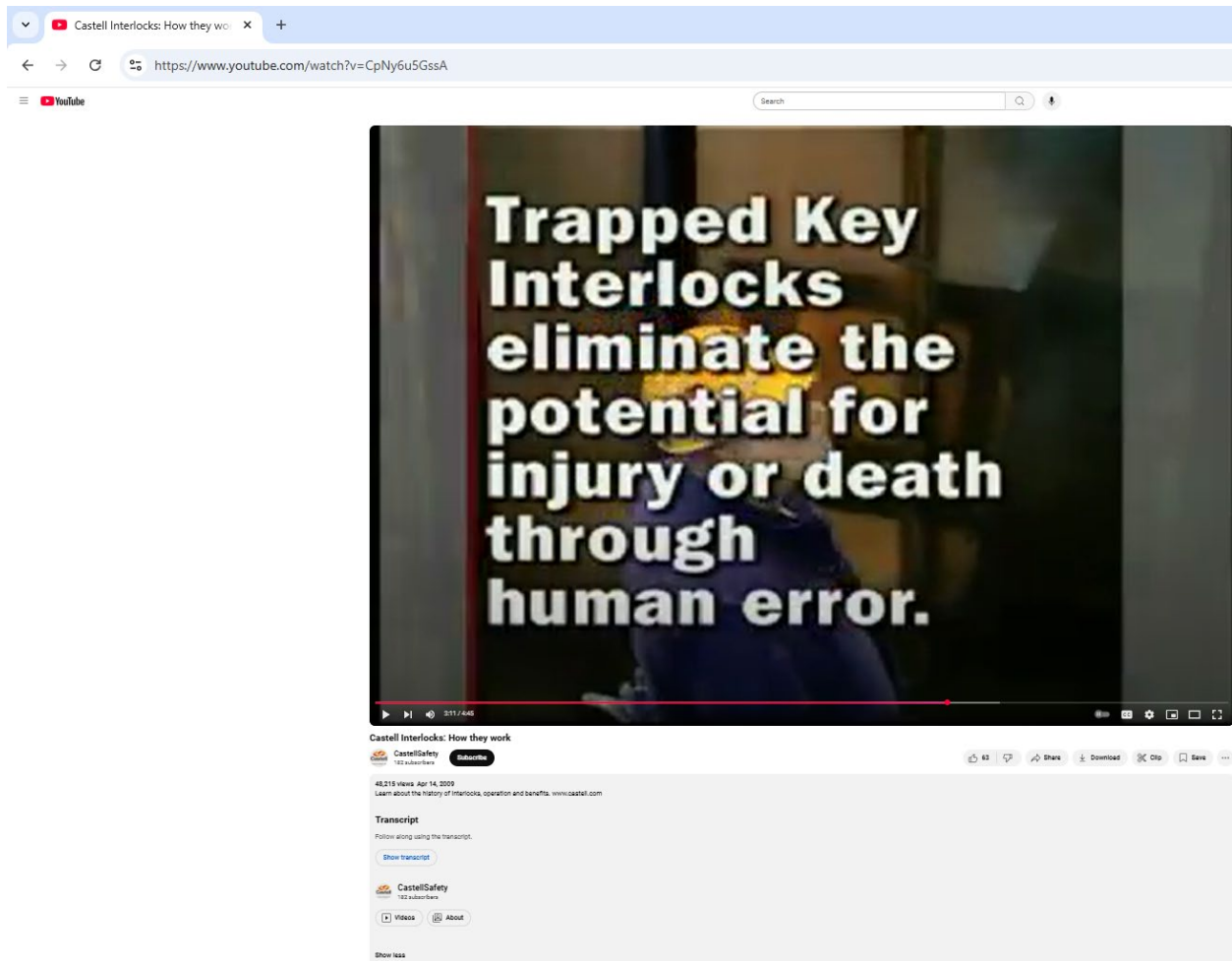


Screenshot of *Castell Interlocks: How They Work*¹



¹ Castell Safety Int'l Ltd., *Castell Interlocks: How They Work*, YOUTUBE (Apr. 14, 2009), <https://www.youtube.com/watch?v=CpNy6u5GssA>.

Transcript of *Castell Interlocks: How They Work*

[0:13] More than 100 years ago, trapped key interlocks were installed on French Railways to control track switching, thereby reducing the alarming number of accidents that could be attributed to human error.

[0:26] Over time, the technology has been embraced by virtually every industry in Europe.

[0:31] Fitted interlocks control the process, ensuring that equipment is always locked in the desired operating mode and imposing a predetermined and safe sequence of activities through the controlled release, transfer, and trapping of keys.

[0:49] Statistics support the contention that trapped key interlock systems create a safer industrial environment.

[0:56] In the United States, where the technology is relatively new, there are approximately 4 million serious industrial injuries every year resulting in nearly 4,000 deaths.

[1:09] In the United Kingdom, where trapped key interlock systems are mandated by law, there are less than 100,000 serious injuries each year.

[1:18] That equates to nearly 40 times more serious injuries in the United States.

[1:24] Since the United States has only four times the population of the UK, this is a staggering and shocking comparison.

[1:32] Let's look at two examples.

[1:35] Moving parts and the potential to store electric and hydraulic power dramatically increases the risk of injury when a worker has to interact directly with a machine.

[1:45] Machine guarding with trapped key interlocks removes the human factor.

[1:52] The machine's main power switch is outfitted with a trapped key lock.

[1:56] As long as the power is on and the machine is operating, the key cannot be removed.

[2:01] When the power is turned off, the key is released, and the power switch is safely locked into the off position.

[2:09] The key can then be taken to the lock on the access door of the machine.

[2:13] When it's inserted and turned, the key is trapped, and the bolt on the side of the lock is freed, which allows the door to open

[2:21] This is the only way the door can be opened, and as long as the door remains open the key is trapped.

[2:27] It's impossible to mistakenly reenergize the machine while the protective door is open.

[2:34] When the task is complete and it's necessary to re-energize the machine, the sequence of events is simply reversed.

[2:41] The bolt is reinserted, and the door is locked, which releases the power key.

[2:47] This key is then returned to the main power switch and used to reenergize the machine.

[2:53] Trapped key interlocks have a universal application.

[2:57] They can be fitted to virtually any piece of equipment or machine operated by human intervention in virtually any industrial environment, making it virtually impossible to deviate from safe practice.

[3:09] This eliminates the potential for injury or death through human error.

[3:19] Castell interlocks is a company you should know, an American company in the business of safety engineering, a company designing, manufacturing, and installing trapped key interlocking systems for customers all over the world.

[3:35] Trapped key interlocking systems may seem new, different, or radically at odds with standard American safety practice, but the concept originated over a century ago.

[3:46] It's long been a staple of European industry, and it's steadily gaining support among American safety experts.

[3:52] Trapped key interlocking technology creates safer work environments.

[3:57] It's the best solution to a problem that costs thousands of lives and billions of dollars every year.

[4:04] Castell interlocks is a leader in safety engineering, providing the widest range of mechanical and electromechanical trapped key interlocking systems in the world.

[4:14] We are determined to change the face of American industry.

[4:18] Together we can make a difference.

[4:21] Together we can Implement a strategy that is the essence of risk management and best practice.

[4:28] Together we can ensure that the penalty for a single moment of carelessness is not the loss of life or limb.