

Case involving organic solvent poisoning during unscheduled work in a metal product washing unit

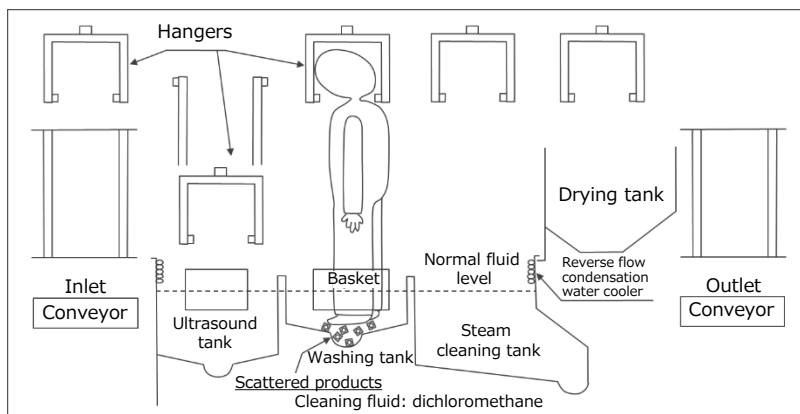


Figure: Washing unit cross-sectional diagram (at time of accident)

[Location of accident]

Inside automatic ultrasonic washing unit used to wash die-cast products in a factory that manufactures solenoid valves and other components for gas equipment

[Cause of accident]

A basket rotating in the washing tank inside the washing unit came loose and scattered the products being washed inside the tank. A worker who entered the washing unit to pick up the scattered products inhaled dichloromethane vapor given off by the cleaning fluid left in the unit.

[Damage/injuries]

The worker lost consciousness after inhaling the cleaning fluid vapor and was rescued after being found caught on a hanger inside the washing unit by another cleaning worker. The worker was diagnosed with dichloromethane poisoning and was absent from work for 15 days.

Extract from [Preventive measures]

- [1] Before anyone enters the washing unit, all cleaning fluid must first be drained from inside the unit. The interior must be adequately ventilated. Workers must wear protective gear, such as a breathing apparatus.



Riken Keiki Recommendations

Measuring gas concentrations will confirm whether the ventilation is sufficient. We also recommend performing chemical risk assessments using personal PID monitors for work environments in which organic solvents are used.