



2024 AIST Galvanizing Study Tour Recap

In the spring of 2023, members of the AIST Galvanizing Technology Committee (GTC) took on the task of planning an arduous but ultimately fulfilling endeavor. The idea was simple: a study tour visiting multiple galvanizing lines at numerous steel facilities across Europe. The efforts to bring this idea to fruition, and its great success, was anything but simple.

The initial goals in attempting a study tour of this scale were multifaceted. The reasoning and benefits were plain to see. Attendees would have the opportunity to meet, communicate, and interact with industry peers from various facilities and cultures. They were exposed to the social cultures of the countries and regions visited, as well as to the individual company cultures. Each facility had its own unique feel, pace and structure. The Study Tour expanded the participants' global networks, familiarizing them with new customs and practices, thus stretching perspectives and fostering alternative thoughts. The Study Tour enabled attendees to become more active participants in the truly global nature of today's steel industry. This enhances potential for collaborations on future projects, research opportunities and interactions.



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The delegates visited voestalpine Stahl GmbH in Linz, Austria. Mark Marietti (right) presented a plaque of appreciation to Werner Maschek (left).

Amongst the many specific items discussed during the tour, some common interest topics were highlighted across the multiple locations. For example, a discussion on safety standards and regulations, and the challenges experienced in meeting those standards, was held at length at every facility that was visited. The Study Tour attendees and the host mill personnel were able to share ideas and solutions to the myriad safety concerns we all face together as a global industry.

Along with the theme of shared benefit, “green” decarbonized steels were another significant point of discussion. Each facility was working to significantly reduce the carbon emissions of their steelmaking process. These discussions allowed for significant technical transparency into how each facility was working toward their goals. Each company was implementing different strategies and plans to achieve their targets. These varying strategies provided attendees with significant takeaways, identifying various ways that the industry is working to reduce its carbon footprint.

The most significant hurdle in making the Study Tour into a reality was assuring the European company management that European Union (EU) antitrust compliance rules would be diligently followed and enforced. Current regulatory conditions in the EU necessitated assurances that AIST’s longstanding antitrust policies and regulations would be adhered to, always, during the tour. The willingness of the host companies and facilities to take part in the open exchange of information is the primary reason for the success of the tour. After several months of planning, the 2024 Galvanizing Study Tour had finalized its agenda, and would be visiting multiple lines across five separate galvanizing facilities and two separate galvanizing line equipment suppliers plus their parent company. The tour was nine consecutive days, visiting four separate countries.

The 2024 AIST Galvanizing Study Tour commenced in Vienna, Austria, on Thursday, 4 April 2024. Over 40 steel industry professionals from nearly 20 companies came together for the first organized activity of the trip, with an introductory dinner in downtown Vienna sponsored by Eric Almquist of Star Tool and Die.

The tour group visited its first host company, voestalpine in Linz, Austria, on Friday, 5 April. In what would be the first of several bus rides, attendees traveled approximately 2 hours northwest from Vienna to the foothills of the Alps to visit the voestalpine Linz campus. Linz is conveniently located on the banks of the Danube River. This strategic location allows for easy downstream access to the Black Sea, and upstream access to Amsterdam and the Atlantic Ocean.

Upon arrival on voestalpine campus, tour members were transported to the Voestalpine Stahlwelt (Steel World), an on-site museum. This multistory museum helps to tell the story of the company's history, as well as provide insight into the ongoing transformation of the company to a more environmentally sustainable organization. Gerald Helekal and Werner Maschek greeted attendees and provided a presentation on the history of voestalpine, as well as the layout of the facility and its various operations. Upon completion of the line tour, attendees returned to the Stahlwelt for additional presentations and a traditional Austrian lunch provided by voestalpine.

Following lunch, members of the Study Tour provided presentations on a variety of topics which, in some cases, were discussed during the line tour. Upon completion of the presentations, attendees returned via bus to Vienna for an evening respite sponsored by ANDRITZ Metals.

On Saturday, 6 April, tour attendees were free to explore Vienna, the surrounding areas, and Austria as a whole. ANDRITZ Metals arranged a walking tour of Vienna with a local guide. This nearly 3-hour tour was insightful and awe-inspiring as attendees made their way through Vienna's palatial and cultural districts, as well as a trip through the city's history as told by the guide.

Early Sunday morning, 7 April, all members of the Study Tour boarded a short commuter train bound for the Vienna Airport. Attendees traveled to Hannover, Germany, with our destination ultimately being the small city of Braunschweig, in north central Germany.

Upon arrival in Braunschweig, attendees were greeted by representatives of Salzgitter Flachstahl GmbH. As on the previous day, attendees were free to explore the hamlet of

The delegates visited Salzgitter Flachstahl GmbH in Salzgitter, Germany. Mark Marietti (right) presented a plaque of appreciation to Michael Brühl (left).



Braunschweig and the surrounding countryside. Salzgitter representatives arranged for a walking tour of the historic city center. Following the tour, all attendees were invited to a dinner sponsored and hosted by Salzgitter.

Early Monday morning, 8 April, attendees boarded a bus for transit to Salzgitter Flachstahl, located in nearby Salzgitter. They were welcomed to the Salzgitter Information Center and Museum by Michael Brühl, director of pickling/cold rolling/surface coatings. Brühl presented a detailed look at the corporate structure, steel mill operations, and specifically the setup of the galvanizing lines among which they would be touring. Following an introduction from Oliver Meyer, line manager, Salzgitter, and a brief safety review, attendees were escorted through continuous galvanizing line (CGL)

#3 in small groups led by Meyer and other members of the Salzgitter team. As in the previous and subsequent tour stops, presentations were provided by both members of the Study Tour and representatives from the host companies.

After the day spent at the Salzgitter facility, the tour moved via bus to its next stop, the metropolitan city of Dortmund, home to thyssenkrupp Steel Europe – Werk Dortmund.

Following an evening meal sponsored by thyssenkrupp, the tour arrived the following morning at the Dortmund Works of Germany's largest steel producer, and the second largest in the European Union, thyssenkrupp.

The delegates visited thyssenkrupp Steel Europe AG – Werk Dortmund in Dortmund, Germany. Mark Marietti (right) presented a plaque of appreciation to Andy Rohe (left).





The delegates visited Fontaine Engineering und Maschinen GmbH in Langenfeld, Germany (top photo). The same day, the delegates visited SMS group GmbH's headquarters in Mönchengladbach, Germany (bottom photo). Mark Marietti (right) presented a plaque of appreciation to Holger Behrens (left).





The delegates visited Tata Steel Netherlands in Velsen-Noord, Netherlands. Mark Marietti (right) presented a plaque of appreciation to Gabriel Tahitu (left).

Before lunch, attendees were escorted to FBA 10, a galvanizing line that was brought on-line in 2021. As at other facilities, small groups were formed and individual groups were escorted along the line by thyssenkrupp personnel, who were able to answer questions as posed by tour attendees.

Upon completion of the visit to thyssenkrupp and after a short drive to Düsseldorf, Jean-Paul Fontaine, head of sales, and Pascal Fontaine, president, Fontaine Engineering, presented the group with dinner.

The following morning, attendees arrived at Fontaine Engineering's (FOEN) headquarters for an in-depth look at the process, inner workings and manufacturing of their galvanizing technologies. FOEN supplies wiping equipment, bath rolls and electromagnetic stabilization solutions with movable magnet technology, amongst others. The large group was split into thirds, with all groups having the opportunity to move freely between various stations. Presentations at these stations included a look at the FOEN test stand, which is used for precommissioning testing of products during their manufacture, along with an explanation of current design features and other products manufactured by Fontaine.

The tour moved further along to its next destination in the nearby city of Mönchengladbach, the SMS-Duma Bandzink workshop. Upon arrival, attendees were invited to tour the workshop and discover more about the individual technologies being developed. These were shown either hands-on, or in significant detail, including the application of specialized coatings to in-line rolls. The time spent in Germany by the Study Tour was brought to a close with dinner sponsored by SMS-Duma Bandzink.

At the midway point, the Study Tour moved on from Germany on 10 April and left Düsseldorf via bus, headed north to the Netherlands en route to its next destination, Tata Steel IJmuiden.

Following the lengthy commute, Tata Steel representatives joined the group for a bus tour throughout the facility. On-site, Tata Steel has more than 9,000 employees with another 3,000 contractors as well.

After this initial bus tour of the complex, the group was presented with an overview of the company by Gabriel Tahitu, customer value manager, Tata Steel, on its guiding themes, and examples of those themes being put into action. Tata Steel states its mission is to be a "clean, green circular steel company that is sustainable in every way," with further discussion from Michael Kick

regarding challenges and solutions in advanced high-strength steels.

As a follow-up to the group discussion and presentations, all attendees were invited to tour the DVL 3, a continuous galvanizing line located at IJmuiden with the ability to produce both galvanized coatings as well as zinc-magnesium-based coatings.

Upon bringing the DVL 3 tours to a close, Tata Steel organized a visit to the nearby Dutch village of Wijk an Zee, located just north across a series of sand dunes from the mill for a bit of site-seeing followed by a group dinner. At the conclusion of the day in the Netherlands, the Study Tour moved south to the next destination, the historic city of Ghent, located in the East Flanders province of Belgium.

On Friday morning, 12 April, tour participants were welcomed by the team at ArcelorMittal's Ghent facility. Upon arrival, hot metal galvanizing department head,

Brecht Caekaert, welcomed everyone and walked the group through a standard introduction to the company, the facility's layout and capabilities. Included in this initial conversation were extensive dives into aspects of ArcelorMittal's safety culture, along with current environmental sustainability efforts.

Following these opening remarks, tour attendees were escorted to Sidgals 3 and 3.5. These lines showcase a truly unique setup in the "sharing" of certain galvanizing line equipment between different lines.

Following the walkthroughs of Sidgals 3 and 3.5, tour attendees convened in the ArcelorMittal Research Center for a final round of presentations. Upon completion of the day's events at ArcelorMittal, attendees were free to spend a portion of our last day together exploring the beautiful town of Ghent followed by their last meal together sponsored by ArcelorMittal. Following dinner, and one last overnight in Ghent, attendees made their

The delegates visited ArcelorMittal Ghent in Ghent, Belgium. Mark Marietti (right) presented a plaque of appreciation to Brecht Caekaert (left).





During their free time, the delegates visited the Graslei in Ghent, Belgium.

return trips back to North America, drawing the 2024 AIST Galvanizing Study Tour to a close.

Planning for future iterations is already in the works. Plans for a reciprocal tour taking place across locations within North America are beginning to take shape. While the exact dates and locations have not been finalized, the target is during the first two weeks of April 2025. Any individual interested in taking part in future tours is encouraged to reach out to an AIST representative for more information as it becomes available.

The 2024 Study Tour could not have provided the benefits it did without the help of multiple individuals and groups. To the companies who acted as hosts during the trip: the hospitality, the transparency and the willingness to take part in this idea, are the reasons that the tour was a success. From the first visit to voestalpine to the last stop at ArcelorMittal and each location in between, every location showed genuine enthusiasm to have the tour on-site. ◆