

Application story



Ceramic Slurry Pumping

Location	USA	Hydra-Cell model	G25EKSTDDEMA
Type of application	Manufacture of Ceramic Components	Flow rate	18 - 30 l/min (5 - 8 gpm)
Liquid	Ceramic Slurry	Pressure	17 bar (250 psi)
Application details	A ceramics company which produces advanced technical ceramics in the manufacture of tubes and rods, crucibles, and lab-ware contacted FT Thomas, the western Pennsylvania Hydra-Cell distributor, for assistance on a difficult application. The ceramics company was considering a hydraulic membrane pump and exploring other possible options. The slurry is pumped into the filter press, removing liquid and forming a paste or cake that is then extruded into the components that the company produces. Pulsations would have a negative effect on the quality of the cake. After reviewing the application data, FT Thomas proposed a Hydra-Cell pump. From experience with ceramic at other similar locations, the distributor was aware that a pump with ceramic valves and seats occasionally did not hold up at the higher pressures. FT Thomas knew that running the pump at slower speeds would increase the life of the pump, while using an inverter duty motor with a VFD would allow speed to be increased to compensate when flow and pressure dropped as a result of wear. 316SS was requested by the customer so no product discolouration would occur. Tungsten carbide was selected for the valves and seats based on previous experience with another ceramic company. Using a Hydra-Cell base and guard along with a tungsten carbide-fitted C62 Pressure Regulating Valve gave the customer a very attractive, complete, easy-to-install pumping package. The pump runs on intermittent duty 6 times a week, 2+ hours per cycle. It has been in service since June of 2008 and has not seen any downtime since installation.		
Advantages of Hydra-Cell pump on this application	Ability to pump abrasive ceramic slurry, adjusting flow easily via VFD motor speed control to compensate for eventual wear. Reliable pumping over long service life.		

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