

What Does That Button Do?

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A safety system needs to have a well-defined purpose. When activated, it must reliably respond with the action, including a stop (ESD, emergency shutdown), as designed.

Do you know how these safety systems operate for your processes? If you ask others how they expect these systems to operate, do you get different answers? There must be only one way for each critical system to perform, and everyone needs to know it.

The objective of a process control system is to keep the process within the critical safety control limits (see 06/2015 Beacon). It is important to understand that, when the process exceeds the specified control limits, action is required. This can include activating the ESD system. Operators must be trained in what actions to take, and when.

When safety systems are not well-understood, problems can become worse, because people may not rely on them and take the wrong actions. They might also falsely rely on the safety system and expect it to take actions beyond what these systems are capable of doing.



Did you know?

- Safety systems, including ESDs, are designed, programmed, and tested to meet the safety requirements of the process and equipment. All changes need a Management of Change (MOC) review (see Beacon 07/2017).
- Safety systems, just like pressure relief devices, are there to protect, not to control the process (see Beacon 03/2016, “Safety Device or Control Device?”).
- Safety systems have defined responses to power, instrument air, or other utility failure. This information is often noted on the piping and instrumentation diagram (PID).
- Many companies have a Stop Work Authority policy, which allows, and even demands, that operators stop the process if it is out of control.

What can you do?

- Ask your supervisor or trainer how safety systems are supposed to operate and why that is the case. The more you know, the better your response when needed.
- Make safety systems a topic for discussion at the next crew or safety committee meeting. If everyone thinks the systems operate differently, you have a problem!
- During Process Hazard Analyses (PHA) or MOC reviews of these critical safeguards, be open and honest about what you know and what occurs in the field. Any doubt should be investigated so the systems function correctly.

Understand how your safety systems work!

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