



STANDARD OPERATING PROCEDURES (SOPS)

Standard Operating Procedures provide step by step instructions of any repeatable procedure and allow for uniformity, safety, quality and accountability for complex but routine duties. SOPs are important to quality programs so that data is produced and collected in a standardized form. The author of an SOP should be the person most familiar with the task at hand (ie. those persons actually performing the work on a consistent or daily basis). For SOPs to be truly effective, they should be translated into checklists that are used daily. It is important to use SOPs not as a replacement for, but as a tool to assist with employee training.

How to Write Successful SOPs:

- **Keep it simple:** For SOPs to be effective they need to be written the way your team works and in common language.
- **Be specific and concise:** Different equipment requires different SOPs. For example, you'll need separate SOPs for fermenters of different sizes. Write SOPs so that employees at every level of experience can understand and carry out the procedure.
- **Use pictures or graphics:** Graphics ensure that written instructions are properly interpreted.
- **Maintain and update SOPs:** Regularly audit your SOPs. Critically evaluate SOPs for procedural changes or updates needed to improve safety, efficiency or economy.
- **Make it accessible:** Post the SOP in an area where the procedure is usually performed, compile in a binder, or archive as an electronic file.
- **Train employees:** Make sure employees understand and acknowledge the SOP.

Hazard Analysis:

An important step in creating an SOP is to evaluate the associated safety hazards involved in the tasks performed. Refer to this guide for hazard assessment principles in the BA Resource Hub:

["Best Management Practice \(BMP\) for the Development of Safety Programs in Breweries. Volume 1. Hazard Assessment Principles," Prepared by the Brewers Association Safety Subcommittee.](#)

Common Elements:

Depending on your operational procedures and department, the elements in SOPs will vary along with the level of detail. A front of house cleaning SOP may be structured as a list of steps whereas a brewhouse SOP may include a list of environmental and safety hazards, a detailed step by step procedure, and labeled images.

- Name of Author
- Date Written or Revised
- Purpose & Scope
- Environmental Health & Safety
- Equipment & Materials
- Procedure
- References

Additional Elements may include: Record of Updates, Trouble Shooting, or Quality Impact



Example Standard Operating Procedure (SOP)

SOP 1.1 – HOSE HYDROSTATIC TESTING

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Purpose & Scope: Hoses are a vulnerable link in most process and transfer applications. Hoses handle valuable and potentially dangerous materials, and hose failures can be expensive in terms of lost product, ruined equipment, spill clean-up, and, most importantly, personal injuries. This procedure is to ensure hoses are handled properly, and in safe working condition. This SOP is to act as a guide for the Cellar, Brewing and Packaging teams to safely use, and effectively assess the condition of industrial hoses.

Environmental Health & Safety:

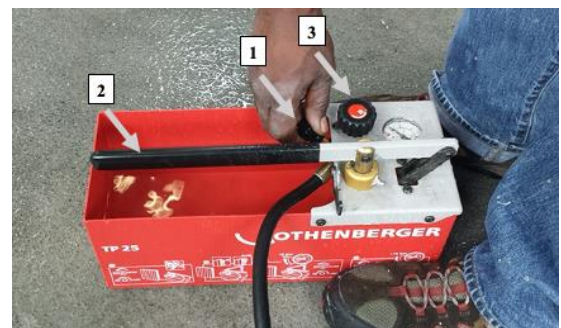
- PPE: Closed toe sturdy shoes or boots, and safety glasses
- Never stand in front of, over, or behind ends of a hose assembly during pressure testing. Hose failure could make noise, and briefly spray water. Due to rapid pressure drop from closed system and low compression character of water, violent blow out of fittings/hose is not considered as a hazard.
- Use only cool water to hydro-test hoses. Do not use chemicals. Be sure to get all air out of hose before hydro-testing.

Equipment & Materials:

- Clamps
- Gaskets
- Butterfly valves
- Rothenburger test pump (TP25) (located in the supply closet across from the 220 control room)

Procedure:

1. Collect hose/s to be tested and lay out straight on a clean / dry surface. Hose/s should be tested one at a time at room temperature.
2. Gather parts for testing: clamps, gaskets, butterfly valves, Rothenburger test pump (TP25)
3. Attach butterfly valves to both ends of the hose.
4. Fill the hose with water (vent air by raising one end of hose), and close butterfly valve.
5. Clamp the TP25 fitting onto the butterfly valve.
6. Turn adjustment knob **(1)** on TP25 towards the “minus” direction (just so that it is hand tight).
7. Open the butterfly valve.
8. Pump up the hose to XXX psi using handle **(2)** and hold for XX seconds prior to conducting the hydrostatic test at full pressure.
9. Keep pumping until XXX% of working pressure is reached, use knob **(3)** to close system and hold pressure.
10. Hold for X minutes and watch for pressure drop on the pressure gauge. Dropping pressure indicates either a leak in the system, or fittings pulling out of the hose. Small kinks expanding may also cause the hose pressure to drop
11. Record results of testing for specific hoses tested on the “Hose inventory Excel Spreadsheet”
12. Remove damaged/defective hoses from service immediately and take to “Red Tagged” area.



References: “Hose Inventory Excel Spreadsheet” (Public/Brewery Docs/ Hose Inventory and Inspections folder)