

APM TERMINALS CALLAO

emergency-stop-type switches, strategically located on the right side and at the rear of the semitrailer

the challenge

During the container tallying process at the pinning station area, personnel must position themselves on the steps of the semitrailer (rear and/or side), which exposes them to the risk of falls or being struck if the equipment moves before they have fully stepped away from the tally points.

The challenge is to ensure the immobilization of the Terminal Truck (TT) during this task, preventing any risk of equipment movement caused by the operator unintentionally engaging the gear lever, which could result in serious accidents involving the tally personnel.

the innovation

The implemented solution consists of installing two manual emergency-stop-type switches, strategically located on the right side and at the rear of the semitrailer (for tallying in both twin and single modes).



When activated by the tally personnel, these switches block the TT's transmission, fully neutralizing it. This eliminates the possibility of the operator engaging the gear lever while personnel are still within a risk zone.



how it was implemented

The electrical circuit of the Transmission Control Module (TCM) was analysed, identifying the lines and signals that originally operate through a bridge-type connector. These lines and signals allow the gears to be locked by opening the circuit.

Both lines were routed through a 7-pin connector to the semitrailer, where the two manual emergency-stop switches were installed. These must be activated by the tally personnel before approaching the equipment and deactivated upon completing the task, thus ensuring full immobilization of the TT during the tallying process.

Additionally, a visual confirmation system (LED lamp) was installed on the exterior of the TT cabin (red = equipment locked // green = equipment unlocked), providing clear status indication to both the operator and tally personnel.

what was the result

Functional tests were carried out under real operating conditions, verifying that activation of the switches effectively blocks the TT's transmission.

This innovation has proven to be effective in preventing unintentional equipment movement, eliminating the risk of accidents during the container tallying process.

conclusion

This implementation is simple, low-cost, and significantly enhances operational safety in the tallying area, protecting personnel from critical risks.

As a maintenance department, we are focused not only on the proper upkeep of machinery but also on promoting an active safety culture, where workers participate directly in risk management. We encourage them to contribute to safety through the application of

technical and/or technological improvements, implementing these enhancements across the various systems of our machines according to each area's needs, with the objective of preventing accidents.



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