

## **EPD**

## **Erosion Protection Device**

Used in conjunction with a Flowserve seal, the EPD helps to protect seal components in hard abrasive slurry applications to improve the equipment's Mean Time Between Planned Maintenance (MTBPM)

High impeller speeds and large or hard abrasive particles found in the pumpage liquid can cause wetted equipment or mechanical seal components to wear prematurely.

Also, restrictive equipment designs may prevent efficient fluid exchange in and out of the seal cavity that can lead to a concentration of solids that plugs the area behind the impeller and can trap entrained air that does not allow proper lubrication of no flush mechanical seal faces.

The EPD modifies the fluid flow pattern generated in the seal cavity located behind the impeller. The interrupted fluid flow helps to eject particles and air bubbles to improve overall seal performance.

In extremely aggressive slurry services, centrifugal force causes dense heavy and large particles to be thrown to the outside surface creating a high velocity vortex that creates wear. The radial protrusions progressing axially inward along the outer surface of an enlarged or taper-bore chamber of the EPD greatly decrease a particles velocity when they are struck to significantly reduce direct erosion contact by process fluids containing solids.

Traditional mechanical seal designs require that the complete gland or mounting flange be manufactured out of abrasion resistant materials.

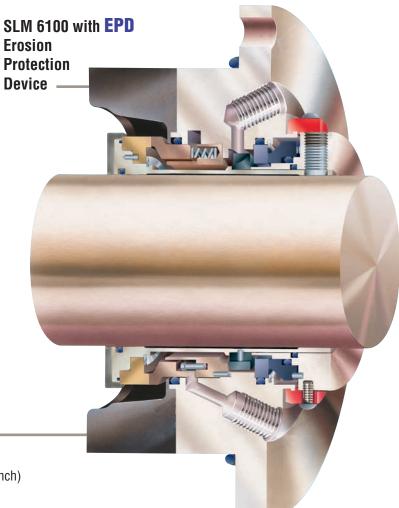
The EPD allows for an innovative solution to prevent abrasive wear from damaging expensive equipment and small cross section seal components. Also, the EPD provides a renewable surface allowing for economical repairs.



# The EPD reduces equipment repair costs



With the EPD - Hard Abrasive solid wear occurs to the EPD and not to expensive seal components and equipment which reduces maintenance and future capital costs.



### **Specifications**

Shaft Size Range 25 - 235 mm

(1.000 - 9.250 inch)

Materials of Construction CD4MCuN (primary)

Elastomer and Polymer coating (optional)

Other materials available as required

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