

Nippon Steel & Sumikin Stainless Steel Corporation

Award: Safety
Category: Workplace improvement

Prevention of injury accidents in machine operating area of gate type hoist

Challenge

It is fundamental to prohibit entering into machine operating areas for ensuring the safety of workforce. In fact, however, some accidents have occurred by not complying with basic rules.

In 2016, a lost time injury accident happened at a gate-type hoist of the construction material storage site in Hikari Works. Therefore, a structural measure was implemented, in addition to non-structural measures such as use of operation prohibition tags at the time of entering, risk prediction activities, and alerting operators for attention.

Action

The hoist is used by multiple construction companies to process and store materials. The injury accident in 2016 occurred during a worker was operating the hoist. Another worker of different company walked in the rail to find some material. At that time, his toe was pinched by the moving wheel of the hoist (Fig1).

We have made instructions to outsource-companies in the works to take non-structural measures to prevent operators from entering any machine operating areas. However, it was not efficient to be implemented in workplaces where operators from multiple companies were working, because it was difficult for each worker to be noticed actual operating situation of other companies. Therefore, we have considered how to make it fundamentally safe by improving the facility itself.

We installed safety fences around the rails of the hoist to restrict operators to walk in. Moreover, the entrances of the fences are locked so that only workers from hoist management company can enter.

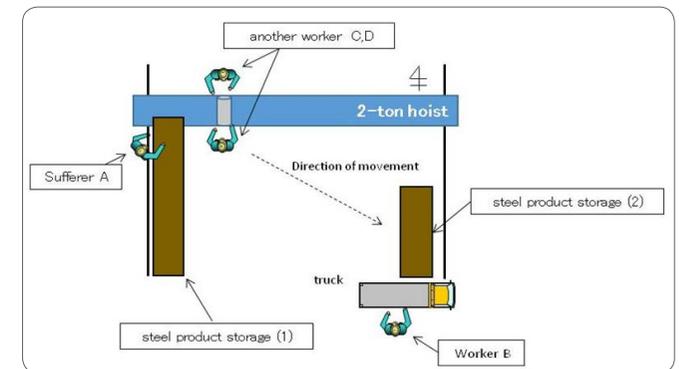


Figure 1: Positional relationship at the time of disaster



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Outcome

As a result, the possibility of such accident would be much lower than before the countermeasure. Even if risk prediction activities are not enough, injury accident would be no longer occurred.

Based on the experience from this injury accident, we started to implement measures for all similar hoists and cranes. There are 17 similar units in NSSC and we have already done measures for 10 units. Measures for remained 7 units will be completed in 2018.

We are continuously working to implement countermeasures to ensure the safety of not only our employees but also contractors.



Before



After