

2015

Safety and Health Fundamentals: Mexico



For the first time, the AIST Safety and Health Conference was held outside the United States. Held on 1–4 December 2015 at the Hotel Safi Valle in Monterrey, N.L., Mexico, Safety and Health Fundamentals: Mexico had 91 attendees. Jorge Von Bergen, safety director, Ternium Mexico, was the keynote speaker. He opened the conference with a roundtable discussion, shared Ternium’s successes and failures pertaining to safety practices, and reviewed Ternium Mexico operations throughout Mexico. Critical safety areas need to be identified while striving for zero accidents by diminishing risks. Von Bergen asked the group about the risks they face and posed the question, “Does production come before risk?” The answer for Ternium Mexico is that safety is Priority One in all operations. Increasing human behavior with safety indexes will result in an improved safety culture.

Several presentations were given on the theme of pedestrian safety and mobile equipment. Matt Moore, Harsco Corp., discussed “Mobile Equipment Safety.” Mobile equipment movement is critical for success, but leads the steel industry with 46% of all listed fatalities since 2001. Mobile equipment hazards include noise, limited illumination and blind spots. Operator visualization is critical to keep everyone safe in mobile equipment areas. Enhanced communications and camera usage can prevent safety incidents.

Moore later presented “Pedestrian Safety.” Protecting pedestrians within the plant is a difficult task. Non-human capital investments continue to rise with

triple-digit increases in technology, which means automation will have a bigger impact in the workplace. Employee detection is critical throughout the plant. Remote technology for equipment detection is being used to protect the employees.

Ted Blanton, NACB, spoke about crane safety. Blanton discussed 20 fatal crane accidents that occurred from 2006 to 2011. From 2012 to 2015, the incident rate for fatality accidents was reduced to 11, with 66% of these fatalities from crane cab-operated cranes.

Other presentations focused on safety regulations, procedures and assessments. Kim Stachler, Crown Equipment Corp., presented “Improving Operator OSHA Compliance and Safety With the Use of Technology.” She discussed global trends in mobile equipment, detecting collisions and impacts with equipment, monitoring and controlling operator performance levels, and ensuring equipment service reliability. The U.S. Occupational Safety and Health Administration compliance process was detailed, particularly the importance of providing accurate information for each piece of equipment. Paper checklists can be misleading if not accurate.

Justin Hoover of Steel Dynamics Inc. presented “Hazard Assessment — IH Exposure Decision Making.” An effective hazard assessment program starts with an assessment of the potential health risks faced by all workers. A company’s efficient and effective allocation of time and resources determines their hazard assessment strategy.



The officers of the AIST Mexico Member Chapter, the conference's keynote speaker and the AIST staff representative, were introduced at Safety and Health Fundamentals: Mexico (left to right): Jorge Von Bergen, safety director, Ternium Mexico, keynote speaker; Pat Philbin, staff engineer, AIST; Felipe Villarreal, AIST Mexico Member Chapter; Juan Carlos Rodriguez, AIST Mexico Member Chapter vice chair; Rafael Colas, AIST Mexico Member Chapter chair; and Rodolfo Martínez, moderator.



Jorge Von Bergen gave the keynote presentation at the Safety and Health Fundamentals: Mexico Conference (left to right): Rafael Colas, AIST Mexico Member Chapter chair; Von Bergen, safety director, Ternium Mexico; and Juan Carlos Rodriguez, AIST Mexico Member Chapter vice chair.

Marco Quiroz of Ross Controls presented “Lockout/Tagout,” which focused on lockout procedures within plants. Identifying pneumatic risks with valves needing blocking devices should be routine. Stored energy needs to be recognized with lockouts. Using pressure gauges is a way to monitor stored energy.

Jeff Adams of CMC Americas presented “Leading Indicators Versus Lagging Indicators.” He discussed safety metrics for lagging indicators, including total recordable incident rate, lost-time incident rate, days-away restricted transfer rate and frequency rate. For leading indicators, proactive tasks include near-miss reporting, first-aid reporting, safety observations, incident investigation corrective actions, hazard inspection corrective actions, lockout periodic reviews, safety committee action items and a walkthrough of these action items.

Other topics covered during the conference included combustible dust, confined spaces, fall protection, hand safety, hearing protection and radiation safety.

Barry Momyer, AM Health & Safety, discussed combustible dust. Overall awareness and understanding of dust explosion hazards is lacking and requires training. Secondary explosions are most often responsible for damage and injuries. Material Safety Data Sheets do not provide enough information to adequately assess dust explosion hazards. Steel plants that handle combustible dusts should focus on the following: combustible dust handling processes and equipment,

housekeeping, dust accumulations, electrical classification, ignition source control, and training.

Brad Bray, California Steel Industries Inc., presented “Confined Space Safety — Overview and Best Practices.” Key aspects in dealing with confined spaces are identifying a confined space, having a confined space entry permit system, communicating a confined space emergency response and conducting confined space training. Common hazards associated with confined spaces are poor air quality, chemical exposures, potential fire hazard, material movement involved with a confined space, noise and radiation concerns along with visibility, and biological hazards. On average there are 100 confined space fatalities per year in the United States, and 60% of these fatalities are would-be rescuers.

Christopher Sierra, 3M Mexico, presented “Fall Protection Solutions for Heavy Industry.” Effective fall protection equipment is critical to prevent serious injury once restraints are being used. Full-body harnesses need to fit properly. Traumatic suspension needs to be avoided at all times.

A joint presentation on hand safety was given by Joanne Zaraliakos of U. S. Steel Canada and Claudia Villavicencio Aguilar of Showa Denko. Zaraliakos discussed glove education, hand injury simulation and no-touch tools. Villavicencio Aguilar addressed how 70% of all hand injuries are due to gloves not being used. Glove material is critical to ensuring hand safety protection, especially when in contact with chemicals.



The panel discussion focused on cardinal safety rules (left to right): Ted Blanton, Justin Hoover, Joanne Zaraliakos, Jeff Adams and Robbie Woods. Standing in back is Brad Bray, who served as moderator.

Glove wear is another hazard that can result in poor hand protection.

Robbie Woods, California Steel Industries Inc., presented “Hearing Conservation.” Woods discussed and displayed different types of hearing protection. Wearing hearing protection is critical to avoid hearing loss. Decibel levels greater than 105 dBA can cause irreparable hearing loss. Noise-induced hearing loss is 100% preventable.

Barry Momyer presented “Radiation Safety.” Momyer discussed the history of and types of radiation. He explained the units of measurement to identify radiation levels. For steel production, scrap detection is a major source to prevent radiation contamination in the steelmaking process.

The conference concluded with a panel discussion on cardinal safety rules. Brad Bray was the moderator, and the panelists included Ted Blanton, Justin Hoover, Joanne Zaraliakos, Jeff Adams and Robbie Woods. A tour of Ternium Tenigal was provided the following day, where the group toured the finishing operations. ♦



Presenters on the first day included (left to right): Kim Stachler, Crown Equipment Corp.; Justin Hoover, Steel Dynamics Inc.; Jeff Adams, CMC Americas; Barry Momyer, AM Health & Safety; Myrna Molina, AIST Mexico Member Chapter operative director; Brad Bray, California Steel Industries Inc.; Robbie Woods, California Steel Industries Inc.; Ted Blanton, NACB; and Marco Quiroz, Ross Controls.



Presenters on the second day included (left to right): Brad Bray, California Steel Industries Inc.; Lorena Gonzalez, AIST Mexico Member Chapter; Gabriela Rivera, AIST Mexico Member Chapter; Myrna Molina, AIST Mexico Member Chapter operative director; Joanne Zaraliakos, U. S. Steel Canada; Claudia Villavicencio Aguilar, Showa Denko; Jackeline Cruz, AIST Mexico Member Chapter; Barry Momyer, AM Health & Safety; and Chris Sierra, 3M Mexico.