

SAFETY SHOWER GUIDANCE

November 2016



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Eurobitume, November 2016

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Introduction

Health and Safety laws impose duties on all relevant stakeholders and on all involved parties to provide safe systems of work.

This guide to safety showers is intended to help all parties comply with their responsibilities during the delivery of bitumen products and does not alter the legal responsibility of either party. A specific risk and exposure analysis must be completed by the responsible party before any operation, new installation and reviewed if any modification is undertaken.

Purpose

These guidelines provide uniform minimum considerations for the performance, use, installation and maintenance of emergency safety shower equipment at facilities where bitumen products are handled in bulk and at elevated temperature. It is not an exhaustive list of considerations and, as such, anyone considering installing safety shower equipment should consult with a competent engineer or safety professional.

Scope

These guidelines establish minimum requirements for both mains-fed and self-contained safety shower equipment, for the emergency treatment of the eyes or body of a person who has been exposed to hot bitumen.

The emergency safety shower is not suitable for primary protection against splashing hot bitumen. Workers must wear, as a minimum, the personal protective equipment stipulated in the Eurobitume Personal Protective Equipment (PPE) guidance.

Reference documentation

Suitable guidance can be found in the ***American National Standard for Emergency Eyewash and Shower Equipment – ANSI Z358.1 – 2014.***

At the time of writing there is no European standard available for safety showers for industrial facilities.

Applicable National Health & Safety legislation may need to be considered.

Further general information can be found in the Eurobitume Safe Delivery of Bitumen guide.

To support this guidance the following should be considered prior to design, procurement, installation, use and maintenance of the safety shower:

1. Design Considerations

- The emergency shower must be capable of delivering a sustained volume of clean water for a minimum period of 15 minutes.
- The flow rate and spray pattern must be sufficient to drench the whole body with the intention of removing heat from the bitumen.
- If an eyewash is installed, the flow rate should be sufficient to thoroughly wash the eye, but not too great to create pressure damage to the eye.
- The shower must be operational at all times during bitumen delivery or handling.
- If shut-off valves are installed in the water supply line, provision should be made to prevent unauthorised shut-off, e.g. locked valves or removed valve wheels.
- It is critical to ensure that the emergency shower operates reliably in all weather conditions, in particular during freezing conditions.
- It is important to avoid hypothermia when using the shower, therefore the delivered water should be tepid and not cold.
- It is important to avoid bacterial contamination and airborne issues, such as legionella.
- The shower operation must be simple, preferably by footplate, push-bar, pull-handle or a similarly uncomplicated mechanism.
- The area within the shower must be sufficiently large to not adversely restrict movement, therefore enabling the injured party to focus the water flow on the affected area.
- The shower should be alarmed in such a way as to alert site staff of its use.

2. Shower Position

- The shower must be close to the area of highest risk of bitumen exposure; in the case of bitumen delivery it should be within 20 meters of the offloading point
- The shower must be protected from potential bitumen spray, therefore it is best situated at least 6 meters from the source of bitumen (e.g. discharge point). If this is not possible, the shower must be shielded
- Access and egress to the shower must be clear, level and unobstructed with no steps
- The risk assessment must consider other hazards on the route to, and in the shower area (e.g. traffic, other activities....)
- There must be clear signage identifying the shower location
- The route leading to, and the shower itself must be well lit

3. Training & Shower Maintenance

- The shower manufacturer should provide operation, inspection and maintenance instructions for the shower equipment.
- Maintenance of the shower in line with the manufacturer's recommendation must be part of the planned maintenance program.
- Showers should be activated at least once per week to ensure that water is available to the shower and there is no sediment build up in pipelines.
- Water header tanks should be visually checked monthly to ensure sufficient water is available. The water should be changed or replenished if necessary.
- All employees who might be exposed to hot bitumen must be trained in the location and use of the safety showers.
- All drivers must have instruction on the location and use of the safety showers as part of their site induction.