

THE ULTIMATE EMERGENCY SHOWER...



NEVER HAS TO BE USED

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ENGINEERED SOLUTIONS[™] FOR SAFETY

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By Casey Hayes

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Most emergency shower and eye/face wash installations across North America do not comply with significant code provisions, even though the most recent ANSI Z358.1 Standard released in 2009. Exposure to risks associated with non-compliance increase significantly for companies that have not yet upgraded their emergency eyewashes and showers. Non-compliance OSHA fines typically begin at \$100,000 and can easily exceed \$1 million; however the most damaging risk is an injured worker's ability to claim excessive injury from a non-compliant drench shower or eyewash. In today's "lawsuit lottery" business climate, even a rich imagine is no match for jury-system settlements.

To protect workers and the companies that employ them, emergency drench showers and eye/face washes must be in the right place, at the right time, with the right water supply. Large-scale industrial settings require tempered water systems that provide right-sized water heating and/or cooling, storage, and recirculation – all engineered to address the unique conditions at each facility. Several factors contribute to the engineering challenge and complexity; water volume, pressure and temperature vary significantly between sites, and may even fluctuate within a facility. Coupled with the possibility of sudden demand from multiple drench units concurrently, creating an effective plant-wide design can be extremely complex.

NOW WHAT?

Designing, building and installing a system of emergency shower eye/face wash units does not address the full scope of ANSI standards. ANSI includes two additional requirements: Shower eye/face wash units must be (1) Tested and flushed weekly, and (2) Subjected to a comprehensive annual inspection. Conducting all necessary testing is time consuming and labor intensive, and usually does not produce adequate documentation to prove ANSI compliance and reduce litigation exposure.

ARE YOU IN HOT WATER?

While cold-climate sites typically require water heating and blending systems to meet safety standards, hot climates and water pipes exposed to exothermic processes often require a source of cooled water to reach a tepid blend.

WHO NEEDS A SHOWER?

Current emergency shower and eyewash safety code states that "where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use."

Current automation technology enables facility and safety managers to perform system testing and documentation without the time consuming, error-prone, and costly burden of manual maintenance cycles. Safety and facility managers now have the option to equip their large-scale shower eye/face wash installations with System Integrated Management Applications (SIMA™). SIMA™ is a cloud-based asset management solution that automates facility-wide unit testing and retains a log of system readiness documentation.

SIMA™ connects measurement and activation points installed on physical assets to a cloud-based asset management platform using secure communication channels. With virtually any standard browser-equipped device, authorized personnel may log on to a secure SIMA™ website to monitor and interact with the SIMA™-enabled assets. Offered as an option for custom-engineered emergency shower/eye/face wash systems, SIMA™ provides a cost-effective and location-independent method for monitoring, testing, and documenting system readiness. In its basic configuration, SIMA™ serves several significant functions:

SITE CONDITIONS DRIVE SYSTEM REQUIREMENTS

Site-specific factors include: exposure to corrosive materials, climate extremes, seismic activity, environmental compliance, water and power infrastructure, and integration with local systems and operations.

TESTING AND MAINTENANCE

SIMA™ helps take the cost and inconvenience out of continuous compliance by providing both on-demand and calendar-based testing. To conduct remote unmanned testing, the system can bypass shower and eye/face wash outlet heads remotely and redirect water flow to a bypass drain. This feature makes it easy to test and log simple valve operation and water flow.

SIMA™ can also detect and report out-of-limit conditions such as water pressure, temperature, and system readiness.

EVENT MONITORING

How will your personnel summon emergency response resources when they are working alone or in remote locations? SIMA™ equipped systems can alert supervisors and other personnel when a specific piece of equipment is activated. This capability can significantly reduce emergency response time, which is directly linked to favorable medical outcome.

RAPID RESPONSE :: LIFE SAVER

For many types of chemical exposure, rapid response means a favorable medical outcome.

DATA RECORDING

SIMA™ records and archives installation-wide asset test and activation events. Documentation includes system operating attributes (water temperature, pressure, flow rates, etc.) along with system activation cycle time, essential data in the event of subsequent litigation. Standard reporting tools make it easy to view and export logged data for further analysis.

YOUR MSDS KNOWS

The Material Safety Data Sheet for many contaminants and chemicals states: "In case of contact with skin, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately."

Remote assets introduce unique challenges and risks to industrial operators. To address those challenges, SIMA™ provides advanced monitoring and communication capabilities that integrate remote assets with your central control system. For critical operating parameters such as pipeline temperatures and pressures, turbine conditions, and power availability, SIMA™ captures instrumentation output and utilizes cellular or satellite communications to integrate remote assets with your operations environment. Identifying out-of-range operating situations and alerting appropriate personnel **before** a catastrophic failure occurs will elevate your safety environment from reactive containment to proactive intelligence.

REMOTE :: NOT FORGOTTEN

SIMA™ connects front-line asset performance and personnel safety with central operations.

The ultimate emergency shower is the one that never needs to be used.

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