Technical Note from Production Resources, Inc.

Light Curtain Guarding Issues – "Walk Thru Hazard"

Safety light curtains (presence sensing devices) are an especially effective means of guarding air clutch presses, hydraulic presses, roll formers, welding lines, and other automated equipment. These devices protect operators, helpers, and passersby from the point of operation. They allow full visibility and accessibility to the point of operation and are active in all modes of operation. Proper application of the devices is critical to safe operation.

One such consideration that is frequently overlooked is the "walk through" hazard. The light curtain needs to be located at a safe distance as defined by the OSHA or appropriate ANSI standard. This distance may be large enough to allow an operator/helper to walk between the light curtain sensing field and the point of operation. This allows another person to initiate machine movement while another individual is exposed to the point of operation. The hazard created here is significant and potentially lethal!

The typical solution to this problem is to install a horizontal light curtain or a control reliable single beam optical system. These devices scan the area between the light curtain and point of operation effectively preventing machine operation if anyone is present.

Often conveyors, scrap hoppers, die tables, or other fixtures fill up all or part of the area between the light curtain sensing field and the point of operation. These obstructions may prevent the proper use of secondary optical systems. However, they may effectively prevent an operator from reaching the hazardous area as long as they are in place. The employer needs to be concerned with the possibility that the machine may be operated while these obstructions are removed; thereby, creating an unguarded point of operation hazard. A potential solution to this situation is to install a tamper resistant interlock switch to insure the obstruction is in place. This simply requires that the "interlock switch" be mounted to the machine and wired to a control reliable stop circuit. The "key" for the interlock switch should be mounted to the moveable obstruction with a short "steel" cable. When the obstruction is in place the key will fit in the interlock switch and satisfy the safety circuit. Obviously, employers need to inspect this kind of installation with some frequency to insure that someone has not cut the key free from the obstruction.

For more information on point of operation and machinery guarding solutions contact Production Resources at (800)863-3164 Southeast or (800)582-9214 OH/KY/PA/WV or e-mail us at lcp@pri-mailbox.com