

Application story



Seal Flushing for Soda Ash Mine

Location	Western USA (Installation: August 2019)	Hydra-Cell model	H25XKBTHFEHA
Type of application	Seal Flushing for Soda Ash Mine	Flow rate	57 l/min (15 gpm) @ 800 rpm
Liquid	Water	Pressure	48 bar (700 psi)
Application details	A large mine uses the Longwall process (underground method of excavating) to bring up 100 rail cars of “Trona Ore” (raw soda ash) daily from 488 meters (1,600 feet) underground. The ore is crushed at the surface and treated with chemicals and water to separate out Sodium Bicarbonate, Sodium Hydroxide, soda ash, and other industrial products. The remaining rock slurry “tailings” are pumped in stages by slurry pumps and heaped into mounds. To keep the packing of the slurry pumps clean, they require a large volume of flush water - containing Calcium and sediment-pumped continuously from the nearby river with minimal filtration. The plunger pumps in use could not consistently deliver the 48 bar (700 psi) seal flush pressure required at the slurry pumps. Inconsistent seal pressure can damage the packing of these larger, expensive slurry pumps, resulting in leaking and costly downtime. Hydra-Cell G25/H25 pumps with a rating of 69 bar (1000 psi) replaced the plunger pumps to handle the required pressure and eliminate downtime issues.		
Advantages of Hydra-Cell pump on this application	• Unique, spring-loaded, vertically-orientated check valves allow particles to flush through giving more reliable performance when pumping liquids with solid suspension. • Only requiring minimal servicing, this has resulted in eliminated unplanned downtime and reduced costs.		

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