

ACTIONABLE LESSONS LEARNED: Miami Smelter – Slag Launder



Contact With Molten Metal

Incident Overview

January 14, 2024






Smelter Operator Trainee gave clearance to the slag hauler operator to set the pot in place to receive slag from the east slag launder. Without confirming that the pot was in place, the operator opened the tap hole while the slag hauler was maneuvering the pot into position. The slag spilled on the ground and slag hauler. The slag hauler operator quickly moved the hauler and pot away from the pouring slag. No damage to the hauler was reported.



Causal Factors

- Skimmer opened the west side tap hole without verifying the pot was positioned correctly.
- Skimmer and slag hauler operator were not in communication during task.

Site Specific Actions

- 
 • **Engineering** – Miami engineering department will evaluate a proximity system that can detect haulers and pot positioning in the working area. If the system detects a hauler has entered the area, or a pot is lacking under the chute, tapping equipment will be shut off and the skimmer will not be able to open the slag tap.
- 
 • **Engineering** – Closed circuit television monitors will be added in slag skimming area. Skimmer will have visual of movement underneath slag deck.
- 
 • **Engineering** – Slag skimming area redesign (scheduled 2025) will improve slag hauler approach to picking pots. Tapping machine will be operated by skimmer via remote control.
- 
 • **Administrative** – Employees will be retrained on existing slag skimming and slag hauling controls.
- 
 • **Administrative** – Proper use of communications and tools must be identified and expectations reinforced. Consequences will be applied when protocol is not followed.



Contact With Molten Metal

Incident Overview

January 14, 2024

Smelter Operator Trainee gave clearance to the slag hauler operator to set the pot in place to receive slag from the east slag launder. Without confirming that the pot was in place, the operator opened the tap hole while the slag hauler was maneuvering the pot into position. The slag spilled on the ground and slag hauler. The slag hauler operator quickly moved the hauler and pot away from the pouring slag. No damage to the hauler was reported.



Smelter Operators

- Maintain positive communication with slag hauler operator to verify pot positioning.
- Identify tasks that require positive communication. Validate you are communicating as required.
- Report fit for duty.
- Perform Fatal Risk Management (FRM) verification to confirm all critical controls are in place.



Leadership

- Reinforce execution of policies. Regularly check for employee understanding and adequate training.
- Hold employees and yourself accountable when policies aren't followed.
- Verify positive communications. In the field, verify employees are effectively communicating and following safe protocols.
- Lead by example. Commit to being a leader that models the behaviors you want from your team members.



All of Us

- Utilize stop work obligation. Stop work when processes or procedures are not followed or when control improvements are identified.
- Utilize knowledge checks to regularly confirm your understanding of your training.
- Establish and maintain good communication in your work processes. Strong communication processes can decrease the likelihood of safety incidents.



Contact With Molten Metal

Actionable Event: Miami Smelter – Slag Launder



Preliminary Incident Details	
Operation	Miami Smelter
Date / Time	January 14, 2024 / 12:43 p.m
Event Type	Near Miss
Summary	Smelter Operator Trainee gave clearance to the slag hauler operator to set the pot in place to receive slag from the east slag launder. Without confirming that the pot was in place, the operator opened the tap hole while the slag hauler was maneuvering the pot into position. The slag spilled on the ground and slag hauler. The slag hauler operator quickly moved the hauler and pot away from the pouring slag. No damage to the hauler was reported.
Risk Category	Actionable – Significant (3) Likely (3)
Findings / Missing Controls	<ul style="list-style-type: none"> • Communication between slag skimmer and hauler operator • Visual verification
Applicable Policies / Procedures	<ul style="list-style-type: none"> • Slag skimming standard operating procedure • Communication expectations
Employee Condition	No injuries
Contact	Justin Taylor, Manager – Health & Safety

