

Application story



Spray Drying Alumina Slurries

Location	USA	Hydra-Cell model	G10XKCECCECC
Type of application	Spray Drying Alumina Slurries	Flow rate	11-19 l/min (3-5 gpm)
Liquid	Alumina Slurry De-Ionised Water	Pressure	13 bar (190 psi)
Application details	A porcelain manufacturer was using an air operated diaphragm pump to deliver an alumina slurry in deionised water to a spray dryer. The slurry included 70% solids, of which up to 90% were alumina. The AOD pump's characteristically uneven flow was further upset by pressure variations each time the air compressor switched in or out. Stalling was also a problem. The plant replaced the unsatisfactory pump with a Hydra-Cell G10 with ceramic valves and seats. Installing the Hydra-Cell pump also allowed the customer to devise a better control system. The G10 was connected to a variable speed drive linked to a temperature sensor at the dryer discharge. Rising temperature automatically increased pump speed, to deliver more material. Conversely, the pump responded to decreasing temperature by slowing down. This arrangement was made possible by the pump's ability to respond instantly on signal with an accurate and repeatable adjustment of output flow.		
Advantages of Hydra-Cell pump on this application	Ability to pump abrasive material. Consistent adjustable accuracy. Pulse-free delivery. Reliability.		

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