**Application Description**

In beer production, level sensors must operate without being influenced by the typical process conditions, such as quick temperature fluctuations, foam generation and high pressure. Food-suitable process connections are just as much required as CIP cleanliness of the sensors. Further requirements are high measuring precision, long-term stability and reproducibility. Level measurement in such processes is usually realized with a differential pressure transmitter with capillary lines and pressure transmitting cells. The technique measures the superimposed pressure at the top and the total pressure (superimposed + hydrostatic pressure) at the bottom of the tank. The difference is calculated directly in the instrument and the measuring result is indicated as level. The disadvantages of this measurement setup are the high initial costs, the high installation costs as well as the temperature influence through the capillary tubes.

**Process Characteristics**

- Medium: Beer mash
- Vessel: Flavoring vessel, fermenting vessel
- Process: conditions Strong foam generation

**The Solution**

An interesting alternative here is the use of two relative pressure transmitters instead of one differential pressure transmitter. In this case the difference calculation is carried out via the control system. The capillary tubes can be eliminated this way, thus avoiding the temperature influence and achieving a higher total precision. The sensors are available with absolutely front-flush process connections as well as a housing of stainless steel with protection rating up to IP 69K (water and steam pressure tight +80° C/100 bar). This allows external cleaning with jet water and ensures maximum operational reliability in this humid environment.

**The Advantages**

- Low initial costs
- Low installation and servicing costs
- Cost-efficient spare parts stocking, procurement