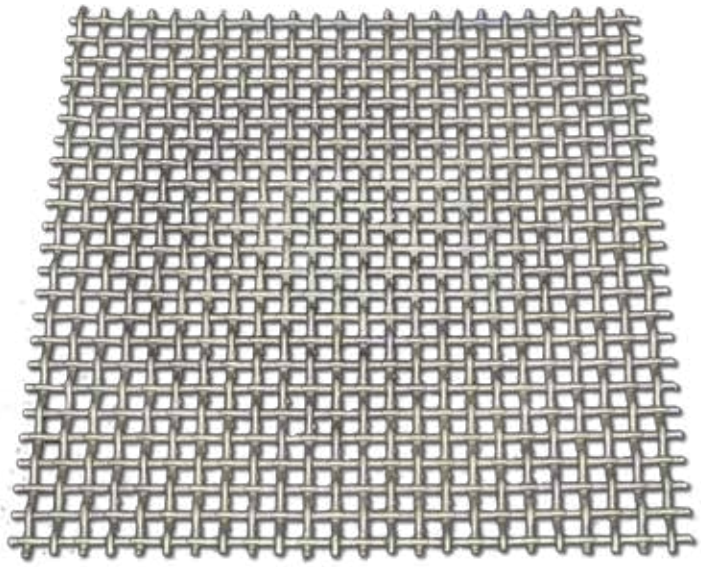
APPLICATION BULLETIN

KENNAMETAL®

UltraFlex™ Clad Screens

- **Superior Erosion Resistance**
  Kennametal cladding provides significantly higher erosion resistance versus stainless steel. Our cladding enables the substitution of less expensive carbon steel screens for more costly stainless steel screens.
- **Metallurgical Bond**
  Much more resistant to impact than thermal spray coatings.
- **Advanced Cladding Process**
  The Kennametal proprietary process blends hard tungsten carbide particles and tough nickel chrome particles to create a durable, high-density cladding. Applied to components in a controlled atmosphere brazing furnace, the tungsten carbide particles metallurgically bond to the nickel chrome lattice and substrate component, preventing spalling, chipping, and peeling.
- **Proven Results**
  It would take 1" of chrome carbide weld overlay or 3" of plain carbon steel to equal the erosion resistance provided by 1/16" (1,5mm) of Kennametal cladding.



Common Screen Types

Woven Mesh | Wedge Wire and Grates | Expanded Diamond | Perforated

Extend the life of SCR popcorn screens 5–8x longer than stainless steel.

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Technology

Kennametal tungsten carbide cladding provides unmatched resistance against abrasion, impact, erosion, and corrosion. Other types of protection may guard against one form of wear, but only Kennametal cladding protects against multiple modes of wear — and our application creates a true metallurgical bond. Kennametal screen capabilities include screens up to 4' x 12' (longer lengths may be possible), with screen openings 1/4" and larger (screen opening size may need to be adjusted to accommodate coating thickness).

Proven Results

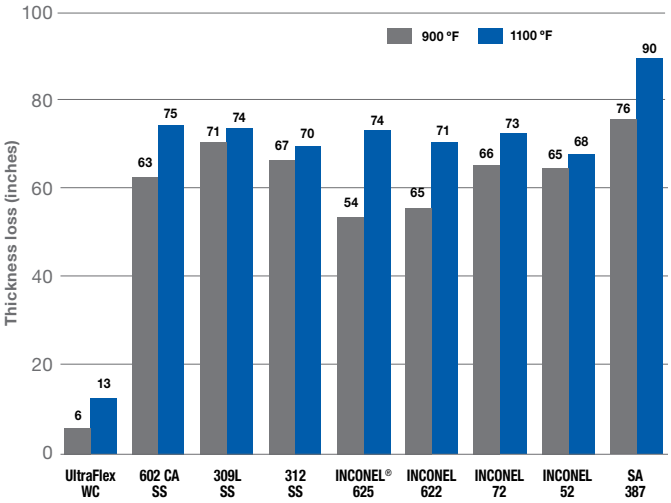
One coal-fired power plant installed stainless steel screens to protect it's SCR equipment. In less than six months, the screens were torn apart and had to be replaced. Kennametal screens were then used and after nine months, the screens showed little wear.

Stainless steel screens after less than six months performance.

Kennametal screens after nine months.

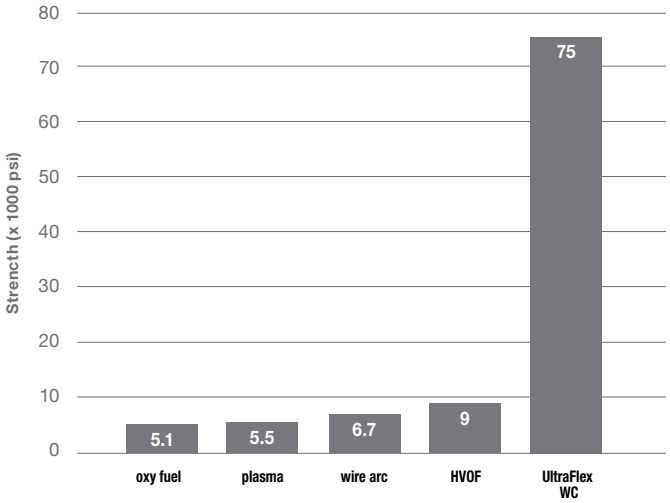
Performance Data

EROSION RESISTANCE TESTING (EPRI)



UP TO 8X BETTER
Erosion Resistance versus Stainless Steel

BOND STRENGTH COMPARISON



UP TO 8X STRONGER
Bond versus Thermal Spray (HVOF)

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