

SAFETY MEMO

April 5th, 2021 – Emergency shower and eyewash station (2 of 2)



Did you know?

Introduction

In the event of an emergency, the system must have proper plumbing to the emergency shower or eyewash station in order to obtain water flow and temperature as quickly as possible. The piping used for construction must limit corrosion in order to avoid clogging the water spray nozzles.

Recirculation Loop

If several emergency showers are to be installed in a factory, it is possible to connect them individually to the water network or to install a recirculation loop.



There may therefore be a pump that recirculates the water in the internal loop in order to maintain the desired water temperature at the points of use. When there is a demand, the pump speed is increased to provide the required pressure at each point of use.

Components

Several components allow the proper functioning of the emergency shower:

- A thermostatic mixing valve provides the ideal temperature.
- A local hot water tank or instantaneous heating allows hot water to be supplied quickly.
- A pressure regulator makes it possible to limit the pressure when it is too high, especially in the case of a recirculation loop where several showers can be used simultaneously.
- An electric tracing on the piping can be used for locations where there is a potential for freezing.

Performance Test

In order to provide an ideal emergency shower or eyewash station for users, performance must be validated. It is therefore necessary to verify that:

- The correct dimensions are used.
- There is no leakage.
- The tap provides water in less than a second and stays open by itself.
- The water speed is low enough to prevent injury.
- The water temperature is lukewarm.
- The water flow is adequate even if multiple showers are used simultaneously.



Maintenance

Shower valves must be opened once a week to validate operation, validate the presence of water and to drain stagnant water at service points.

Lack of maintenance could lead to emergency showers and eyewash stations which do not properly function during an emergency or the presence of bacteria in standing water that would then be projected into the user's eyes when using the eyewash station.

