



BoCross MicroScreen Filter

Dynamic Sieve Filtration of a High Viscous Polymeric Suspension

From a high valuable polymer dispersion coarse particles ($x > 20 \mu\text{m}$) have to be separated completely. The difference in density of the particles compared to the fluid is negligible. The dispersion has a viscosity of 1000 mPas (1000 times higher than the viscosity of water) and the coarse particles have a concentration of only 20 ppm. Every sieving process tested for this demanding application failed due to poor results like:

- no satisfying cut point
- too high product loss
- low throughput rates
- interrupted production and high operating costs by permanently clogged filter

With the BoCross MicroScreen filter the dispersion can be sieved in an economical way with best results like



- cut point at 20 µm
- continuous operation with high throughput rate of 4000 l/h per filter
- extremely low amount of retentate or product loss, resp., of only 0,1%
- extremely long life time of the special designed sieves

BoCross MicroScreen Filter XL12

Units installed	[-]	1
Filter area per unit	[m ²]	12
Material	[-]	1.4571
Filter drive power installed	[kW]	45
Footprint	[m ²]	13
Year of commissioning	[-]	2003

Process and Operation Data

Feed flow	[kg/h]	4000
Amount of retentate	[kg/h]	0.4
Coarse particles in feed	[ppm]	20
Coarse particles in concentrate	[ppm]	5,000
Coarse particles in filtrate	[ppm]	< 5
Life time of sieves	[years]	> 10
Operation pressure	[bar]	< 2

Product Data

Product		Polyol
Sieve cut	[µm]	20
Viscosity	[mPas]	1,000

