



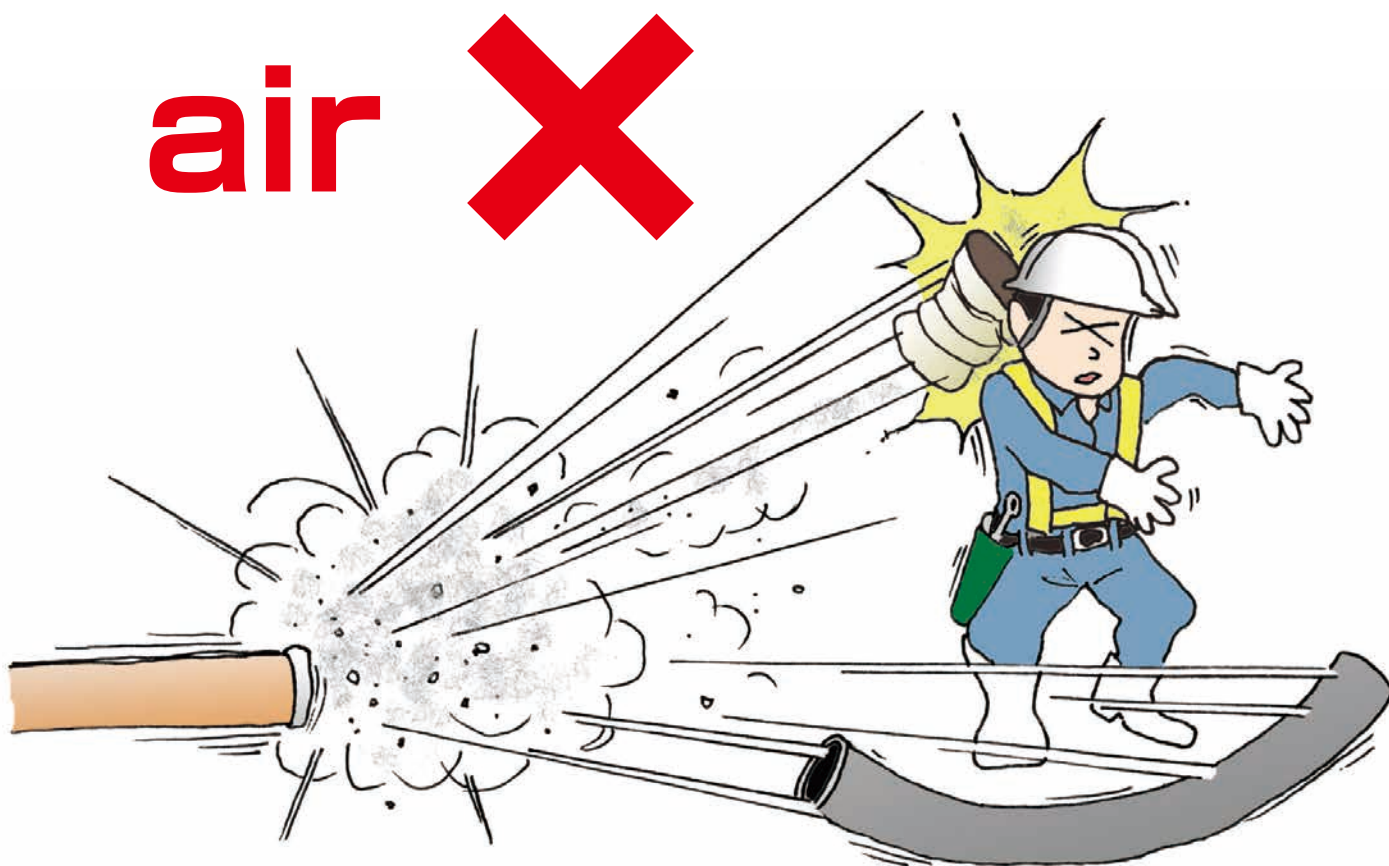
# “Concrete Pumping”

The important points for Safety and health

## Precautions for cleaning and withdrawal

### (1) Precautions for cleaning the transport pipe

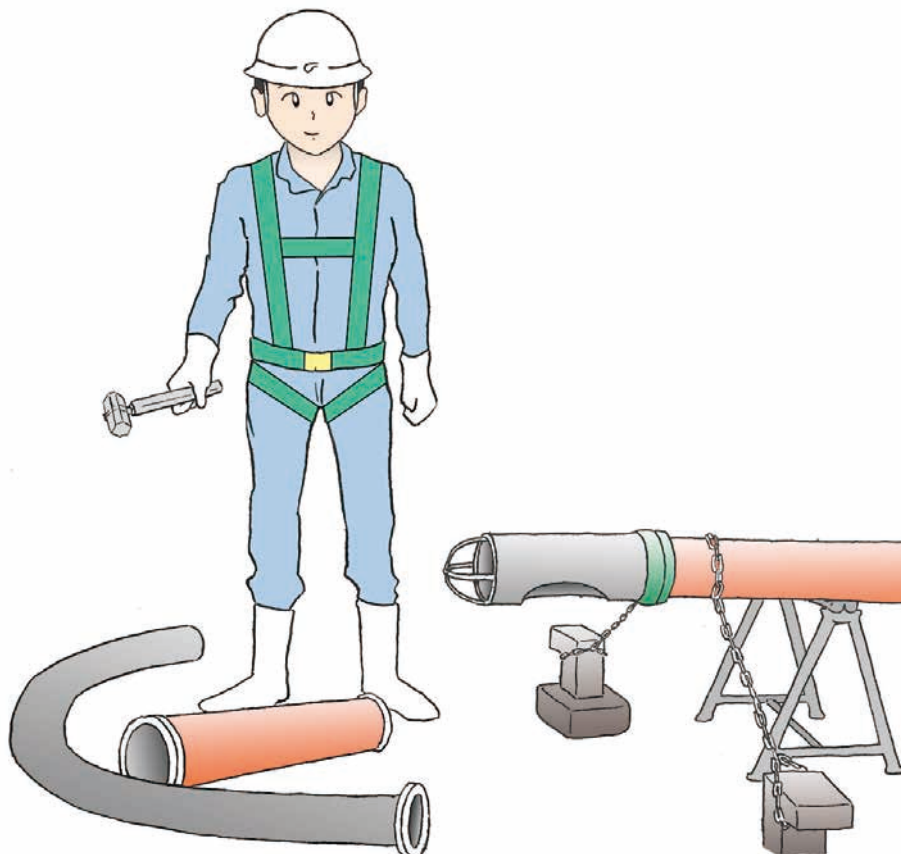
There are two cleaning methods for transport pipes: water cleaning and air cleaning. However, the water washing method is recommended because the air cleaning method may cause serious accident due to air explosion.



Example of an accident due to an explosion of compressed the air during air cleaning

## (2) When cleaning the transport pipe remove the tip hose

When cleaning the transport pipe, remove the tip hose for safety, attach the cleaner holder and securely fix it to a firm place with a wire or chain.



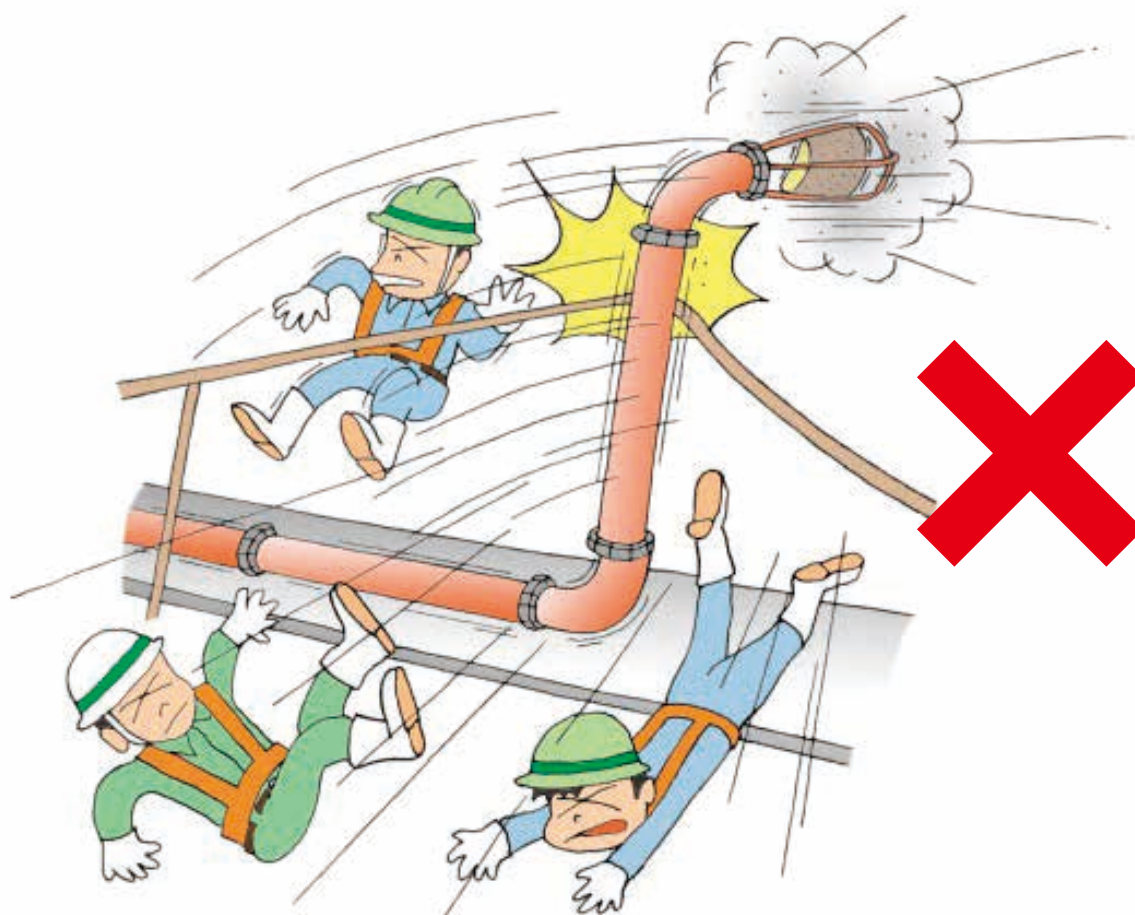
Removing the tip hose and installing a cleaner receiver



Example of a cleaner receiver

### (3) Do not use a vent pipe at the end of the transport pipe.

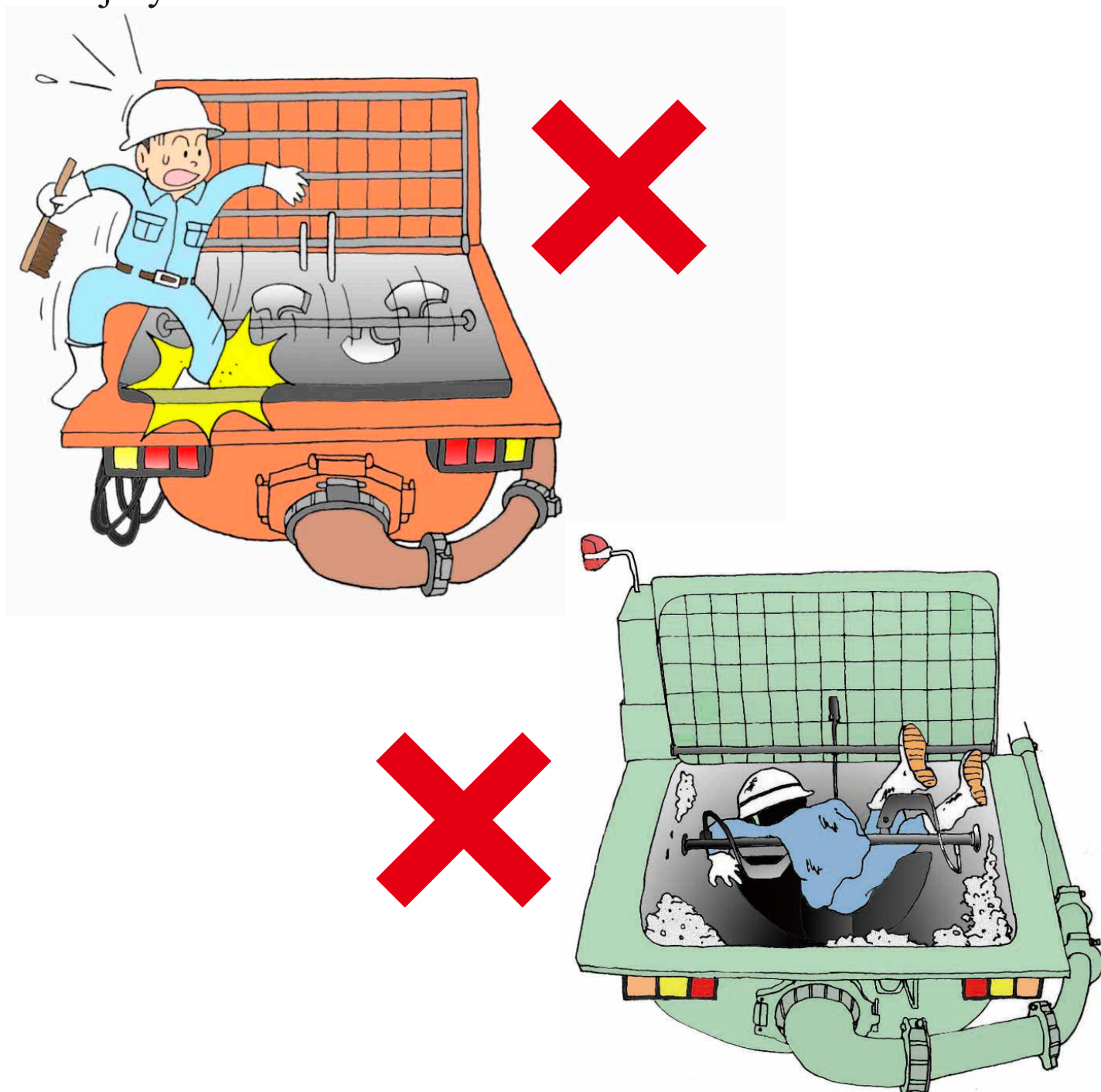
Do not use a vent pipe (curved pipe) at the tip of the transport pipe for cleaning. If a vent pipe is used the transport pipe may spring up or run out due to the impact of the transport pipe cleaner coming out of the tip.



Example of an accident caused by using a vent pipe at the tip of a transport pipe

## (4) Cautions when cleaning a hopper

Always clean the hopper after stopping the agitator (agitating blade). If you work without stopping the agitator, your hands and feet may get caught in the agitator, resulting in serious injury or death.



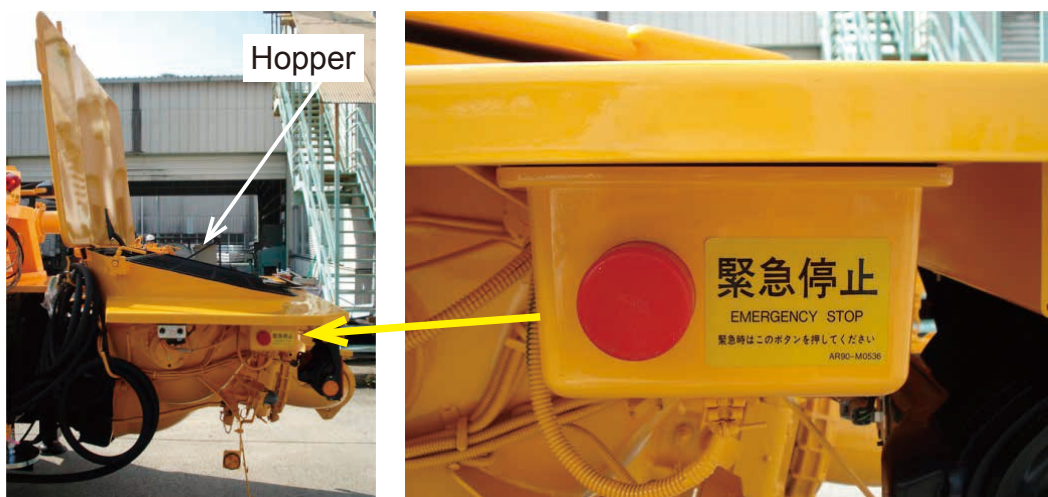
Example of an accident being caught by a hopper agitator



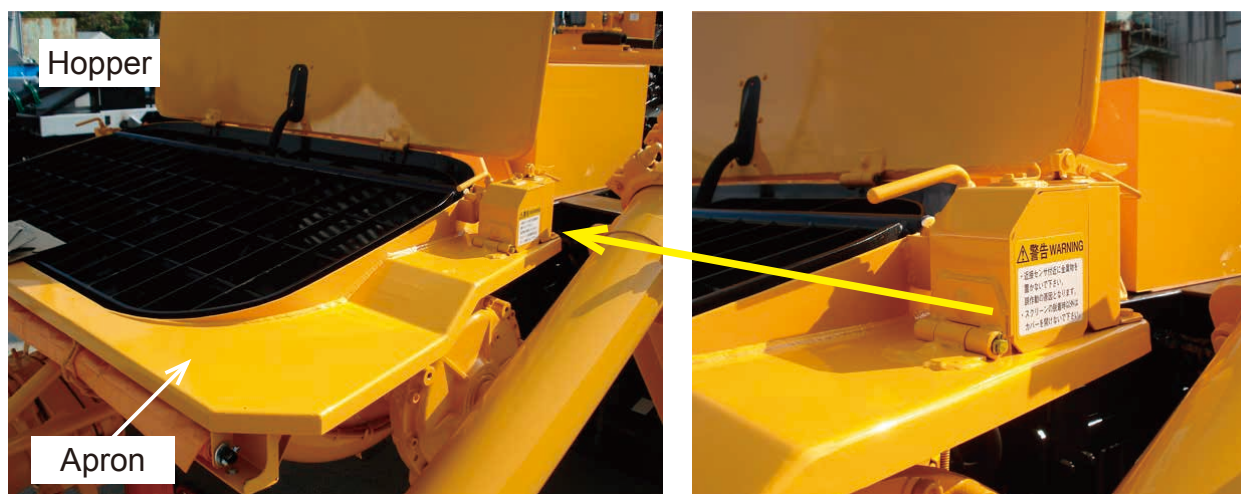
## (5) Emergency stop device

An emergency stop device (agitating blade) is attached to the side that can stop the operation of a concrete pump by pressing the button when a person is caught by a hopper agitator or when it is about to occur.

There is a device on the side of the hopper (apron) that automatically stops the agitator in order to prevent accidents involving a person in the agitator, that is seen when the hopper screen is opened.



Example of emergency stop device



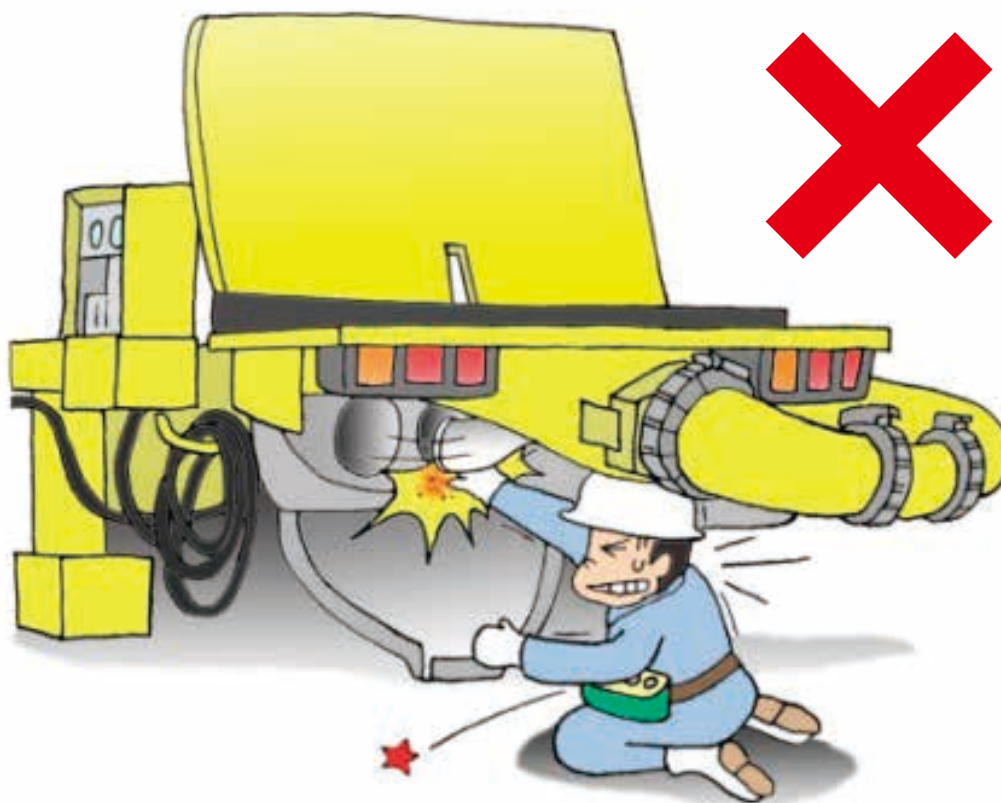
Example of automatic stop device

## (6) Cautions when cleaning a cylinder

When cleaning concrete valves, cleaning of a cylinder is carried out after stop the engine and move the remote control unit away from your body to prevent accidents caused by malfunctions.

In addition, never put your hands into the concrete cylinder on the piston type concrete pump vehicle. There were accidents that caused the valve to malfunction when the hand was put in, resulting in serious injury due to the hand or fingers being caught in the valve device.

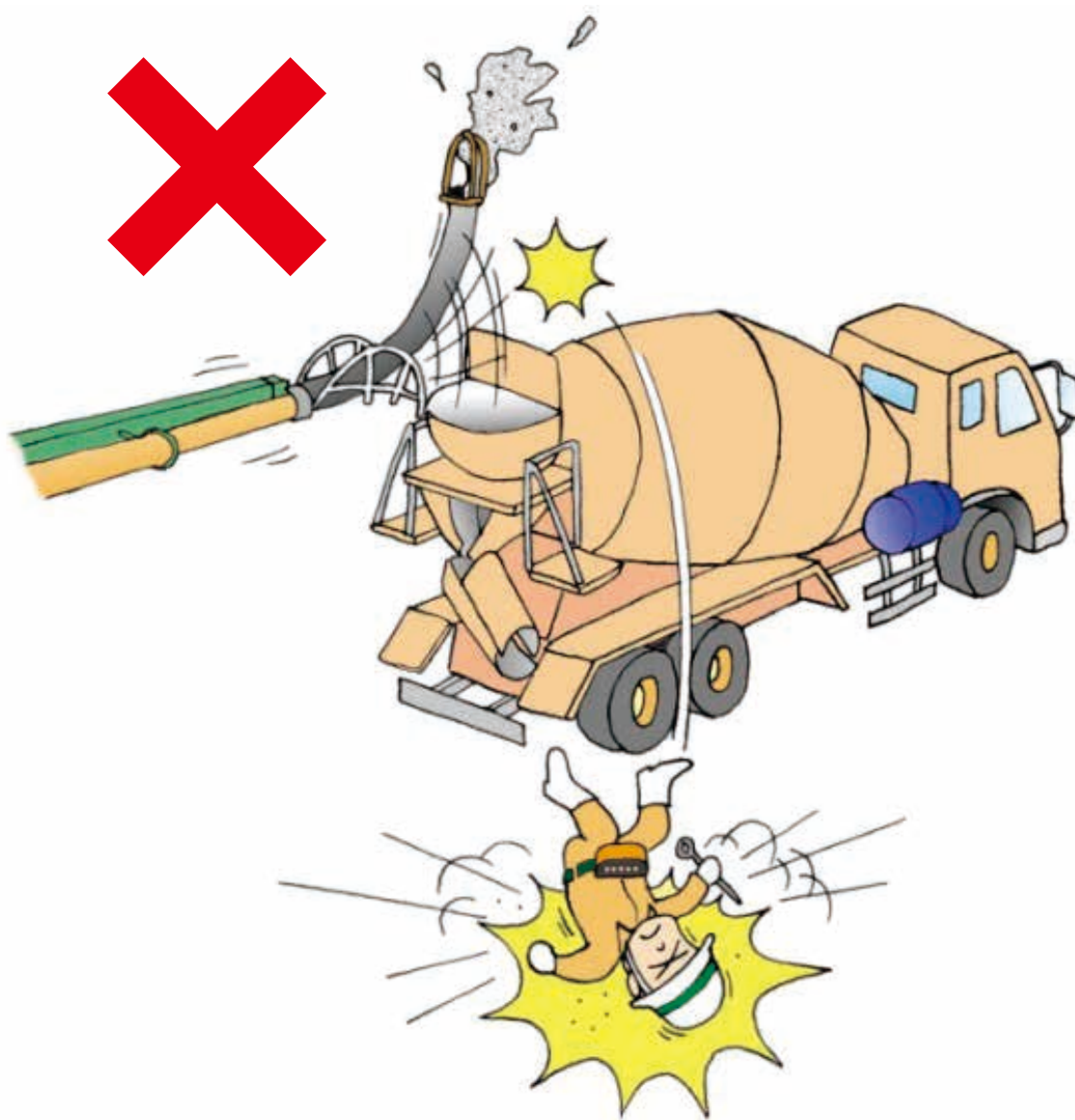
Do not put your hands in the concrete cylinder. Instead, use a scooping bar and high-pressure water to wash away.



Example of an accident where a finger was caught in a valve that was activated during cylinder cleaning

## (7) Cautions when working on a concrete mixing vehicle

When return the remaining concrete to a ready-mixed car (truck agitator) while washing it with water, you must use the fall prevention equipment to prevent accidents falling from the top of the concrete mixing vehicle when you climb the hopper (input port) of the vehicle.

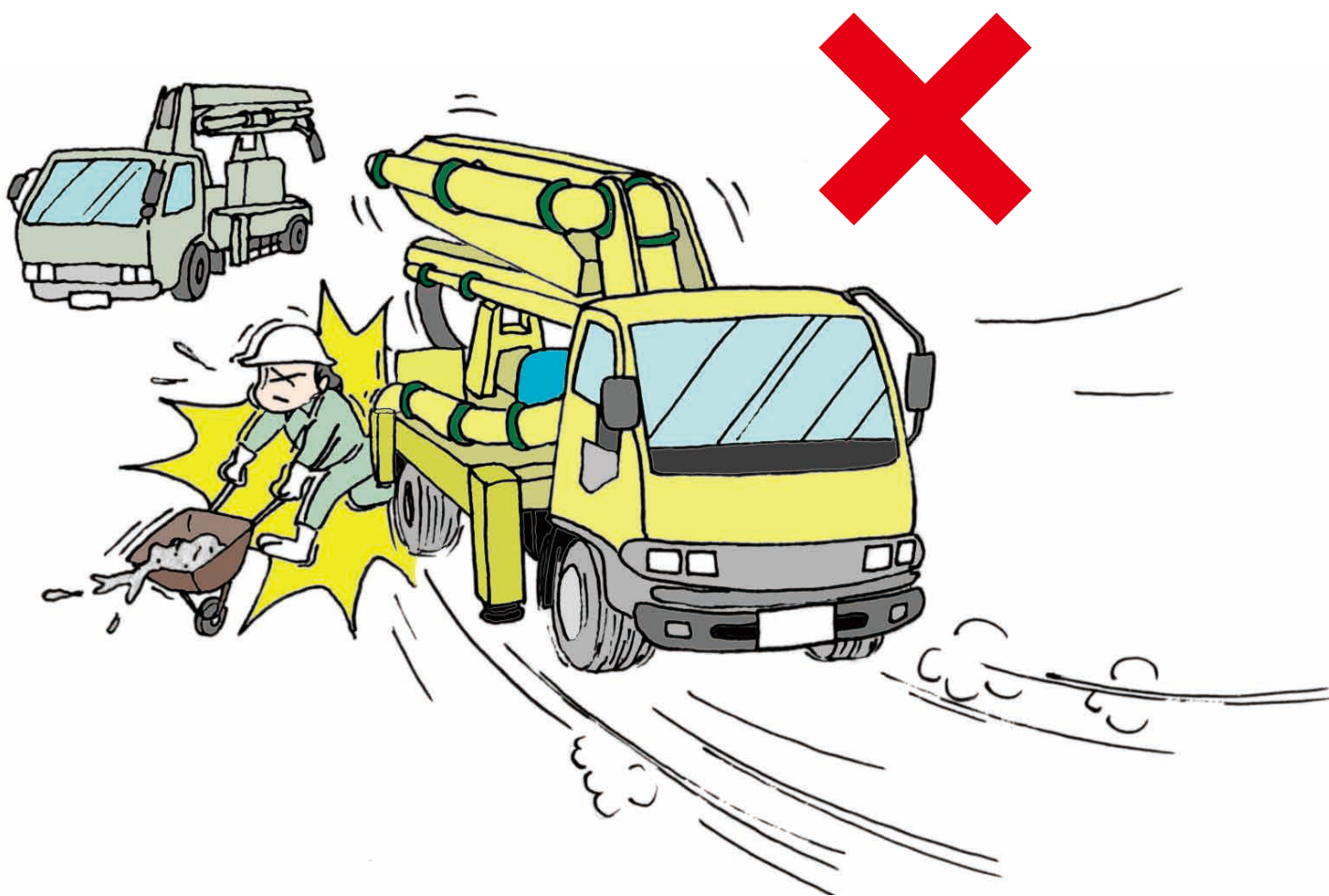


Example of a fall accident from a truck agitator



## (8) Check the flow line of concrete pump vehicles

Places where there are many things, such as project site and company parking lots, pay attention to the traffic lines of concrete pump vehicles in the places where many obstacles, poor visibility, and narrow places to prevent traffic accidents.



Example of a traffic accident caused by a concrete pump vehicle in a company parking lot