

Safety Alert

Chemical Burn to Hand from Ball Valve

What happened?

Employee received an acid burn to left hand & holes to the front of his shirt when operating a small chemical dosing ball valve, that had been removed from the plant and was sitting on a mechanical tech's desk.

How did it happen?

The acid dosing system had been thoroughly flushed, to facilitate a 3/8" ball valve being swapped out.

The ball valve that had been removed from service, was sitting on a tech's desk. An Engineer picked up the valve and operated the valve from the open to closed position a couple of times. Some liquid came out of the valve onto his shirt and hand causing holes to appear on shirt. He immediately pulled shirt(s) away from skin to prevent burns to the chest & headed to the washroom to flush. He sustained minor burns to his left hand. The two shirts he was wearing, were ruined.



What did we learn?

The pipework was drained (via pump) and the valve was flushed while in the open position.

The ball valve was considered "safe" and ended up on Tech's desk, where it was inadvertently picked up and exercised / operated.

The cavity behind the ball valve had contained a small amount of acid/acid-water which drained onto Engineer's shirt and hand, when moved into the closed position.

How can we improve?

Take all precautions when handling valves from chemical systems.

Small bore valves removed from chemical systems, should be bagged, tagged and disposed of appropriately.

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Take 5! Stop. Check, Challenge, Change, Continue.

5 seconds, 5 minutes, 5 hours – however long it takes to do the job safely.