

Safe Work Instruction - Cleaning Hydrochloric Acid Injectors

DO NOT use this plant* unless you have been inducted in its safe use and operation by an Authorised Experienced Operator

This SWI may not cover all possible hazards and risks and should be referred to as a control measure in the risk assessment process. Additional training may be required for high risk plant. Site and task may change required PPE.

PERSONAL PROTECTIVE EQUIPMENT



Eye protection must be worn



Long and loose hair must be contained or covered.



Hearing protection must be worn



Foot protection must be worn



Hand protection must be worn



Half face mask respiratory protection must be worn



Full-face protection must be worn



Protective body clothing must be worn

POTENTIAL HAZARDS AND RISKS

- ⓘ Exposure to High Pressure Fluid**
Injury from exposure to high pressure fluids
- ⓘ Chemicals**
Exposure to hazardous chemicals
Exposure to toxic fumes
Burn injury
- ⓘ Manual Task Injury**
Manual task injury from incorrect manual handling techniques
- ⓘ Explosion**
Explosion of gases, vapours or liquids
- ⓘ Slip, Trips, Falls**
Slip, trip, fall due to uneven or slippery work surfaces
Slip, trip, fall due to steep working surfaces

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Complete site specific risk assessment
- ✓ Complete visual plant check prior to operation
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Ensure that guards are fitted, secured and functional in accordance with manufacturers guidelines
- ✓ Ensure to put on PPE (gloves, full-face shield or goggles, apron boots, work clothes and respirator)

OPERATING PROCEDURES

- ✓ Operate plant to the conditions of the work area
- ✓ Locate injector point below last valve handle on pool return pipe. Signage should indicate where the injector is
- ✓ Turn hydrochloric acid ducolometer (acid pump) off
- ✓ Turn power off
- ✓ Bleed the line to relieve pressure. Not relieving the pressure could lead to explosive release of hydrochloric acid
- ✓ Unscrew feed line from injector and remove
- ✓ Turn off injector isolating valve, unscrew injector and remove
- ✓ Inspect injector for contamination or blockage
- ✓ Disassemble injector and clean with water to remove contamination or blockage
- ✓ Check injector isolating valve is not blocked and clean if necessary

- ✓ Apply new plumbing tape to injector thread and join back to ball valve
- ✓ Screw whole unit back into return pipe and tighten
- ✓ Replace feed line, making sure O-rings are in place and in good condition. The unit will leak if O-rings are removed or damaged

ENDING OPERATIONS

- ✓ Turn injector valve on – note, the injector valve must be turned on BEFORE the pump or the feed line could blow out
- ✓ Turn power on
- ✓ Turn hydrochloric acid ducolometer (acid pump) on

Note: If the isolating valve requires maintenance, it is recommended that the pool system be shut down. The following steps are taken to shut the pool down and reversed to start it up again

- After the injector valve has been turned off
- Turn filter valve off
- Turn pump return handle to off
- Turn main pump switch to off

FIRST AID -

EYES

If chemical comes in contact with the eyes

- ✓ Immediately rinse while open with saline solution
- ✓ Continue irrigation of eye until advised by Poisons Information Centre or a Doctor, for at least 15 minutes
- ✓ Transport to hospital or Doctor without delay

- ✓ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel

SKIN

If skin or hair contact occurs

- ✓ Immediately flush body and clothes with large amounts of water, using safety shower if available
- ✓ Quickly remove all contaminated clothing, including footwear
- ✓ Wash skin and hair with running water. Continue flushing with water until advised to stop by Poisons Information Centre
- ✓ Transport to hospital or Doctor

INHALED

- ✓ If fumes or combustion products are inhaled remove from contaminated area
- ✓ Lay patient down
- ✓ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures
- ✓ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, big-valve mask device, or pocket mask as trained. Perform CPR if necessary
- ✓ Transport to hospital or Doctor without delay

DO NOT

- ✗ Do not use if plant is faulty. Attach a DO NOT OPERATE tag and report fault to your supervisor
- ✗ Do not leave plant running unattended
- ✗ Do not eat, drink or smoke when handling chemicals
- ✗ Do not wear loose jewellery
- ✗ Do not use mobile phone while operating plant

*Plant in this SWI refers to any machinery, equipment, appliance, container, implement and tool.