CERAMIC WEAR PROTECTION

Anti-abrasion and anti-erosion coatings for thermal power plants

FOR SELECTED DUTIES BELOW 120°C

01 CERAMIC PRIMER

1180 NMB Ceramic Coat

FLEXIBLE PRIMER · ST3 GRINDING

Nano Molecular Bonding (NMB) anchors 1180 to ST3-ground steel without abrasive blasting for specified applications. The flexible ceramic primer resists brittle cracking and peeling, helping keep the full system bonded.

02 CERAMIC WEAR LAYER

731 ER XTREAM

NANO ZIRCONIUM WEAR RESISTANCE

This fibre-reinforced putty uniquely uses hard nano zirconium for substantially better abrasion and erosion resistance than conventional ceramic-bead or standard zirconium coatings. Higher coverage per kg reduces coating consumption.

THERMAL POWER PLANTS

Coal handling, fuel conveying, fly ash and wet FGD



Illustrative problem and after views



FAST-MOVING COAL DUST SCOURS THE OUTER CURVE OF THE BEND.

01

Pulverised-Fuel Pipe Bends

APPLICATION

Internal wear zones in pulverised-fuel bends and direction changes.

TECHNOLOGY

1180 primes the prepared metal. 731 ER XTREAM lines the outer radius, where the coal stream strikes the wall.

CUSTOMER GAIN

Help prevent local wall loss and reduce repeat elbow repairs during outages.



ASH SCOURS THE INSIDE WALL WHERE THE TRANSFER PIPE BRANCHES.

02

Ash-Transfer Pipe Branches

APPLICATION

Wear faces inside ash-transfer forks and Y-junctions.

TECHNOLOGY

1180 primes the sound metal. The nano zirconium layer of 731 ER XTREAM protects the wall where ash changes direction.

CUSTOMER GAIN

Reduce repeated wear-through at the junction and preserve the flow path.



FLY ASH SCOURS THE FAN CASING AND WEARS AWAY THE DISCHARGE EDGE.

03

Fly-Ash Transfer Fan Casings

APPLICATION

Stationary casing walls and discharge wear zones in dry fly-ash transfer fans.

TECHNOLOGY

1180 primes the casing. Fibre-reinforced 731 ER XTREAM restores worn areas and forms a renewable wear layer.

CUSTOMER GAIN

Protect the fan housing and reduce casing repairs between planned outages.



ABRASIVE ASH SLURRY PITS THE VOLUTE AND ERODES THE CUTWATER.

04

Fly-Ash Slurry Pump Casings

APPLICATION

Wet-end casing, volute and cutwater in approved fly-ash slurry duties.

TECHNOLOGY

1180 primes prepared metal. 731 ER XTREAM rebuilds local wear and protects the specified profile.

CUSTOMER GAIN

Preserve casing geometry and help extend the interval between wet-end repairs.



LIMESTONE SLURRY SCOURS THE BORE AND WEARS THE LOWER PIPE WALL.

05

FGD Slurry Pipe Spools

APPLICATION

Removable slurry spools in wet flue-gas desulphurisation systems.

TECHNOLOGY

1180 provides the ceramic primer. 731 ER XTREAM protects the bore in approved slurry chemistry and immersion conditions.

CUSTOMER GAIN

Slow bore wear and extend the usable life of replaceable spool pieces.



SLIDING COAL SCOURS THE FEED BOX FLOOR AND SIDEWALLS.

06

Coal Feed Boxes

APPLICATION

Fine-coal sliding zones in feed boxes and their discharge lips.

TECHNOLOGY

1180 primes the prepared steel. 731 ER XTREAM protects the floor and sidewalls along the coal flow path.

CUSTOMER GAIN

Slow steel loss and reduce feed-box rebuilds or replacements.

Confirm the peak metal temperature, substrate condition and particle or slurry duty before specification. Use the approved wet-service temperature and chemistry for immersed parts.