CIP (Clean In Place) Guidelines

Important Precautions!!!

Wear eye protection when dealing with hazardous chemicals.

Wear eye protection during cleaning solution circulation.

Make sure tank is vented during cleaning circulation – remove some accessories such as sample valve, etc. to avoid pressure or vacuum build up.

Place a 90 degree elbow on any open ports on the side of the tank, so that cleaning agent spray or fumes are vented to floor.

When cooling tank down during the post cleaning rinse cycle, make sure tank is heavily vented. Crack the manway lid open by a few inches, in addition to having all side mounted ports venting to floor.

IF TANK IS NOT ADEQUATELY VENTED DURING THE HOT TO COLD RINSING CYCLE, A VACUUM CAN BE CREATED THAT COULD RESULT IN TANK IMPLOSION

Basic CIP Outline:

1) Vent the tank
2) Cold water rinse
3) Hot water rinse
4) Add required amount of hot water (see cleaning chemical directions for water temperature). Be sure there is enough water to run the CIP without causing the pump to run dry.
5) Add chemical to hot water in tank per the chemical manufacturer’s instructions
6) Circulate for the time specified by the chemical supplier and then drain the tank. Use the dirty hoses and dirty pump from the transfer out of the tank.
7) Hot water rinse.
8) Cool down tank by gradually lowering temperature of rinse water (while the tank is adequately vented) or let stand.
9) Visually inspect inside of tank for cleanliness.
10) Repeat the CIP process using cold water and a weak acid solution (phosphoric acid is fine). Drain the tank and let it air dry with the door open. This acidic state will make it less friendly to any bacteria that might want to try to take root.

Sanitize – Do This Just Before Using The Tank

1) Add sanitizing agent to cold water in tank per the chemical supplier’s instructions.

2) Using the pump and hoses you will use for the upcoming transfer into this tank, circulate for 5 minutes (per the chemical supplier’s instructions). Drain to floor.

3) Reinstall cleaned and sanitized accessories

4) Purge oxygen from tank with CO2.

5) If not using immediately, leave tank pressurized at 3 PSI

Detailed CIP Guidelines

1) Remove all accessories from tank:
   a. PRV valve
   b. Pressure Gauge
   c. Sample valve
   d. Racking Arm
   e. Manway gasket
   f. Butterfly valves on cone

2) Scrub manway lid, manway port, and inside of tank around manway port, with a soapy brewery cleaner like Supreme. Rinse.

3) Scrub manway gasket inside and out. Rinse.

4) Rinse the tank with cold water through the manway port and drain to floor.

5) Rinse the tank with cold water through the spray ball

6) Install 90 degree elbow pipes on top ports in order to direct any fumes or spray away from people.

7) Reinstall manway gasket. Close (and clamp) manway door.
8) Install 90 degree elbows on horizontal ports on side of tank.

9) Depending on the size of your tank, and your water pressure, you may or may not want to rinse your tank by going through the pump (and then through the spray ball) with the pump turned on.

10) Once tank is as clean as it can get with the cold water rinse, gradually increase the water temperature (by rinsing through the spray ball) until you’re using full hot.

11) Rinse with hot water until tank temperature reaches 160 F, or whichever temperature is recommended by the manufacturer of the cleaning chemical you are using.

12) Once tank is up to temperature, add the volume of hot water specified by the cleaning chemical manufacturer for the amount of cleaning chemical that you will be using.

11) Add the cleaning chemical.

13) Circulate cleaning solution (routed from the bottom outlet of the tank, through the pump, and through the CIP line and spray ball, for 20 minutes.

14) During the cleaning cycle, disassemble small parts removed above, clean, rinse, sanitize, reassemble, and store in sanitizing solution.

12) Drain cleaning chemical solution to floor.

13) Rinse tank with hot water.

14) Open manway and remove gasket.

15) Rinse gasket and store in bucket of sanitizer.

16) Rinse manway door and port.

17) IMPORTANT! Prop manway door open a few inches.

15) Proceed with tank rinsing, and (making sure tank is well ventilated) gradually decrease the temperature until you are rinsing with full cold.

16) When tank is fully cooled, drain to floor and visually inspect inside of tank for cleanliness.

17) Add required amount of water and sanitizing chemical. Circulate for 5 minutes. Drain to floor.

18) Reinstall sanitary accessories.

19) Purge tank with CO2 to remove oxygen.

20) Pressurize tank and blow remaining sanitizer out bottom outlet.

21) If not using right away, pressurize to 3 PSI.