SCANDI BREW® Centralised Sampling System

Sampling

Application

A centralised sampling system facilitates in many ways sample taking from beer tanks (in- or out-doors). Because of the position of the sampling valve on vertical fermenters or bright beer tanks, access to sampling point often needs catwalks or platforms. To take a sample outdoor from such platforms is often done under less favourable climatic conditions thus giving the possibility of unacceptable samples as well as increasing the risk of work related accidents.
A centralised sampling system allows for placing the sample valve at the optimal point for sampling: on the middle of the cylindrical part of the vessel, independent of whether there is easy access to this point or not.

Design

The SCANDI BREW® Centralised Sampling System is a modular system and each section is equipped for taking out samples from up to 12 tanks. See flow sketch on reverse. On tank no. 1 to 12 on the flow sketch, you will find the SCANDI BREW® pneumatic sample valves that are mounted on the tanks.

For mounting the pneumatic sample valve different methods are foreseen. For new stainless steel tanks the valve is welded into the tank wall and for existing tanks, the valve can be supplied with special thread to fit a socket.

The sampling panel is placed for easy access and handy operation. However, as straight and simple pipe mains as possible is recommended. Due to pressure loss the distance from the panel to the sample valves should be maximum 100 –120 pipe metre.

Service utilities are connected to the bottom side of the sampling panel and the tank sample valves to the top of the sampling panel.

The sampling panel is connected via pipes of Ø10 mm to the pneumatic sample valves on the tanks. The connections can either be stainless steel pipes or Teflon hoses, with or without insulation, depending on local conditions.

The benefits of the centralised sampling system are:
- Fully automatic and safe sampling from selected tanks
- “Fool proof” operation
- Highly sanitary sampling
- Economic solution compared to “cat-walk” installations
- Optimal sampling point position on tank regardless of tank construction and access
- Simultaneous sampling and or CIP

Working principle

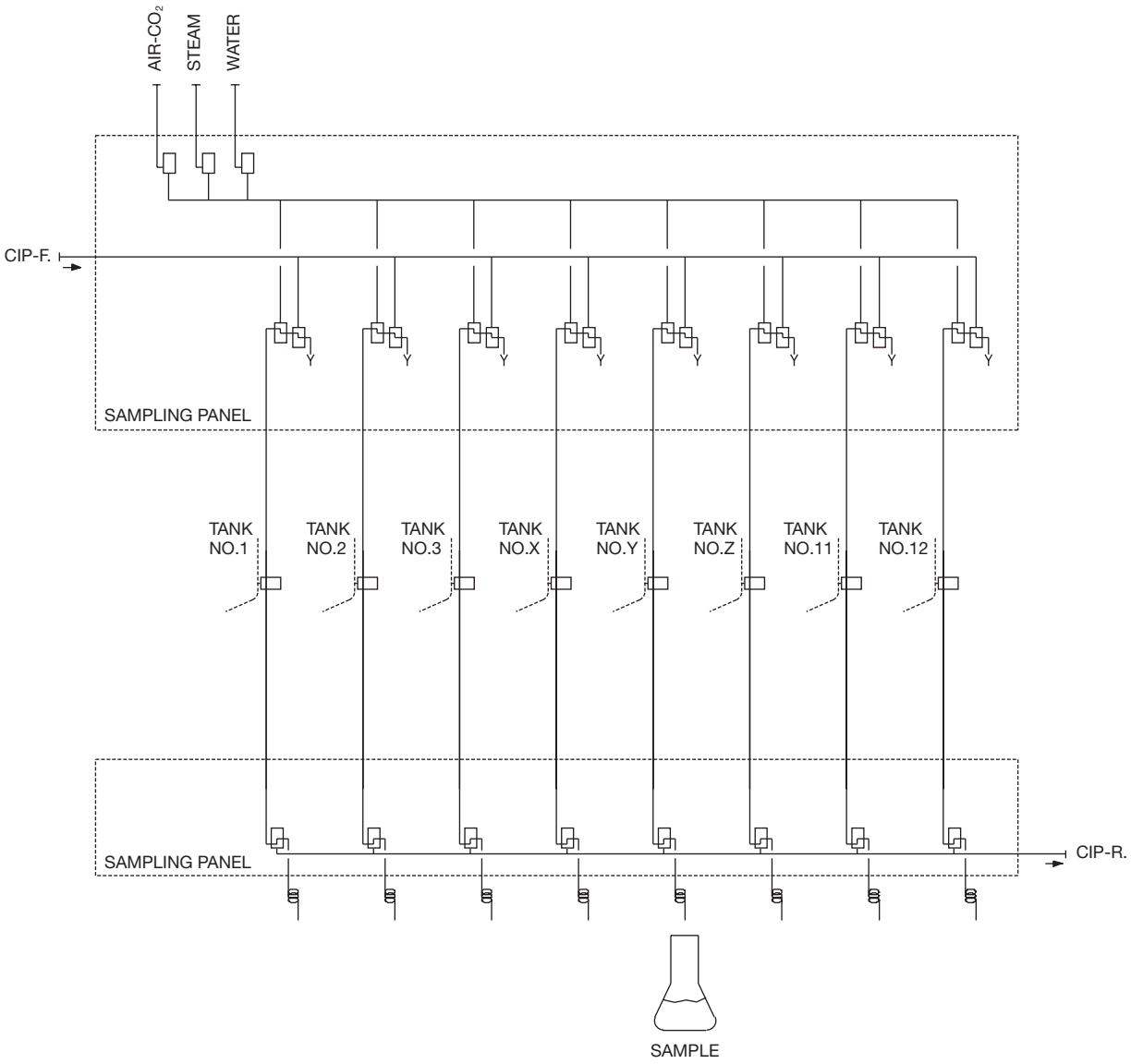
When taking a sample there are two possibilities; either sterile or non-sterile sampling. For sterile sampling of the chosen tank, the “sterile” button is pressed and the pipeline to the sampling panel will be steam sterilised. After sterilising, the pipeline is blown dry with sterile air or CO_2. Now the “sampling” button can be pressed and the sample media will flow from the chosen tank to the sample coil at the sample panel. By pressing the “flush” button, the pipeline is hereafter flushed with water, steamed and blown dry.

When choosing non-sterile sampling for non-microbiological samples the first step after choosing the tank, is to press the “sampling” button. The sampling process will then be the same as above but without the sterilisation before the sample is taken.

The sample valves and pipelines with other valves are CIP'ed together with the tank. The cleaning process is started by pressing the "CIP" button or by external signal from a PLC and runs automatically according to the pre-selected time.

Extra Equipment

- Extra sample module for sampling from up to 24 tanks
- Hot water heater (up to 90°C) for hot water sterilisation instead of using steam
- Feedback signal from sample valve on tank
- More valves on the same tank



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