The Association for Iron & Steel Technology (AIST) strives to be a valuable resource for the steel industry and to build professional networks for sharing information. Among these efforts, AIST and the AIST Foundation are endeavoring to better understand and share how to build quality internship and co-op programs for steel-related companies.

In August 2019, AIST issued a survey to students who have been placed into internships by the AIST Foundation. AIST also solicited past attendees of the University-Industry Relations Roundtable, including human resources contacts at steel-related companies, and faculty members who place interns with steel companies to issue the survey to their students. The results of the survey are included in this report.

A total of 127 students participated in the survey, comprised of 94 who had completed an internship and 33 who were involved in a co-op.

One of the first questions participants were asked was “What do you find most attractive about a possible career in the steel industry?”. The unique industrial/manufacturing environment accounted for 37% of the responses, which was the most popular answer. Given the chance to leave a response, one participant said, “With the chemical and physical flexibility of steel there is always an opportunity for advanced solutions to new challenges in this industry! With this, every new challenge presents the opportunity to discover a new capability of steel.”
What do you find most attractive about a possible career in the steel industry?

- The unique industrial/manufacturing environment
- New challenges
- Very rewarding personally and financially
- Many different positions within the industry
- It is an industry that will likely never go away
- Other

In contrast, the participants were then asked, “Is there anything that makes you apprehensive about pursuing a career in the steel industry?” Some of the more common responses focused on economic and geopolitical concerns; the cyclical nature of the industry; health and safety; locations of the mills; a perceived lack of upward movement; environmental concerns; gender representation; long hours; and the steel industry being unrelated to their current field of study.

However, there were also participants who expressed no apprehension in joining the steel industry, particularly those who have family members within the industry, with one responding that steel is a “strong industry with lots of new challenges and ways for me to grow personally and professionally.”

When asked “What influences inspired you to pursue a career in the steel industry?” most (29%) said their internship experience had a great impact on them. One participant said, “I don’t know anything about steel so I thought an internship would help me better understand it.” Another cited a love of knife making: “I started knife making at a young age and fell in love with steel and the heat treatment of it.”

Location of internship/co-op respondees

- US: 117 respondees
- Other Countries: 11 respondees
A number of respondents indicated that steel is big where they live or grew up, with several from the Pittsburgh, Pa., USA, area; the Midwest; and Hamilton, Ont., Canada.

In terms of other industries the participants are considering, the responses were wide-ranging and are depicted below. The challenge set before AIST is to illustrate how these other fields, particularly automotive and industrial automation, relate to the steel industry.

Participants were then asked about their favorite internship or co-op experience, with most (42%) choosing “Contributing to projects that make a difference,” followed by (21%) “Feeling like a member of the team.”

On the flip side, they were asked about their least favorite experience during their internships. A lack of consistent and meaningful work was stated several times, as well as poorly planned internships and the feeling of being left out of their teams. One respondent added, “Not being able to be as hands-on as I would have liked.”

On the other hand, several survey respondents shared that they didn’t have a least favorite part: “Everything about the experience was worth it,” one said.

Besides steel manufacturing technology, what other industries are you considering?

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<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
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<tr>
<td>Petroleum Industry</td>
<td>7%</td>
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<tr>
<td>Medical Equipment/Appliances</td>
<td>11%</td>
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<tr>
<td>Industrial Automation</td>
<td>14%</td>
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<tr>
<td>Other</td>
<td>15%</td>
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<tr>
<td>Defense/Military</td>
<td>15%</td>
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<tr>
<td>Aluminum and High-Performance Alloys</td>
<td>18%</td>
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<tr>
<td>Automotive Industry</td>
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Respondents were then given the opportunity to suggest things companies can do to improve the intern experience. The top responses were creating a well-planned internship and effectively communicating the expected outcomes before the interns arrive on-site — especially for those interns who are relocating for the internship.

“Make sure there is a well-established outline of what an intern will accomplish and how,” one participant said, summing up a majority of related comments.

Providing hands-on, real-world projects was also cited, as well as including interns in more meetings and company activities. “Don’t let the interns slip under the radar. Keep them occupied and involved,” another participant said.

Other suggestions that appeared frequently were to expose interns to different departments and parts of the mill, and providing an experienced employee to mentor the interns or simply answer their questions.

These comments were echoed in response to the next question, which was, “In your experience, what do you feel makes the ideal internship?” Responses here varied from “Being given meaningful work, having independence, a group of helpful people to work with, and a good onboarding experience” to “Communication, delegation and appreciation.”

What these sentiments boil down to is what anybody wants out of a job — to be recognized as part of a team, to be appreciated, to be given responsibilities without being micromanaged, to have interesting and meaningful work to do, and to be compensated fairly.

The full intern survey results are available at AIST.org/SteelInternSurvey.

Visit AIST.org/SteelIntern for more information on the AIST Foundation Steel Intern Scholar Program.

**Intern vs. Co-Op: Favorite Experience**

Co-ops
- Hands-on experience with engineers
- Contributing to projects that make a difference (substative work)
- Feeling like a member of the team
- Learning the ins and outs of production
- Personal satisfaction

Interns
- Contributing to projects that make a difference
- Feeling like a member of the team
- Learning the ins and outs of production
- Hands-on experience with engineers
- Other
- Personal satisfaction