

Safety passage and blind spot camera - Prevention of contact accidents at outdoor loading area

Member Company NIPPON STEEL Stainless Steel Corporation

Category workplace improvement

Challenge

The outdoor loading area is a place where many large logistics vehicles and many loading workers pass for shipping operations. Since such logistics vehicles have a high driving position and a long body, the range of blind spots from the driver's position is wider and the prevention of a contact accident by a logistics vehicle with a loading worker including a vehicle guide has been a serious issue. Once a logistics vehicle makes contact with a loading worker, a serious injury often occurs. Nippon Steel Group companies have also experienced such accidents.

In NIPPON STEEL Stainless Steel, no such accident has occurred so far. However, dangerous cases (near-misses) have occurred and the situation cannot be neglected.

In addition to these cases, Hikari Area Yamaguchi Works of NIPPON STEEL Stainless Steel is currently facing a chronic shortage of workers in Japan and a time of generational change in its workforce. Since these situations are expected to become more frequent in the near future if a general warning only is given, concrete measures have been taken.

Action

An accident occurs when a logistics vehicle makes contact with a loading worker. Thus, we have mainly taken two measures to prevent such accidents.

As a measure on the worker side, safety passages and traffic rules for workers were established to prevent workers from entering the work area of the vehicles.

When establishing the measures taken, the loading workers and the logistics vehicle drivers discussed the details of their work and mutually confirmed the work area of the vehicles. The route of the safety passages was decided so that both workability and safety were achieved.

As a measure on the vehicle side, in order to eliminate blind spots from the driver's position in all logistics vehicles, five blind spot cameras on the straddle carrier and four blind spot cameras on the pallet car have been installed, and the driver can directly look at the blind spots of the vehicle on the monitor.



Picture 1: Positions of the blind spot cameras on the vehicle



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Outcome

The total length of the safety passages was over 800 m and the traffic area for logistics vehicles and loading workers has been separated. By painting the passages in green, it is easier for the driver to see the workers on the passage.



Picture 2: The safety passage – Before and after at the shipping quay

Even when the logistics vehicle is not moving, the driver can always check the workers by using the blind spot camera, and the risk of the driver starting the vehicle without noticing the workers has been eliminated.

After these measures were taken, there were no near-misses.

In addition, the workers and the vehicle drivers participated from the planning stage and talked to each other about traffic areas and blind spots. As the result, the safety awareness of inexperienced employees has been improved.

Furthermore, since the driver checks the safety of the surroundings by himself, a vehicle guide is no longer required and labour-savings has become possible.

This project, which has had a great effect on safety, human resource development and labour-savings, is currently under consideration for company-wide activity.