

## WORLD BREWING CONGRESS 2016

## HOP SLURRY -A DRY HOPPING STRATEGY

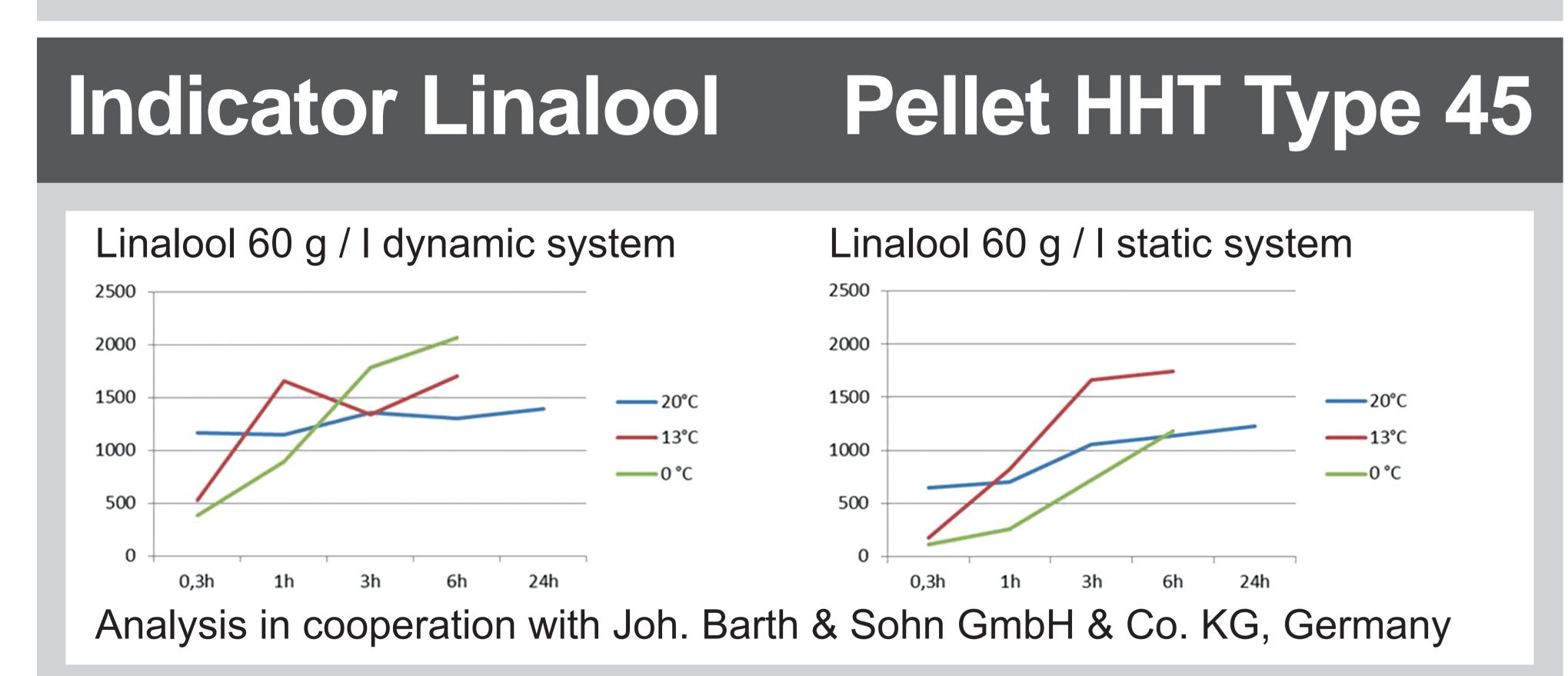
World Brewing Congress August 13-17, 2016

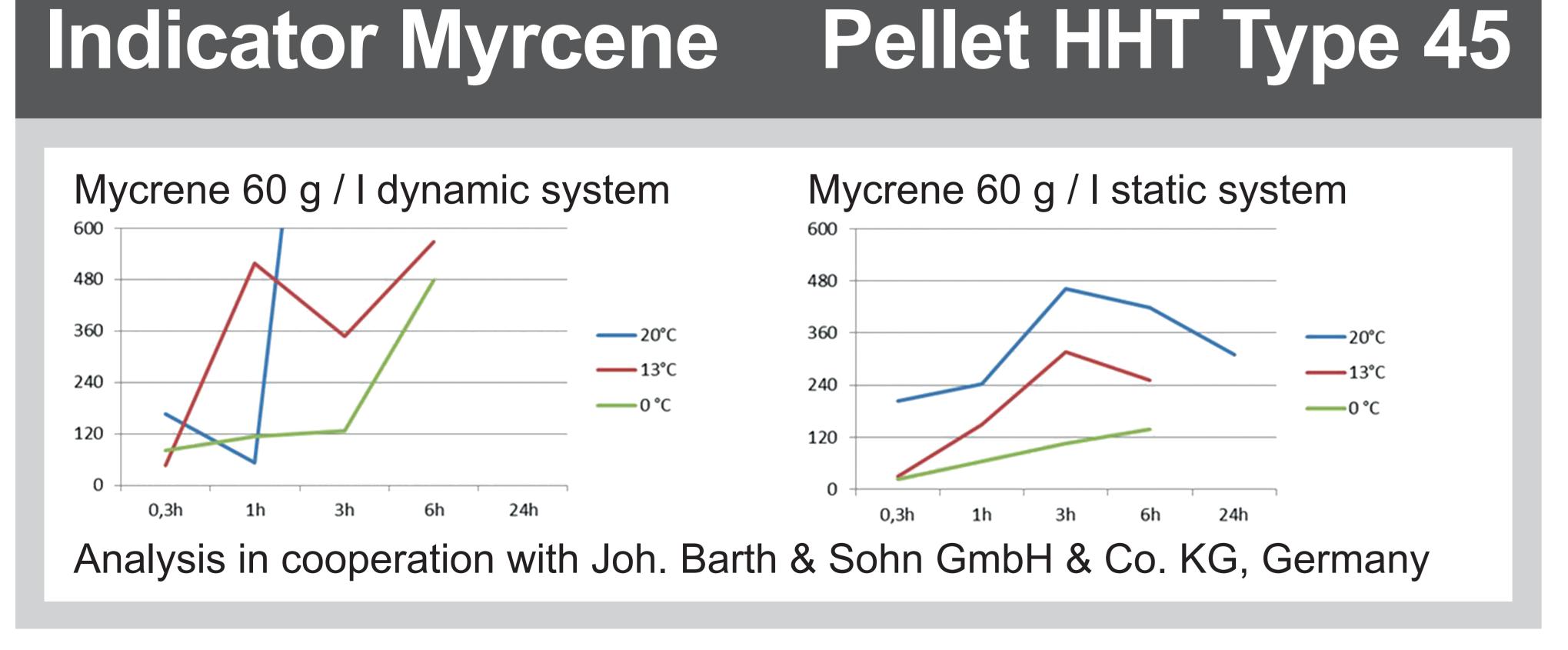
Sheraton Downtown Denver Denver, Co 80202, USA

Konstantin Ziller, Volker Schaufler, Tobias Becher, Klaus Wasmuht of Ziemann Holvrieka GmbH, Ludwigsburg, Germany

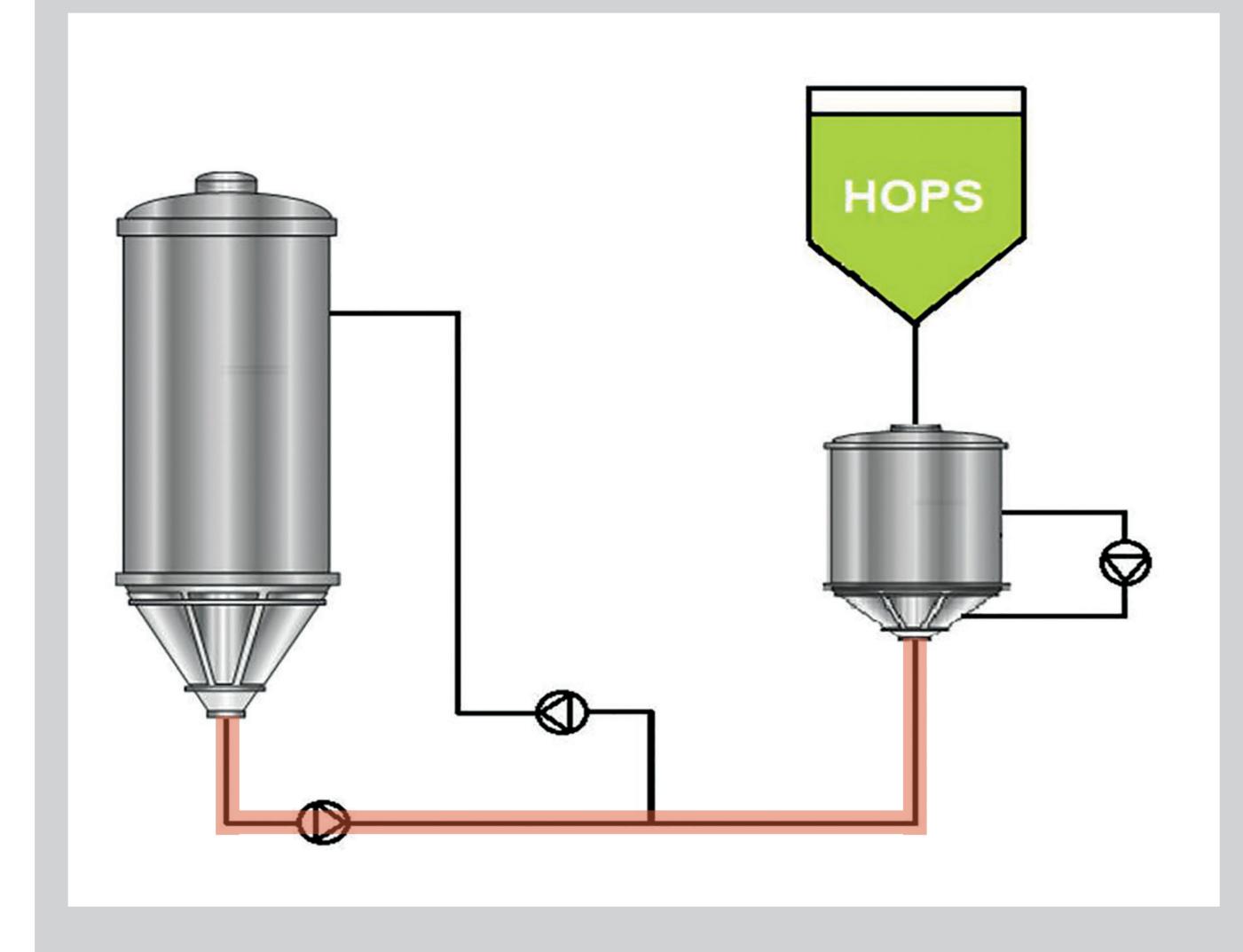
Hops are the most important ingredients to establish a certain aroma profile in the beer. The hop slurry is a new dry hopping system for hop pellets. An integration in a fully automated brewery is possible and has many advantages.

# Technology Dynamic (convective) hopping is more effective than static (diffusive) hopping convective \_\_\_ diffusive

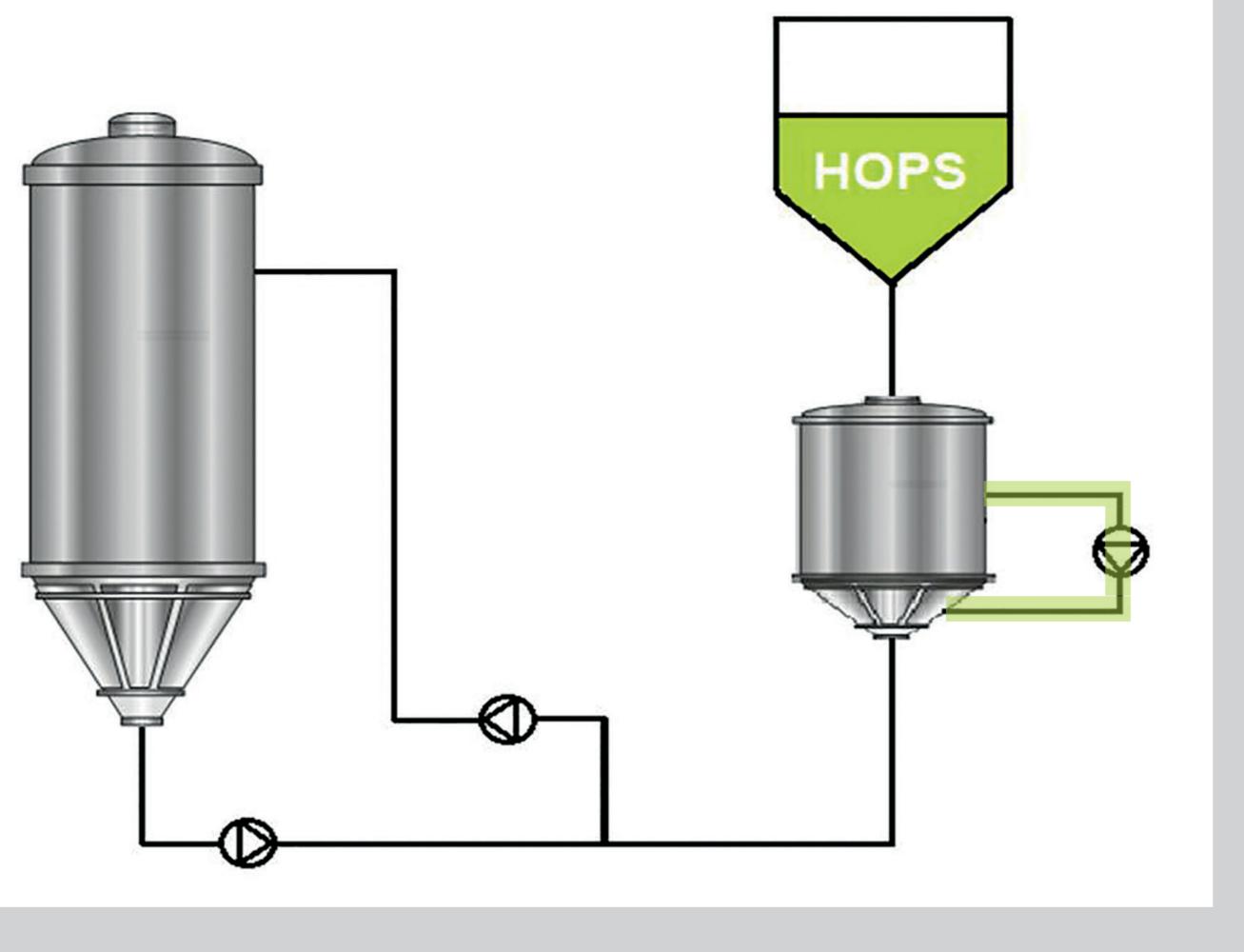




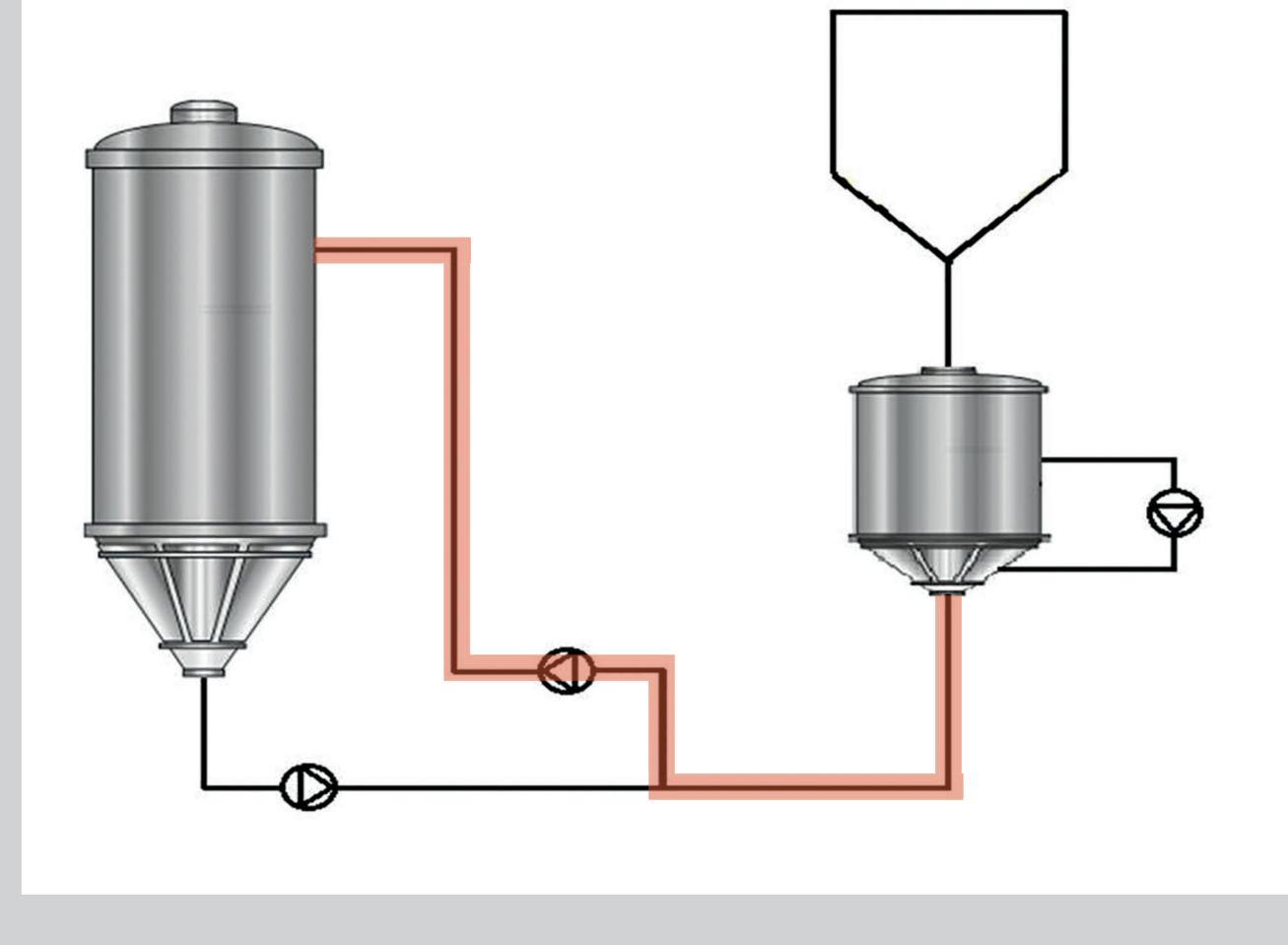
## Hop Slurry



Transfer beer into separate Dry Hop Tank Ratio 30:1



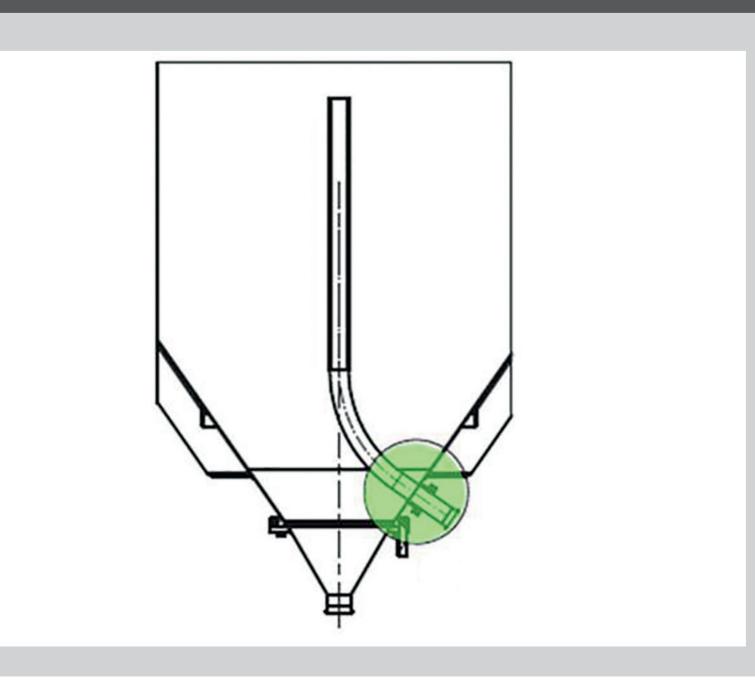
Hop Slurry results of continuous circulation during hop dosing by rotary valve in the Dry Hop Tank



Transfer Hop Slurry back into the ZKT with a tangential inflow

## Removal of hops - racking arm

- Rotable outlet for removal of hops and yeast
- Bent pipe is introduced in the vessel via a flange in the cone



#### Hop Slurry by Ziemann Holvrieka



#### Results by BrewDog PLC, UK

It is possible to dissolve 1.8 t hop pellets in 1,800 hl beer!

### Dynamic system

Advantages

- Provide reproducibility
- → Flexible process
- Fully automated
- Improved yield



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With Meet us at booth # 301