



*First run of the
second steam dryer at the
Nordzucker factory, Uelzen*

In autumn 2011, BMA received an order for re-assembly of the fluidised-bed steam dryer (FSD) at the Uelzen factory of Nordzucker AG and to increase its evaporation capacity; the dryer had been disassembled in 2008 for the closedown of the Güstrow factory.

Nordzucker AG has been successfully practising the drying of beet pulp by superheated steam in a number of its factories for 20 years. At the Uelzen factory, an FSD – called ‘VDT’ at Nordzucker – has been operating since 2003, with a diameter of 12 m and an evaporation capacity of more than 50 t/h. With the installation of another FSD with an evaporation capacity of 40 t/h, there should no longer be any need for “energy-guzzling” high-temperature drying.

Given that the FSD did not reach nominal capacity during operation at Güstrow, BMA was asked to identify and implement the necessary measures for optimising its performance. For this purpose, BMA dryer experts recalculated the drive power and the design of the fan wheel and designed it to provide nominal capacity. For better control of operation and to ensure the nominal evaporation capacity, the patented BMA rotary weir was installed as well. This weir, which is mounted in the last dryer chamber, controls the dryer level and safeguards an even layer thickness of the fluidised bed, and in turn a constant dryer output. Another advantage is that the weir offers more stable control of the dryer.

The assembly of the FSD was complicated by the fact that it had not been disassembled by BMA, so neither as-built drawings nor a complete documentation of disassembly were available. This led to difficulties during assembly and the necessary repairs. However, everyone involved in the project contributed to mastering these challenges in a quick and non-bureaucratic way. During repair work, BMA also made a complete overhaul of the inlet air lock. The dryer was installed in a building newly constructed for this purpose, so assembly had to be coordinated closely with the companies involved in construction.

The dryer and the peripheral equipment were put into operation on schedule for the 2012 / 2013 campaign. The promised evaporation capacity could immediately be reached and even exceeded.

Hartmut Stolte

- Reduced energy costs
- Reduced CO₂ emissions
- Resource-efficient
- Optimised control thanks to the rotary weir