

Extraction plant for Billings sugar factory, USA

In July 2003, BMA was awarded an order by Western Sugar Coop. for a complete extraction plant to be supplied in 2004 for the Billings sugar factory. The plant is designed for a beet slice rate of 5,000 sht/d and will include as main components a countercurrent cossette mixer, the defoamer, two pulp pumps and the extraction tower. This tower will be realized according to the successful concept 'Tower 2000'.

The technological data can be taken from the table below. Some parts of the equipment will be

manufactured in the shops of the BMA subsidiary Brewer Steel in the USA, which particularly reduces the shipping cost for the customer.

In the two sugar factories in Fort Morgan and Scottsbluff, Western Sugar has already been operating two BMA extraction plants with great success, which led to the positive decision for BMA in case of the plant for the Billings sugar factory.

Marion Uhlenhut / Burkhard Bartels

Countercurrent cossette mixer	Ø 4.5 m x 7.0 m
Extraction tower	Ø 7.0 m x 19.93 m
Slice rate	5,000 sht/d
Determinable extraction losses	max. 0.24% with
Raw-juice draught	110 % o.b.
Sucrose content of fresh cossettes	16 %
Raw-juice purity	at least 89 %
Heat exchange in the CCC mixer	Temperature difference between raw-juice draught and incoming cossettes = max. 13 K with – Slice rates between 3,500 and 6,000 sht/d – Raw-juice draught up to 115 % o.b. and – Temperature difference between mixer and fresh cossettes of max. 60 K

Manufacture of system

components at

Brewer Steel



Benefits

- Lowest possible extraction losses with low raw-juice draught
- Extremely flexible slice rate of the overall extraction plant from about 50 % to 120 % of the nominal capacity
- Very low energy requirements per ton of beets processed
- High dry-substance content of the extracted cossettes up to 13 %.
- Low operation and maintenance cost