Stronger with... Eutectic

WEAR & FUSION TECHNOLOGY

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS

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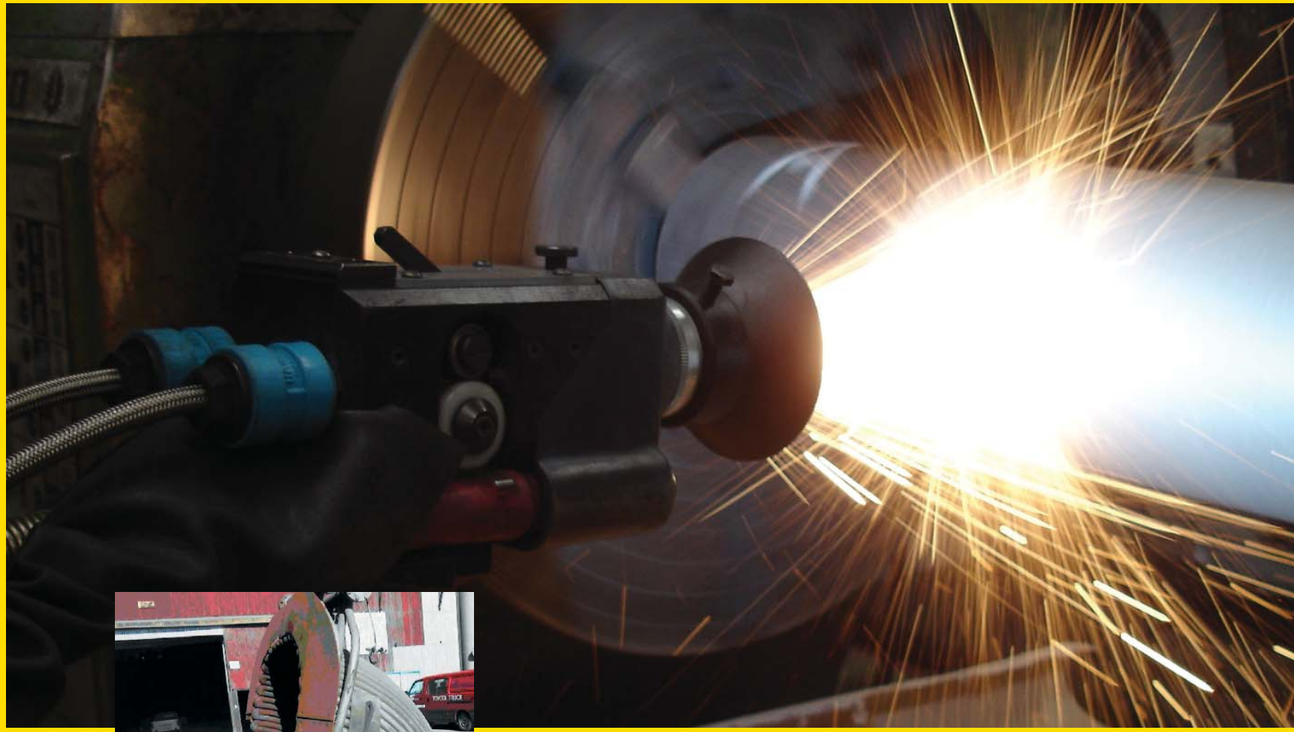
Twin Wire Arc Spray Technology

EuTronic® Arc Spray Wires



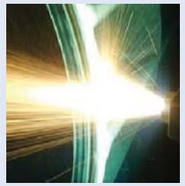
- Protects parts from wear by friction, abrasion, erosion
- Increases resistance to corrosion, heat and oxidation
- Maintains original mechanical strength of substrate
- One-step, self bonding characteristics
- Minimum shrinkage stresses in coating
- Controlled density and oxide dispersion
- Faster deposit spray rates reduce labor costs
- Cost effective solution for increasing productivity

Protected boiler tubes against hot gas erosion and corrosion in the thermal power industry.

Restoration of cutter drum worn by scoring in the mining industry.

Rebuilt bearing seat surface of railway brake trunnion to resist wear by friction and fretting.

Coated clinker cooler plates resist hot abrasion in cement industry.



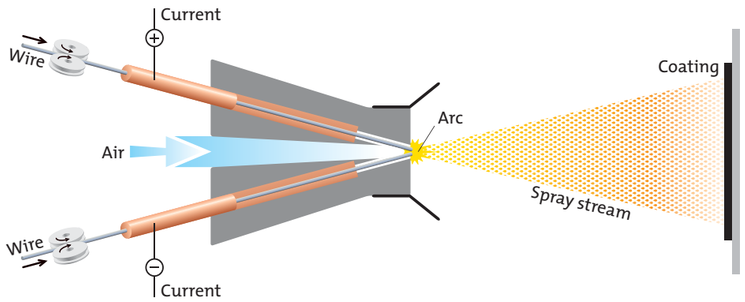
Protecting a ventilator against erosive wear.

EUTRONIC ARC PROCESS

As the electrically conductive wires are fed towards each other, a short circuit is established between the wires creating an arc with a temperature of around 9032°F (5000°C). This heat causes the wire tips to melt. Compressed gas – most often shop air – is used to atomize the molten tips and propel the droplets towards the substrate at velocities exceeding 300 feet per second. This combination of high temperature and particle velocities gives arc sprayed coatings superior bond strengths and low porosity levels at high spray rates. Furthermore, this Twin Wire Arc Spray technology is a "cold process" as the substrate temperature can be kept low during spraying avoiding metallurgical changes and distortion within the workpiece.

EuTronic Arc provides a wide range of benefits compared with conventional welding processes:

- Most substrate types can be coated
- No thermal distortion or metallurgical alteration of the substrate
- Low pre-heating requirements
- Low heat input during spraying
- No heat treatment after coating
- No dilution of the coating
- Fastest coating speeds
- Better control over deposit thickness reducing machining time and saving materials



Screen protected against fine particle abrasion.

Protecting fan blades from abrasive wear.

Coated pump housing to resist erosive wear and cavitation.

Protecting boiler tubes for the Power Generation Industry.

EXCLUSIVE EUTRONIC ARC SPRAY WIRE RANGE

The complete range of EuTronic Arc spray wires has been developed by Eutectic Castolin using its extensive, practical research experience in advanced, metallurgical alloy formulations. These proprietary, arc spray wire alloys are custom designed and batch manufactured according to rigorous quality standards needed for demanding, industrial surface engineering applications. The strict use of refined purity raw materials and alloying elements guarantees, after precision drawing and winding, a versatile range of composite and solid high alloy wires optimized to boost arc spraying performance.

WIRE	ALLOY	BOND STRENGTH PSI	TYPICAL HARDNESS	APPLICATIONS	USAGE
Arc 500	Ni-Al	9500	75 HRB	Bond Coat	Bond layer and as a one-step build-up material for dimensional restoration
Arc 502	Fe-Cr-Ti-Si-Mn	5500	63 HRC	Bond Coat	Self-bonding, iron-base coating for boiler tube applications to resist fine particle erosion
Arc 514	Fe-Cr-Al	6300	85 HRB	Self-bonding alloy	For buildup with high machinability
Arc 520	Zinc	1200	70 HRB	Conductive End Coating	Coatings are best used in environments where pH is greater than 6.0 and wet en vironments
Arc 525	Al99.5	4300	65 HRB	Protection of steel in costal and offshore environment	Protection of steel in salt water environments. Resistance to atmospheric and salt water immersion
Arc 527	Al-Si	4000	95 HRB	Repair of aluminum or magnesium substrates	Coatings are a suitable alternative to pure aluminum coatings when corrosion is not the primary factor
Arc 528	Al-Si	4000	72 HRB	Element Repair Casting Blowholes	For repair of worn aluminum and magnesium parts
Arc 530	C-Si-Mn-Fe	5800	95 HRB	Part Restoration	Suitable for re-build applications where hardness is not critical, but where low costs are a factor
Arc 532	Fe-Cr-Mn	5100	56 HRC	Cylinder Liners Hydraulic Rams	Use against metal to metal friction, corrosion and erosion coatings in general workshops
Arc 535	Fe-Al Composite	8000	35 HRC	Traction Rolls Machine Elements	May be used as an anti-skid coating with mild abrasion resistance bond strength
Arc 538	C-Si-Mn-Fe	8400	23 HRC	Thick Coatings	Dense coatings have excellent resistance to mild abrasion and exhibit low shrinkage
Arc 545	Cr-Ti-Ni	7000	32 HRC	Boiler Equipment	Used to protect boiler tubes in black liquor recovery boilers and coal-fired utility boilers
Arc 546	Hastelloy C-276	7000	35 HRC	Excellent in reducing oxidizing environments	Dimensional restoration
Arc 547	Inconel 625	7000	92 HRB	Excellent corrosion resistance	Chemical processing industry
Arc 548	Ni-Al-Mo	7500	80 HRB	Bearings Pump Shafts	Primarily used for dimensional restoration, but may also be used as a bond pass
Arc 552	Cu-Al-Mn	7000	67 HRB	Sleeves Bearings	Aluminum-bronze coating exhibits excellent bond strength and good machinability
Arc 560	C-Si-Mn-Fe-Cr	6500	42 HRC	Dimensional Restoration	Excellent resistance to mild abrasion and corrosion for dimensional restoration
Arc 562	C-Si-Mn-Fe	5800	95 HRB	Seating Bearings Bearing Housings	Good bonding properties for dimensional restoration repair of mis-matched parts
Arc 563	Fe-Ni-Al-Mo	8000	90 HRB	Diesel Fire decks Cylinder Heads	Machinable, self-bonding coating suitable to re-build worn diesel engine components
Arc 564	18/5 SS	4300	95 HRB	Low carbon stainless steel	Good machinability and low shrink alloy
Arc 565	304 Stainless Steel	4600	100 HRB	Part Restoration Re-Surfacing	Widely used for machine element repair and dimensional restoration
Arc 585	Babbit Tin Based	3000	NA	Babbit Bearings	Rebuilding Babbit bearing surfaces
Arc 595	Fe-Cr-B-Si-Mn-C	5800	60 HRC	Exhaust Fans Coal-Fire Boilers	One-step protective coating against wet or dry erosion