



# KZN/KZNR

**In a centrifugal pump, the volute converts liquid velocity to pressure. The volute can be subject to erosive wear and failure if pumped liquids contain abrasive solids.**

## **KZN Heavy Duty Slurry Pump**

The BJM KZN heavy duty slurry pump's volute is made of a cast heat hardened Class 30 ductile iron. The KZN pump's 300 BHN volute and 28% chrome iron impeller, wear plate and agitator easily provides a long pump life handling typical abrasive slurries.

*A BJM KZN pump installed in a coal fired power plant ash sump pumped 24 hours a day for 2 years without maintenance. The pump was serviced and re-installed with the same volute.*

## **KZNR HI-HARD SEVERE DUTY SLURRY PUMPS**

**Some slurry solids are so abrasive, pump life depends on an extremely hardened casting. The BJM KZNR severe duty slurry pumps are fitted with a Hi-Hard™ ductile iron volute; hardened to 71 Rockwell C by a proprietary process.**

A steel rolling mill experienced frequent volute failures of two submersible pumps installed in the mill scale pit even after a weir was installed in the pit to reduce the amount of scale going to the pumps. Mill scale (iron oxide) is very abrasive and has a high specific gravity. Scale pits typically have solids concentrations high enough to require scale removal with a clam shell bucket; a process that is expensive, laborious and dangerous to personnel due to the swinging buckets.

A BJM **KZNR™75R**, 10hp, **Hi-Hard**, severe duty slurry pump was installed in front of the weir, in the direct flume path, on an overhead jib that allowed the pump to be moved along the entire length of weir. The KZN pump's agitator forced the heavier settled solids into a slurry. A 6 inch flexible hose was connected to the KZNR pump and discharged into the bed of a large dump truck parked next to the scale pit. Baffles were fitted in the interior of the truck bed, and the bed was tilted at an angle sufficient to allow the proper retention time for the scale to settle and allow the effluent to return to the scale pit.

This installation resulted in the direct removal of more than 17 tons of scale every two days, eliminated the clam shelling operation and increased reliability of the two main scale pit pumps. This KZN75R severe duty slurry pump has been operating for more than two years with the same Hi-Hard volute.

**When a slurry application is too tough for cast or chrome iron, choose the BJM KZNR Hi-HARD severe duty slurry pump.**

