



BoHiBar Drum Filter

Steam Pressure Filtration of a Crystallization Product

This BoHiBar drum filter is operated for an intensive wash and drying of an organic crystallization product by steam pressure filtration to obtain a high purity product. Filtration pressure difference is $D_p = 2$ bar.

It is required to remove the mother liquor to the ultimate extent by intensive cake wash to reduce the content of an organic impurity in the cake to less than 100 ppm (achieved value: 80 ppm). At the same time, the moisture content must be reduced to less than 4% by weight (achieved value: 2 wt%).

With a filter area of only 4 m² the BoHiBar drum filter replaces 6 peeler centrifuges which were operated in a 2-stage washing process (3 centrifuges per wash stage) with intermediate re-slurrying. The implementation of the BoHiBar drum filter not only improved the process results in terms of product purity and residual moisture. The availability of equipment improved significantly, the maintenance effort was reduced considerably, the noise level fell sharply and in particular the space requirement was reduced significantly.

BoHiBar Drum Filter S4

Units installed		1
Filter area per unit	[m ²]	4
Material of construction		1.4571
Power of filter drive	[kW]	0.3
Foot print	[m ²]	12
Year of commissioning		2003

Process and Operation Data

Solids throughput	[kg DS/h]	3,600
Organic content in the filter cake	[ppm]	80 (required: ≤ 100)
Cake moisture	[wt.-%]	2 (required: ≤ 4)
Steam per ton solids	[kg/t]	97
Operation pressure	[bar (g)]	3

Product Data

Product		Organic crystallization product
Medium particle size	[μm]	130
Temperature	[°C]	60 - 80

