODER

CHAD EARNED HIS BS DEGREE FROM THE UNIVERSITY OF WISCONSIN-PLATTEVILLE IN INDUSTRIAL TECHNOLOGY-EMPHASIZING IN MATERIALS. HE HAS HIS MBA FROM THE UNIVERSITY OF WISCONSIN-OSHKOSH. CHAD SPENT 8 YEARS OF HIS CAREER AT NEENAH FOUNDRY WHERE HE WORKED IN VARIOUS ROLES INCLUDING MANUFACTURING SUPERVISOR, TECHNICAL SUPERVISOR, MELT SUPERINTENDENT AND QUALITY MANAGER. CHAD THEN SPENT 4 YEARS AT AP WESTSHORE, 1 AS ASSISTANT PLANT MANAGER AND 2 AS THE PLANT MANAGER. CHAD HAS BEEN IN HIS CURRENT ROLE FOR ABOUT 8 MONTHS AT BRILLION IRON WORKS WHERE HE IS IN CHARGE OF METALLURGY, BUT ALSO SPENDS A LOT OF TIME IN FOUNDRY ENGINEERING.
IN HIS SPARE TIME CHAD ENJOYS ALL ASPECTS OF THE OUTDOORS, SPECIFICALLY SPENDING TIME AT HIS FAMILY’S LAND IN NORTHERN WISCONSIN WITH HIS WIFE AND DAUGHTERS.

THE DIS WELCOMES CHAD WHO IS HERE TO TALK ABOUT “MONITORING AND MAINTENANCE OF A PRESSURE POUR FURNACE”

**CURREN REFRACTORY OPTIONS IN PRESSURE POUR FURNACES** - [Link]

JIM MCMINN

JIM GRADUATED FROM SPRING GARDEN COLLEGE IN PHILADELPHIA IN 1986 WITH HIS BST IN ELECTRONICS ENGINEERING. HIS CAREER STARTED WITH INDUSTRIAL SERVICES INC. IN LANCASTER, PA FROM 1986 TO 1987. HE THEN MOVED ON TO ALLIED MINERAL PRODUCTS IN JANUARY 1987 TO 1990. HE HELD THE POSITION OF ENGINEERING AND FIELD SERVICE AND ALSO THE SALES REPRESENTATIVE IN INDIANA. IN SEPTEMBER OF 1990 HE WENT TO FIRE BRICK ENGINEERS AS THE SALES REPRESENTATIVE IN INDIANA AND THEN CONSTRUCTION MANAGER COVERING THE EASTERN USA. JIM THEN MOVED BACK TO ALLIED MINERAL PRODUCTS IN APRIL 2008 AND HAS HELD THE POSITION OF REGIONAL MANAGER INDUSTRIAL SALES AND VP DOMESTIC FOUNDRY SALES. HE IS A MEMBER OF THE DIS AND AFS. HE IS MARRIED WITH A DAUGHTER ATTENDING THE UNIVERSITY OF SOUTH CAROLINA AND A SON IN ELEMENTARY SCHOOL IN THEIR HOME TOWN OF DUBLIN, OHIO.

THE DIS WELCOMES JIM WHO IS HERE TO TALK ABOUT “CURRENT REFRACTORY OPTIONS IN PRESSURE POUR FURNACES”
ELI DAVID

ELI GRADUATED FROM THE ISRAEL INSTITUTE OF TECHNOLOGY WITH HIS BACHELORS DEGREE IN MATERIALS ENGINEERING AND KENT STATE UNIVERSITY WITH HIS MASTERS OF BUSINESS IN FINANCE. ELI STARTED HIS FOUNDRY CAREER AT THE QUALITY CASTINGS COMPANY IN ORVILLE, OHIO AS CHIEF METALLURGIST AND TECHNICAL DIRECTOR, WHERE HE WAS EMPLOYED FOR SLIGHTLY OVER 10 YEARS BETWEEN 1979 AND 1989. THIS POSITION PROVIDED EXTENSIVE EXPOSURE TO MANUFACTURING, METALLURGICAL AND QUALITY ASPECTS OF PRODUCTION OF GRAY, DUCTILE AND MAGNESIUM CASTINGS. ELI IS CURRENTLY AND FOR THE LAST 11 YEARS HAS BEEN EMPLOYED BY GLOBE METALLURGICAL INC. AS GENERAL MANAGER FOR FOUNDRY PRODUCTS. PRIOR TO THIS POSITION ELI WAS TECHNICAL MANAGER FOR GLOBE BETWEEN 1989 AND 2003. HE HAS MADE NUMEROUS PRESENTATIONS AT AFS AND DIS MEETINGS ON VARIOUS METALLURGICAL AND OTHER CAST IRON FOUNDRY RELATED TOPICS. ELI HOLDS A PATENT AS CO-INVENTOR OF THE FLEXIPOR PROCESS (AN INMOLD TREATMENT METHOD FOR THE PRODUCTION OF DUCTILE IRON)

THE DIS WELCOMES ELI WHO IS HERE TO TALK ABOUT “RAW MATERIALS AVAILABILITY – PAST, PRESENT, FUTURE AND IMPACT ON FERROALLOYS”
POURING METHODS FOR TREATED DUCTILE IRON PANEL

AUTOMATED POURING LINK

BOB VOUK


THE DIS WELCOMES BOB WHO IS HERE TO TALK ABOUT “AUTOMATED POURING”

BOTTOM POURING LINK

GREG SELIP

GREG GRADUATED FROM CASE WESTERN RESERVE UNIVERSITY WITH A BSc IN METALLURGICAL ENGINEERING. HE IS CURRENTLY THE VP TECHNICAL SERVICES FOR ELLWOOD ENGINEERED CASTINGS IN HUBBARD, OHIO. GREG STARTED HIS CAREER IN THE MANUFACTURING MANAGEMENT PROGRAM AT GENERAL ELECTRIC’S ENGINEERING CAST PRODUCTS DIVISION. SUBSEQUENTLY, HE HELD POSITIONS OF FOUNDRY MANAGER, VP FOUNDRY OPERATIONS, AND VP MANUFACTURING AT IDEX

THE DIS WELCOMES GREG WHO IS HERE TO TALK ABOUT “BOTTOM POURING”

POURING WITH TEAPOT AND LIP STYLE LADLES - LINK
BRANDON RENEAU

BRANDON GRADUATED FROM THE UNIVERSITY OF MISSOURI – ROLLA WITH A BACHELOR OF SCIENCE IN METALLURGICAL ENGINEERING. HE WORKED FOR INTERMET FOUNDRY IN DECATUR, IL FOR 4 YEARS, AND THEN INTERMET FOUNDRY IN HAVANA FOR 4 YEARS AND CURRENTLY HE IS THE PLANT METALLURGIST AND MELTING GROUP MANAGER AT CATERPILLAR MAPLETON FOUNDRY FOR THE LAST 10 YEARS. BRANDON IS A MEMBER OF THE 5R & 5P COMMITTEES AT THE AFS AND DIS RESEARCH COMMITTEE CHAIRMAN. HE HAS BEEN A PROACTIVE SUPPORTER OF AFS AND DIS RESEARCH BY CASTING SAMPLES AT CAT.

THE DIS WELCOMES BRANDON WHO IS HERE TO TALK ABOUT “POURING WITH TEAPOT AND LIP STYLE LADLES”
VIRTUAL NOZZLE TEAPOT SPOUT LIP POUR - LINK

JAY ZINS

JAY GRADUATED IN 1976 FROM MUSKEGON COMMUNITY COLLEGE. HE HAS WORKED IN THE FOUNDRY INDUSTRY FOR OVER 40 YEARS IN VARIOUS CAPACITIES. HE IS CURRENTLY A MEMBER OF THE DIS RESEARCH COMMITTEE. JAY IS CURRENTLY THE PROCESS CONTROL MANAGER AT DOTSON IRON CASTINGS IN MANKATO MINNESOTA.

THE DIS WELCOMES JAY WHO IS HERE TO TALK ABOUT “VIRTUAL NOZZLE TEAPOT SPOUT LIP POUR”
FEF College Industry Conference, Chicago, IL

The 2014 version of the FEF CIC was held at the Westin Hotel on Michigan Avenue in downtown Chicago from November 20-21st. The DIS once again with the assistance of the DIS College & University Committee had a tabletop display at the Industry Session on Thursday evening. Again Jim Wood with the assistance of Pete Guidi and Kathy Hayrynen handed out the t-shirts. The students once again enjoyed the handouts. This year’s slogan on the shirt was “Ductile Iron Has Balls”. Thanks to the following DIS member companies who donated $100 each to cover the cost of the production of the shirts. There were Allied Mineral Products, Applied Process, ASI International, ASK Chemical, Buck Company, CoorsTek, Dotson Foundry, Dura-Bar, Elkem, Fairmount Santrol, FerroPem, Foseco, Globe Metallurgical, Green Packaging, HMAC, Hickman, Williams & Company, MAGMA, PurePower Technologies, Rochester Metal Products and Waupaca Foundry.

On Friday, November 21 during the luncheon, Pete Guidi and Jim Wood had the honor of presenting this year’s Keith Millis Scholarship awards to 4 deserving students. Thanks again to John (Chip) Keough and Gary Gigante for selecting the students. Four scholarships at $3000 each went to Samuel Edwards (Key Professor Alan Druschitz) of Virginia Tech, Devan Denney (Key Professor Russ Rosmait) of Pittsburg State, Alan Gooden (Key Professor Charlie Monroe) of the University of Alabama-Birmingham, Brandon Wervey (Key Professor Kyle Metzloff) of the University of Wisconsin-Platteville. Congratulations to all four students.
Retirement Notices

Bruce Blatzer –
Iron Casting Research Institute

Bruce graduated from the University of Alabama with a Bachelor of Science in Metallurgical Engineering and MBA from Georgia State University. Bruce worked for Caterpillar and Intermet Foundries before joining the ICRI in 1996 and becoming the Executive Director 4 years later. Bruce was very active with different committees within the AFS and has attended all the DIS meetings for the last 6 years. Thanks to Bruce for operating the projector during those meetings. The DIS wishes all the best to Bruce in his retirement as of January 1, 2015.

Bill Sorenson –
Foundry Education Foundation

In April of 2015, Bill Sorenson will have guided the Foundry Educational Foundation as Executive Director for over 32 years. Bill will be retiring in January 2015. He will continue in a supportive role as Executive Advisor until after the FEF Board of Directors meeting on May 5-6, 2015. Bill was inducted in Foundry M&T’s Hall of Honor in 2008, joining a list of notable leaders in the Foundry Industry. During the World Foundry Conference in Harrogate, England in 2006, Bill had the distinct honor of receiving the VK Medal for excellence in metal casting education from the Foundry Educational
Trust in the UK. Bill was the first American and first non-academic leader to receive this medal. The DIS wishes all the best to Bill in his retirement as of January 1, 2015.

Jim Wood
DIS Executive Director
LIVONIA, Mich. Sept. 17, 2014—Applied Process Inc. (AP) has taken on High Street Capital (HSC), Chicago, Ill., as a majority interest equity partner. This move adds essential resources that will not only expand the company’s capabilities, but will also continue to improve their industry-leading service and allow them to expand even more geographically.

High Street Capital is a private equity firm that has been partnering with and growing successful companies since 1997. High Street finds differentiated companies and provides equity and experience to build winning businesses with strong growth prospects.

Dick McClain, an HSC principal, explained that they are investing in Applied Process because they believe in the management, the people and the business. “The High Street Capital partners are looking forward to working with the world-class leadership team and employees at AP and to continue ‘growing the pie for Austempering,’” he said.

John Keough, AP’s founder, stated, “We are pleased to have a strong partner in High Street Capital going forward. I plan, as always, to be actively engaged in the growth of the business and the profitable conversion of components from one material/process combination to a better, faster and cheaper one.”

Applied Process Inc. was incorporated in 1984 as a stand-alone division of Atmosphere Group in Wixom, Mich., before President John (Chip) R. Keough moved them to their current address in Livonia. In 1993, Keough transitioned out of Atmosphere Group, and he, along with his wife and kids, became 100 percent owners. Because of the demand for AP’s Austemper-focused technologies, the company expanded to AP Westshore in Oshkosh, Wisc. Recently they have added a Monster Parts™ plant in Oshkosh.
Applied Process President John Wagner said, “Austempering offers our customers a cost effective way to obtain stronger, lighter and less expensive parts. We have been able to offer this practical and vendible experience in many different countries as we keep expanding our international network to places like Australia, England, Canada, China and India.”

Applied Process’s extensive global network of industrial and technical contacts and resources are the backbone to AP’s reputation as a worldwide leader in Austempering technology.

**About Applied Process:** Applied Process Inc. is a worldwide family of commercial heat treaters specializing in the Austempering process. Applied Process makes iron and steel parts tougher, stronger, lighter, quieter and more wear resistant and is the world leader in the processing of Austempered Ductile Iron (ADI). For further information visit [www.appliedprocess.com](http://www.appliedprocess.com)
Impro Industries adopts SinterCast technology for industrial power export production

- Mini-System 3000 to be installed at Impro Industries foundry in China
- Series production of industrial power engine components for the export market
- Continued growth in Asia, with fourteen installations in China, Japan and Korea

[Stockholm, 25 August 2014] - Following successful product development and product validation, Impro Industries (Yixing) Company, Ltd. has acquired a SinterCast licence in preparation for the start of series production of Compacted Graphite Iron (CGI) industrial power components. Under the terms of the agreement, SinterCast will supply a Mini-System 3000 process control system and will provide engineering support to establish a robust process for the production of CGI components conforming to the international ISO 16112 standard. The SinterCast installation will enable Impro Industries, which specialises in heavy-duty and industrial power castings, to produce CGI components for the export market at its foundry in Yixing, Shiangsu, China. The Mini-System 3000 will be shipped during August 2014 and is planned to be commissioned during the fourth quarter of 2014. Initial series production is expected to begin before year-end.

"This agreement marks our eighth installation in China and our fourteenth installation in the important Asian market, broadening our presence and brand awareness, and providing new opportunities to increase our production of components in the industrial power sector" said Dr Steve Dawson, President & CEO of SinterCast. "Approximately 10% of SinterCast's current series production is derived from components other than automotive cylinder blocks and heads, and this installation reinforces the opportunity to maintain this contribution level as the core automotive market continues to grow."
We look forward to supporting the series production launch of the first component destined for the export market, and to increasing our presence in the off-road, construction, agriculture, rail, marine and stationary power industries."

For more information:

**Dr. Steve Dawson**
President & CEO
**SinterCast AB (publ)**
Tel: +46 8 660 7750
e-mail: steve.dawson@sintercast.com
NEWS BRIEFS

How New Spectrometer Technologies Substantially Cut Operating Costs — New Whitepaper From SPECTRO Analytical Instruments

Kleve, November 20, 2014 — A new whitepaper detailing how new ICP-OES spectrometer technologies are substantially cutting operating costs in environmental, industrial, and academic laboratories is available to download from SPECTRO Analytical Instruments at http://icp-oes.spectro.com/blue.

Controlling costs associated with the operation of ICP-OES instruments is a continuing challenge for laboratories, regardless of application, given the variety of operational, maintenance and hidden expenses that dramatically increase their total cost of ownership.

Traditional spectrometers bear the burden of a number of inherent problems in their design. A new whitepaper, titled “How New Spectrometer Technologies Substantially Cut Operating Costs,” explores how engineering innovations have addressed design issues to enable significant savings while improving performance. The advancements, detailed in the paper, include:

- New system designs that deliver improved uptime and throughput while reducing operating costs.
- A unique sealed optical system that abolishes the need for the constant purging of argon or nitrogen, eliminating purge gas consumables cost and purging delays.
- Improved spectrometer technology that removes the need for a separate, external, water-based cooling system along with the associated purchase, installation, power and maintenance costs.
- Innovations in optical technology that improve performance measures such as sensitivity and stability.
- A robust generator design that provides ample power reserves, so it can handle extreme plasma loads, and adapt to quickly changing demands.
Such advancements, according to the whitepaper, cut operating costs by enabling easier, less expensive installation, operation, and maintenance, while improving both ICP-OES performance and usability. Download “How New Spectrometer Technologies Substantially Cut Operating Costs” at http://icp-oes.spectro.com/blue.

The paper is authored by SPECTRO Analytical Instruments, a leading global supplier of analytical instruments for optical emission and X-ray fluorescence spectrometry.

About SPECTRO:

SPECTRO, a unit of the Materials Analysis Division of AMETEK, Inc., manufactures advanced instruments, develops the best solutions for elemental analysis for a broad range of applications, and provides exemplary customer service.

SPECTRO’s products are known for their superior technical capabilities that deliver measurable benefits to the customer. From its foundation in 1979 until today, more than 30,000 analytical instruments have been delivered to customers around the world.

AMETEK, Inc. is a leading global manufacturer of electronic instruments and electromechanical products with over 15,000 colleagues at more than 120 manufacturing and sales and service operations in the United States and 30 other countries around the world.

For more information, contact:

Germany: Tom Milner, Tel: +49-2821-8920
USA Don Goncalves Tel: +1-781-793-9380
E-Mail spectro.info@ametek.com
or visit http://www.spectro.com.
GE Oil & Gas Planning $60M Investment in Lufkin, Texas, Foundry to Better Meet Global Demand for Well Production Equipment and Power Transmission Equipment

• Company Planning Overhaul of 112-Year-Old Foundry
• Upgrades to Improve Production Efficiency, Quality and Delivery Capabilities
• Investment Reflects GE’s Continued Commitment to Lufkin, Texas, Workforce and Community

LUFKIN, TEXAS—November 6, 2014—Seeking to improve and sustain its manufacturing capabilities to meet the growing demand for oil and gas production and power transmission equipment, GE Oil & Gas (NYSE: GE) today announced it plans to invest $60 million in expanding and modernizing its foundry operations in Lufkin, Texas. The Lufkin foundry produces industry-leading iron castings used to make renowned Lufkin beam pumping units and Lufkin power transmission equipment.

GE plans to demolish 30,000 square feet of its existing 515,000-square-foot facility and construct 72,000 square feet of new buildings. The company also plans to refurbish the remaining facilities at the site in Angelina County.

The facility upgrades will create a simplified production process flow, improve employee working conditions and provide GE’s customers with improved quality and delivery schedules.

The Lufkin foundry originally began operating in 1902. While there have been various upgrades to the foundry throughout its history, this proposed investment would infuse the site with modern technology and practices to reduce emissions and boost production efficiency in an increasingly competitive global marketplace.
“We chose to invest in modernizing and improving our existing foundry because of the rich history and dedicated, skilled workforce associated with the Lufkin operation here in Texas,” said Jerome Luciat-Labry, president of Well Performance Services for GE Oil & Gas. “The goal is to make the facility as efficient as possible and help strengthen the competitive position of our business around the world. We are excited about continuing to support manufacturing jobs in the United States and especially here in Angelina County where Lufkin Industries began.”

“By having its own foundry, GE Oil & Gas has a strategically integrated supply chain that allows the company to more rapidly meet the needs of its customers, particularly in the fast-growing unconventional oil and gas sector,” said Luciat-Labry.

Design work for the project is expected to begin in 2014. As currently proposed and pending government approvals and permits, construction would be carried out in four phases commencing in 2016. Under that schedule, construction is expected to be complete in about three years.

The foundry manufactures gray and ductile iron castings, producing an estimated 72,000 tons of products each year. About 87 percent of the foundry’s products are used to supply GE’s own Lufkin factories while the remainder is sold externally to other customers.

The modernization of the Lufkin facility is expected to keep the foundry operating for generations to come and continue to provide jobs in the local economy. GE’s planned $60 million investment reflects the company’s continued commitment to the Lufkin business and community. These renovations will not only improve safety and efficiency, but also will allow the foundry to continue operating for the foreseeable future.

In 2013, GE announced it completed its acquisition of Lufkin Industries for approximately $3.3 billion. The move broadened GE Oil & Gas’ artificial lift capabilities with solutions for a wider variety of well types and technology for production automation and optimization in the drilling industry. GE has invested more than $85 million in the Lufkin business globally since the acquisition.
About GE Oil & Gas
GE Oil & Gas works on the things that matter in the oil and gas industry. In collaboration with our customers, we push the boundaries of technology to bring energy to the world. From extraction to transportation to end use, we address today's toughest challenges in order to fuel the future. Follow GE Oil & Gas on Twitter @GE_OilandGas.

###
For more information, contact:
Laura Bauer Tom Murnane or Kate Culman
GE Oil & Gas – Well Performance Services Masto Public Relations
M +1 405 628 7903 +1 518 786 6488
laura.bauer@ge.com tom.murnane@mastopr.com
kate.culman@mastopr.com
Press Release
ASK Chemicals showcases at GIFA 2015
Solutions from a Specialist

Hilden, 01.12.2014 – Foundries have valued ASK Chemicals’ product portfolio for many years. Yet the ASK Chemicals brand represents far more than its range of premium products. As a supplier of foundry chemicals it also supports foundries with services covering the entire development and production process – developing, in close collaboration with the customer, solutions that offer real added value.

ASK Chemicals looks after its customers from the development of casting design through validation to manufacture of the prototype and series production. This global player’s experts have the right combination of construction, production and simulation know-how to draw from.

ASK Chemicals will be showcasing its casting solutions at the GIFA 2015 in Duesseldorf from June 16 – 20, 2015, in Hall 12, Stand A 22.
NEWS BRIEFS

DECEMBER 2014

FEF successfully completed the strategic five year plan and it was formally adopted by the Board in November of 2013. Following that adoption, a Transition Team was formed to begin the search to replace Bill Sorensen as Executive Director. This team included Rick James, President of the Board of Directors, Matt Sullivan, Immediate Past President of the Board, Mo Lynn, First Vice President and Wil Tinker, Second Vice President. The firm Leading Transitions was retained to offer impartial and professional assistance.

The deadline for applicants was October 1, and twenty-three individuals applied nationwide. The Team narrowed this down to the top four and then to the top two for final interviews at FEF HQ.

Brian Lewis from Arlington, Texas was selected as the number one candidate. Brian is a degreed engineer and has worked in both the manufacturing and non-profit realms. He started on November 17, 2014 and will officially become the next Executive Director on January 1, 2015. Bill will assist Brian in an executive advisor role until May 7, 2015. Brian was formally introduced at the College Industry Conference on November 20-21, 2014. Sorensen is looking forward to working with Brian Lewis to make this a smooth transition for FEF!

Brian’s email is brian@fefinc.org.
Molybdenum production and use fall slightly

Global use of molybdenum in the first quarter of 2014 decreased to 136.1 million pounds, down 2% from 138.2 million pounds in the previous quarter but 7% higher than the same quarter in 2013, figures released today by the International Molybdenum Association (IMOA) show.

Global production slowed to 133.4 million pounds for the first quarter, down 6% from 141.4 million pounds in the previous quarter, but was also 7% higher compared with the same period in 2013.

China remained the biggest user, with 46.6 million pounds in the first quarter of 2014, a decrease of 10% from 51.8 million pounds in the previous quarter, but 11% higher than the same quarter in 2013.

Europe was the second largest user with 36.9 million pounds, an increase of 5% from 35.1 million pounds in the previous quarter and an increase of 3% compared to the same quarter in 2013.

Usage in the USA increased by 4% to 14.8 million pounds compared with 14.2 in the previous quarter, while use in Japan also increased slightly from 14.4 million pounds in the last quarter of 2013 to 14.8 million pounds in first quarter of 2014. Usage in the CIS countries increased fractionally to 6.1 million pounds, whilst usage in other countries also increased to 16.9 million pounds.
China remained the biggest producer, but recorded the biggest percentage decrease, falling from 51.2 million pounds in the last quarter of 2013 to 44.1 million pounds in the first quarter of 2014, although this still represented a 5% increase on the same quarter in 2013.

North American production increased slightly from 43.2 million pounds in the last quarter of 2013 to 43.7 million pounds in the first quarter of 2014. Production in South America fell slightly from 38.1 million pounds in the last quarter of 2013 to 36.6 million pounds in the first quarter of 2014, although this was still 32% higher than production in the same quarter in 2013. Production in other countries was static at 8.9 million pounds.

For more information contact:

Alan Hughes
T: +44 (0)1606 852011
M: +44 (0)7759 243969
E: alan@stratia.co.uk
FOR IMMEDIATE RELEASE DECEMBER, 2014
FEF COLLEGE INDUSTRY CONFERENCE

Over 310 student delegates, key professors, industry executives, and university administrators were in attendance at this year’s FEF College Industry Conference, held recently at the Westin Michigan Avenue in Chicago.

The conference began on Thursday, November 20, with the Career Information Session which gave 93 student delegates the opportunity to interact with representatives of 41 companies in the metal casting industry. The Information Session and social time before and after the event is structured to facilitate the sharing of job opportunities and to connect students to potential employers in the industry.

During the General Session on Friday, the following speakers shared their experiences in the metal casting industry: Benji Johnson (MAGMA Foundry Technologies), Sandy Calabrese (General Motors), and Jerry Thiel (University of Northern Iowa).

The FEF/AFS Distinguished Professor Award was given to FEF Key Professor, Victor Okhuysen, Cal Poly-Pomona, in recognition of his demonstrated personal interest in his students, as well as his interaction with the industry. At the Annual Reception on the evening of November 21, FEF’s highest award, the E.J. Walsh Award, was presented to John (Chip) Keough, former FEF Board Member and currently serving as the FEF Professor for the University of Michigan.
Next year's conference will be held on November 19 & 20 at the Westin Michigan Avenue in Chicago. Plan now to attend this exciting event!

As part of the luncheon on Friday, November 21, the Student Delegate scholarships were presented – 22 students were awarded a total of $50,000.00. Two new scholarships were presented for the first time this year: the Dr. Katherine E. Mortimer Scholarship for Women in Metal Casting and the Bill Sorensen Scholarship. The Sorensen Scholarship was created to honor Bill’s 33 years of service to FEF and upcoming retirement. Additionally, the Keith Millis and Ron Ruddle scholarship recipients were announced during the luncheon.

**Special Scholarships**
Keith D. Millis Scholarship Devan Denney Pittsburg State
Keith D. Millis Scholarship Samuel Edwards Virginia Tech
Keith D. Millis Scholarship Alan Gooden Alabama-Birmingham
Keith D. Millis Scholarship Brandon Wervey Wisconsin-Platteville
Ron Ruddle Scholarship Shaymus Hudson WPI

**CIC Student Delegate Scholarships—November 21, 2014**
AFS Detroit-Windsor-Booth Michael Banion Western Michigan
AFS Saginaw Valley Scholarship Gregory Zuber Penn State
AFS Southwestern Ohio Scholarship Shawn Taylor Kent State
Ron & Glenn Birtwistle Mem. Scholarship Sebastian Redcay Penn State
Ron & Glenn Birtwistle Mem. Scholarship Michael Grams Texas State
Donald Brunner Schol.- Waupaca Jared Ottmann Wisconsin-Madison
Paul Carey Memorial Scholarship Aaron Baughman Univ. of Northern Iowa
Clifford Chier-Badger Mining Corp. Nick Sugars Wisconsin-Platteville
Wm. E. Conway Schol.-Fairmount Minerals Cameron LaPresta Missouri Univ. of Science & Tech
Tony & Elda Dorfmueller Scholarship Eric Nixon Trine University
Richard Frazier Scholarship Kyle Ragan Pittsburg State
Burleigh Jacobs Scholarship Andrew Etzold Missouri Univ. of Science & Tech
Loper Award Nicholas Barningham Wisconsin-Platteville
MAGMA Schol.-John Svoboda Michael Konkel Western Michigan
Modern Casting Scholarship Aaron Kelley Alabama-Birmingham
Dr. Katherine E. Mortimer Scholarship Myrissa Maxfield Virginia Tech
Chester V. Nass Memorial Scholarship Brendan Herrera Pittsburg State
Robert W. Reesman Mem. Scholarship Gabriel Bruno Central Washington
Bill Sorensen Scholarship Matthew Hesketh Wisconsin-Milwaukee
Gary Thoe Schol.- Waupaca Ben Timblin Wisconsin-Platteville
Ray Witt Memorial Scholarship Nicholas Bouska Univ. of Northern Iowa
Robert V. Wolf Mem. Scholarship Taylor Thornhill Missouri Univ. of Science & Tech

More information on this conference or any of the FEF activities can be obtained from the FEF office at 1695 N. Penny Ln., Schaumburg, IL 60173, 847/490-9200, info@fefinc.org, http://www.fefinc.org.

Copyright © 2014 by the Foundry Educational Foundation. All rights reserved