

Safety Advocate Program at Charter Steel

Hazards are ever-present in the steel plant environment, and a heightened awareness and emphasis on safety is a necessary priority for our industry. This monthly column, coordinated by members of the AIST Safety & Health Technology Committee, focuses on procedures and practices to promote a safe working environment for everyone.



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As a 25-year veteran of the steel mill industry, I have developed a genuine appreciation for the value Charter Steel places on the safety of its employees. When presented with the opportunity to serve as a Safety Advocate in 2018, I eagerly obliged. As a part of the Safety Advocate Program, brainstorming and thorough communication with a multi-faceted team resulted in many noteworthy improvements over the course of the year. The key areas of focus which best represented Charter Steel's safety culture were safety programs and initiatives, safety communication, and team involvement with safety and culture.

A Safety Advocate's priority is to understand past incidents and ensure controls are in place to prevent reoccurrences of those incidents.

This process of thorough review for all safety incidents allowed the team at Charter Steel – Saukville to better understand the root causes and mitigate the exposure hazard related to each incident. Maximum utilization of incident and corrective action reporting excellence (ICARE) reports following all incidents provided effective cause analysis and allowed both management and affected employees to easily review the scenario and focus on hazard reduction going forward.

Each ICARE review also prompted analysis of current safe work practices (SWPs) for the related task, to determine if updates were necessary. ICARE incident reviews also prompt the generation of an exposure alert, which communicates the risk and necessary prevention efforts to employees without identifying the employee(s) involved in the incident. The goal is to highlight potential exposures for heightened awareness without any perceived negative attention directed toward an individual who may be embarrassed or discourage incident reporting.

Updated SWPs and exposure alerts are promptly shared with employees in order to maintain open communication and prevent future risk exposure.

To achieve one of the specific goals identified in the Safety Advocate outline, the team engaged in a beneficial partnership with Sentinel Machine Safety to ensure compliance of machine guarding with the International Standard ISO 12100.

A step-by-step analysis was completed of each operator task during roll changes. In order to mitigate hazards, this analysis considered ergonomics, machine safety and hazard control. A specific topic of emphasis was the effectiveness of the lockout process and the stored energy. Recommendations from this analysis included improved engineering controls and procedure updates to reduce exposure to risk in the Saukville rolling mill. Affected SWPs were updated accordingly and the new procedures and SWPs were shared with employees.

In addition to the energy control upgrades and procedure updates, additional safety improvements were implemented, such as work platforms, railings, slip prevention efforts, and tool improvements to reduce hazards and exposures during roll changes.

As with any industry, successful communication among all levels of employees is vital. One-on-one conversations with each employee about hazards they observed in their positions allowed for specific insight into the risk exposures and serious injury and fatality potential found

Comments are welcome.

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in their daily duties. This communication also provided these employees an opportunity to contribute their ideas on safety and requests for improvements, which developed their stake in the safety culture of the plant. To sustain employee input on safety improvements, a computerized safety suggestion program was implemented, where suggestions, progress and updates to employees were tracked.

A primary objective as Safety Advocate was to develop a process for bringing employees up to speed on safety updates and changes in the work environment as employees work a 5-2-2-5 rotation. Often, there are changes in their work environment during their time away from work. Due to the importance of this communication, the solution was to shut the mill down for a short period of time (typically 15 minutes) to allow supervisors time to update employees of any changes. These discussions were named “toolbox talks” and they occur at the start of the incoming shift immediately following the employee’s five days away from work.

Some topics of review include: large downtime incidents, employee safety suggestions, new ICARE entries and safety exposures, and any temporary work instructions or training documents implemented during their days off. Doing this ensures employees are better informed going into their work week.

To further communicate safety topics with employees, many key players came together within Charter to develop and install a safety touch-screen monitor in a centralized location in the Saukville rolling mill. Features of this interactive monitor, powered and updated by Tableau, provides information gathered from the ICARE reports. Employees are able to access information on the following topics:

- Safety Overview: Provides customizable data on a variety of past incidents.
- Human Body: Identifies injuries by area of the body and by injury type.
- Injury Deep Dive: Identifies each specific injury by its leading cause and mill location.
- Safety Suggestions: Any suggestions submitted by employees in regards to safety.
- Risk Assessments: These were conducted for each mill task with focus on severity and controls to bring emphasis to jobs with highest hazard.

The addition of this monitor has been a beneficial improvement made through the Safety Advocate Program. Utilization of the touch-screen monitor assisted in team involvement as well. Data gained from the human body feature led the focus of the safety efforts on injuries to the arms and hands due to repeated injuries.

Among other successes, the Stelmor Finishing Area Team implemented gloves with a higher temperature rating for operators and sleeve arm guards to prevent burns to employees’ upper extremities when handling hot rings during the trimming process. The Coil Scale Team efforts resulted in similar findings and, as a result, focused on proper gloves for tagging hot coils. Other safety considerations were made as well, such as even working surfaces, ergonomic lifting, and 5S and installation of mobile equipment safety gates in high forklift traffic areas.

The value of the safety projects and resulting improvements achieved through team effort has now provided resources and direction for safety. Rolling mill employees of all levels can draw from and contribute to these resources to not only keep themselves safe in their daily duties, but their coworkers as well. Although every steel mill is presented with its own unique safety challenges, the hope is that these safety successes serve as an inspiration for other mills to continue to zealously and creatively improve safety to protect their most valuable assets: their employees. ♦