



**MINUTES OF MEETING – FINAL
UNIVERSITY-INDUSTRY RELATIONS ROUNDTABLE
2 OCTOBER 2023
COLUMBUS, OHIO, USA**

Attendees:

Kelly Dallas (Chair), Cleveland-Cliffs Inc.	Lee Morgan, The Systems Group
Ron Ashburn, AIST	Chloe Myers, Steel Dynamics Inc.
Rachel Atkinson, Vesuvius USA	Hyunseok Oh, Univ. of Wisconsin Madison
Karen Arnold, Cleveland-Cliffs Inc.	Mark Olson, Pacific Steel Group
Andrew Bissot, TimkenSteel	Angie Pedraza, Vesuvius USA
Morgan Brenner, Cleveland-Cliffs Inc.	Dominic Piccone, CSM
Mario Buchely, Missouri S&T	Glenn Pushis, Steel Dynamics Inc.
Shannon Clark, ArcelorMittal Dofasco	Malaulkha Rajivmoorthy, Cleveland-Cliffs RD
Emmanuel De Moor, CSM	Victoria Rambo, Virginia Tech
Mark Didiano, AIST	Michael Riley, RHI Magnesita
Mark Fedor, Morgan	John Speer, CSM
Joe Dzierzawski, Primetals Technologies	Keith Taylor, SSAB Americas
Kip Findley, CSM	Grant Thomas, Cleveland-Cliffs RD
Ben Kowing, SSAB Americas	Monserrat Torres, Instituto Tech. de Morelia
Joe Kvak, Carpenter Technologies	Stacy Varnecky, AIST
Karin Lund, G-Power Global Enterprises	Bryan Webler, Carnegie Mellon University
Ted Lyon, Hatch	Lori Wharrey, AIST
Michela Macchi, Tenova Inc	Chenn Zhou, Purdue Univ. Northwest CIVS

1.0 CALL TO ORDER AND INTRODUCTIONS

Ms. Dallas called the meeting to order and introductions were made around the room. Ms. Dallas thanked those in attendance for attending.

2.0 ANTI-TRUST GUIDELINE REVIEW

Ms. Dallas reviewed the anti-trust guidelines provided with the agenda.

3.0 COMMITTEE PURPOSE AND OBJECTIVE

Ms. Dallas reviewed the purpose and objectives of this meeting

The AIST Foundation University–Industry Relations Roundtable exists to foster communication between our university network and the steel industry. The committee objectives are to increase the number of professors teaching a steel-related curriculum, and to increase the number of students interested in a career in the steel industry.

4.0 DOE RESEARCH OPPORTUNITIES UPDATE

Mr. Ashburn and Dr. Speer, along with input from other university faculty, provided an update on DOE grant opportunities. A core team of university faculty, national laboratories, and industry associations has been formed for decarbonization efforts to facilitate research and development for technologies beneficial to the steel industry. Both Mr. Ashburn and Dr. Speer discussed the need to learn how to work with the government

more efficiently to secure funding opportunities that truly serve the industry. Dr. Webler, Dr. De Moor, Dr. Buchely and Dr. Zhou all joined in with current work and advice on these grants.

5.0 CURRENT RECRUITING NEEDS AND CHALLENGES

Ms. Myers, Human Resources Generalist from Steel Dynamics Inc. provided a presentation on recruiting needs and challenges the industry faces. She reported the steel industry is currently facing a need for Maintenance Technicians and Millwrights who possess the skills to install, maintain, diagnose, and repair industrial machines. Steel Dynamics has made significant strides in addressing this challenge through successful initiatives like our sponsorship of the Northeast Indiana Federation for Advanced Manufacturing and our Apprenticeship, Cooperative Education, and Internship Programs. These programs are helping bridge the skills gap and attract talent to the industry. In addition, the industry requires Metallurgical Engineers and Technical Sales professionals who play a crucial role in maintaining order validation, setting quality standards, and ensuring the integrity of the products. Encouragingly, partnerships with colleges and investments in Materials Science and Metallurgical Engineering Programs have been effective. Efforts to engage younger demographics, such as collaborating with Junior Achievement to reach 6,500 local Northeast Indiana eighth graders, are helping to create interest and awareness about careers in the steel industry.

Despite these successes, the steel industry faces several challenges in recruiting talent. One of the primary challenges is the lack of mid-range experience, compounded by an aging workforce and a declining population of skilled workers. Additionally, there is a perception problem, with misconceptions about the industry including concerns about low wages and dangerous working environments. These misconceptions, along with the compensation structures in the steel industry, can deter potential candidates. Addressing these challenges is essential for the industry to attract a new generation of skilled professionals and ensure its long-term sustainability.

6.0 ROUNDTABLE OPEN DISCUSSION AND REPORTS

Each table was asked to select a topic for discussion and provided a report to the group. Topics included:

- AI
 - Eliminates monotonous jobs, require higher level of education and skill
 - Incorporate, not fight, AI
 - Building a team, monitoring, and not being the marketing person in the room, builds networking.
 - How to integrate AI into industry
 - Students concern AI will replace jobs
 - Writing skills have suffered
 - Future problem – good potential
 - Developing the questions to ask will be the biggest hurdle to understand
 - Rebalancing will need to happen in the future to include AI in engineering disciplines
- Work / Life Balance
 - Change in work/life balance - vacation should be used for holiday, not doctor appointments.
 - Be open to unique schedules
 - Money is no longer a factor
 - They are moved away from home and only get 2 weeks of vacation for 5 years – more time, more tools
- Recruiting Needs and Challenges
 - Build roots through community mentorship
 - Working from home, lack of culture and need for work social life, lack of networking
 - Support blue-collar work by mandatory attendance
 - Disconnect between metallurgists, production, lack of communication may lead to lower production
May be due to personality, finance, accounting, software development
 - Utilize compensation structure to affect the inability to work from home
 - Foundry-in-a Box to reach younger generation
 - Explaining metallurgy earlier, before high school and college enrollment

- Develop culture with networking
- Build soft skills
- Transferable positions outside engineering – split shift?
- Name recognition – students don't know our company names
- Changing the Industry's Perception
 - TV commercials
 - AIST is where it starts on behalf of the industry
- University Research Connection Program
 - Summer research programs – train and project work, pilot, AIST to facilitate

7.0 FOUNDATION GRANT REPORT

Dr. Buchely, Assistant Professor from Missouri University of Science and Technology, presented information on his plans as the newest Kent D. Peaslee Junior Faculty Award recipient. His academic mentor is Dr. Ron O'Malley, also from Missouri S&T, and his industry mentor is Dr. Dmitry Tsvetkov from Steel Dynamics Inc. His award objectives are to complete a "Forging-in-the-Box" for classroom demonstrations in metalcasting, create content in social media to motivate new generations to study metallurgical related fields, and complementary activities such as providing demonstrations and tours within the university facilities to K-12 students, as well as taking students to steel plants for tours.

He thanked the AIST Foundation for the support saying the award is a great opportunity for his career, the university, and the steel industry. It recognizes and supports his efforts in metallurgical engineering, increases the visibility of the university's work, inspires students, improves the quality of outreach activities, and promotes greater interest and collaboration within the metallurgical field.

8.0 REAL STEEL VIDEO CONTEST UPDATE

Dr. Findley from the Colorado School of Mines provided an update on the contest. The goal of the AIST Foundation Real Steel Video Contest is to challenge high school and university students to research the steel industry and produce an educational, three-minute video. This year's contest theme is "Industry Advancements that Set Steel Apart" in hopes that the participating students will learn more about how steel is made and discover how the industry has become more safe, technologically advanced and environmentally aware than ever before.

Participating teams will go through a public voting phase, which will take place in February 2024 on AIST's YouTube channel. The top five videos will then advance to the finals for a chance to win a cash prize. Each year, we award US\$3,000 to the Grand Prize Winner, along with up to four US\$1,000 prizes to the remaining finalists. Video submission forms are due 31 October 2023 and the videos should be submitted by 31 December 2023.

9.0 STEEL INTERN SCHOLAR REPORTS

We had three Steel Intern Scholars in attendance. They each participated in the roundtable discussions and provided individual reports on their scholarship and internship experiences.

- Victoria Rambo, Materials Science and Engineering, Virginia Tech (SSAB Americas)
- Dominic Piccone, Metallurgical and Materials Engineering (Lincoln Electric), Colorado School of Mines
- Monserrat Torres Sierra, Materials Engineering, Instituto Tecnológico de Morelia (Juventud Plant, Ternium Mexico)

10.0 NEXT MEETING AND ADJOURNMENT

Ms. Dallas reported the next meeting is scheduled for Monday, 6 May, 11:30 a.m. –2:00 p.m. (ET) at AISTech 2024, Columbus, Ohio USA. There being no further business, Ms. Dallas adjourned the meeting.

11.0 LUNCH AND NETWORKING