

Case Study:

ISO 13849-2 Compliant Validation for Steel Slitting Line



Potentially Disastrous Findings During Validation Prevented Serious Trouble

Objective

- Perform validation services following line upgrade commissioning.

Solutions

- The commissioning process was completed, and validation services performed.
- Several emergency stop buttons were discovered to be nonfunctional.
- Engineers immediately restored function to the stop buttons.

Results/Benefits

- The customer was spared from potentially catastrophic results from an emergency stop button failing to initiate an emergency stop.
- No additional downtime was necessary for this repair as it was completed during a period of planned downtime.
- The customer can rest assured that their workers and equipment are safe.

Background

This customer was finishing commissioning from a line upgrade that included new safety functionality across the line. The customer was originally performing a line speed upgrade. They also wanted to identify and address existing safety issues for the full length of the line, from the uncoiler to the recoiler, during this process.

Validation services from our machine safety consultants are a routine part of our complete safety services, and this situation demonstrates why that is so important. It is critical to verify that safety functions operate as outlined by the risk assessment and truth tables, and that analysis and testing processes adhere to ISO 13849-2 standards. Just as redundancy and monitoring are required to maintain various safety ratings, the human portion of this process should also have redundancy.

During the validation process, we found several emergency stop buttons that did not initiate an emergency stop at all.

Quad Plus Solution

That the failure of an emergency stop button could lead to unimaginable consequences is an understatement. From damage to equipment to injuries to workers—or worse—this was a situation that needed an immediate remedy. Fortunately, we encountered these issues at the tail end of the commissioning process, so the engineers were still on site. They were able to address the problem and restore function to all of the emergency stop buttons right away.

Had the customer discovered the malfunctioning buttons at a later date, even if there were no damages or injuries, they would likely have had to endure at least some downtime for repairs.



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