A rigid metal strip seal in an application where the gap sizes continually change, just doesn’t make logical sense. Which is why metal strip seals rapidly wear to the smallest gap size, leaving the larger gaps exposed, and consequently their functional sealing performance continually deteriorates.

In a variable gap environment, a seal that compresses to the small gap, then expands, maintaining sealing at the larger gaps is critical for air preheater leakage reduction. The Sealeze power brush seal design is inherently flexible and adaptable. It naturally conforms to variances in gap size and surface irregularities, like a warped sector plate, providing a more continuous seal per revolution.

**Better sealing improves heat rate, reduces fuel consumption, reduces fan draw, helps prevent running out of fan, and improves air pollution control equipment performance.**

![Image of brush seal](image)

However, the brush, which was exposed to the same turn-down, was adaptable enough to flex out of the way then return to restore sealing. The brush experiences some wear at this point but extends 0.25-0.5 inch beyond the hard seal wear point, extending sealing capacity beyond what an OEM type seal could provide.

Close-up of the leading edge of the outer seal where extensive turndown occurred. There is some brush wear, but it remains dense and provides effective sealing beyond where a strip seal would end.

The back of the same seal.

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**Boiler:** 750MW  
**Model:** 32.5 V  
**Type:** tri-sector  
**Unit RPM:** 1.1  

Inspection of Sealeze brush seals after 135 days in-service.  
(1.1 rpm = 1584rpm) x (Tri-sector = 3 contacts/rev) = 4,752 seal contacts/day x 135 days in-service = 642,000 contacts /seal  
Sealeze power seals installation: November 2010.  
Photographs taken March 10, 2011.