



# Case Study

## SAFETY SHOWER AUDIT SOLUTION

Ensuring a company has the right safety shower equipment to mitigate risk to its employees AND the company itself from potential lawsuits is challenging, particularly when legislation is not clear and firms are under pressure to keep costs down.

### ▶ THE PROBLEM

SSP was asked by a large chemical company to visit one of its sites to advise on additional new emergency shower equipment as well as to advise on whether they should replace some of the existing facilities. The client was fully aware of its need to protect its employees from the dangers posed by the numerous different hazards in their working environment. It was looking to do more than just tick boxes, however, and was seeking advice on best practice, particularly given the lack of clarity around emergency equipment legislation and the large disparity in quality of products on the market.

### ▶ THE SITUATION

The range of issues we found with the existing equipment served to highlight very clearly what best practice did NOT look like. As is evident from the pictures, there were major problems that, if they weren't already, could affect the functioning of the emergency equipment, thus risking danger to life and the company as a whole.

Problem areas included cracked plastic, inadequate heating elements, rusted and clogged shower heads and drains, inadequate insulation, inaccessible parts making maintenance and checks impossible and poor workmanship generally, particularly in terms of welding. More worrying was a lack of ATEX certification for the whole construction of many of the units, making ATEX certification of individual parts, if this existed, null and void. Most of the equipment did not meet the 'gold' standard EU and ANSI (US) standards met by the SSP range.

### ▶ THE SOLUTION

It was clear that existing equipment needed urgent upgrading. We went through the individual problem areas, highlighting why these occurred and why SSP products would avoid a recurrence of such issues. Being able to demonstrate the major challenges and where the company could mitigate risk to itself and its staff was key. Furthermore, budget issues were mitigated due to the robustness and high quality of SSP designs, meaning replacements of entire units and individual parts as well as maintenance time would be much reduced. (The SSP approach satisfied HSE, QC and accounts functions.)

### KEY CHALLENGES

#### ▶ Frost protection

A shower that is frozen is useless. If an injury occurred when a shower was rendered inoperable by cold weather then the company is wide open to litigation.

#### Mitigation

**Double trace heating** which means the unit does not need to work as hard and will distribute heat better and be less prone to failure

**Tough casing**, unlike cheaper plastic casing, is less likely to be damaged so protects the trace tape from the elements, increases the insulation and reduces the chance of failure.

#### ▶ Heating elements and insulation

A failure in the heating element can result in a cold shower. ANSI standards dictate that a shower must be tepid. EN standards advise that a tepid water shower be used if an environment is likely to be cold. This to encourage users to remain under the shower for the advised 15 minutes. Employees risk hypothermia or hypothermic shock if they stay under a cold shower for 15 minutes on a wintery day.

#### Mitigation

**Longer heating elements.** These are more expensive but heaters with long elements will not have to get as hot and will distribute heat more evenly. As such, they are less likely to fail

**Heat sensors and alarms.** These will not prevent failure but will alert if an element fails.

**Good quality tank insulation.** Using high quality polyethylene insulation reduces the running cost and improves life of the heating element.

#### ▶ Construction

Often showers are situated in high wear environments. They may be exposed to the elements or be situated in busy factories with a risk of being knocked or bashed from time to time. This general wear and tear is unavoidable but if it should result in a faulty shower then the company is exposed to litigation risk. Of course this can be reduced with a regular testing schedule but failure between tests is still a potential risk.

#### Mitigation

**Stainless steel design.** SSP products are made in stainless steel which lasts longer and is tougher than plastic so the shower will stand up to tough environments for longer. All stainless bolts and fittings rather than cheaper metals can also make a difference to things like galvanic corrosion risk.

1.



1. Broken plastic casing, poor quality (polystyrene) insulation v SSP robust stainless steel ATEX-certified unit, polyethylene insulation.

2.



2. Tank cannot empty completely due to poor design v SSP design that allows complete drainage including a water basin to protect the heater.

3.



3. Water can't flow because of calcination in small bores in shower rose v shower rose with big bores.

4.



4. Difficult to access heater unit for upgrade or maintenance v easily accessible heater

5.



5. Heaters have short rods which have to work harder and thus are prone to failure v long rods from SSP heater which

## WHY CHOOSE SSP FOR YOUR SAFETY SHOWER NEEDS?

- The highest quality range on the market, mitigating risk to your employees and company as a whole
- Meet EU / ANSI standards
- ATEX certified options
- We are ISO 9001:2015 Certified
- A wealth of industry experience
- Friendly and hassle free expert advice



### MEETING STANDARDS

The lack of clear EU standards does not mean that any old shower will suffice in the UK. Employers still have a legal requirement to provide sufficient first aid equipment. The lack of clear standards simply means defining the word sufficient is more problematic. Where applicable to the EU standards should be used but in areas or for products not covered, guidance from other standards would be sensible. SSP products meet EU standards AND American ANSI standards.

In addition, our range is one of the very few that has ATEX compliant and certified shower assemblies. Not only are ATEX certified components available for most electrical components but, just as importantly, the complete assembly is also certified.

