



## PRODUCT APPLICATION

# LaserBond® E-Clad™

### An E-volutionary Alternative to Hard Chrome Plating.

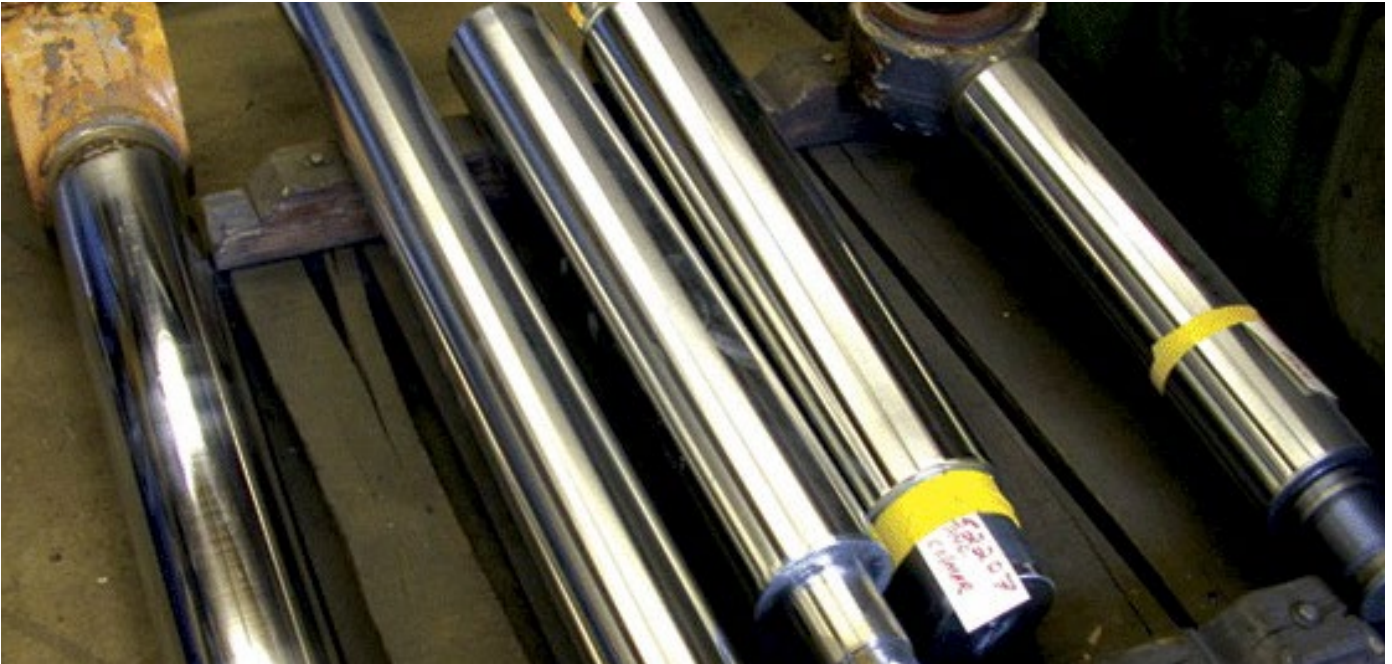
The latest surface engineering product offer is LaserBond® E-Clad™. LaserBond® E-Clad™ is a metallurgically bonded overlay suitable to replace Hard Chrome on cylindrical surfaces.

- Environmentally superior – protecting people and the environment by not producing carcinogenic Hexavalent Chromium
- Environmentally superior – the cladding method uses less than 25% of the energy used in the traditional hard chroming process
- Extended wear life – components have significantly better abrasion, impact (metallurgical bond) and corrosion (less porosity) resistance meaning your equipment will operate for longer
- Effective wear life – a superior cladding means fewer planned and unplanned shutdowns due to component failure
- Express delivery times – a faster cladding process without the delays inherent in electroplating
- Efficient application – component parts for cladding are not limited by component dimensions or desired thickness

Hard Chrome Plating	LaserBond® E-Clad™	Characteristic
●	●	Environmentally Friendly
●	●	Occupational Health and Safety
●	●	Delivery Lead Times
●	●	Abrasion Resistance
●	●	Corrosion Resistance
●	●	Coating Hardness
●	●	Bond Strength
●	●	Component Material Flexibility
●	●	Coating Material Flexibility

#### Legend

- Positive/supportive characteristic
- Negative/unfavourable characteristic



### The Key Features and Benefits of E-Clad are:

1. LaserBond® E-Clad™ is a Laser Cladding overlay of a hard metallic alloy.
2. It has a metallurgical bond meaning that it is significantly more impact resistant than the chemical bond produced by the hard chroming process:
  - a. During independent testing (UniSA, Future Industries Institute) E-Clad™ provided a wear rate 3 – 10 times lower than for commercially available hard chrome coatings as measured by standard Pin-on-Disc testing.
  - b. E-Clad™ has no interconnected porosity or cracks resulting in superior corrosion resistance.
  - c. In electrochemical corrosion testing with 3.5% NaCl solution, E-Clad™ showed corrosion rates 2–3 times better than hard chrome coatings.
3. LaserBond® E-Clad™ is delivered in a much more environmentally sustainable and safer manner than the hard chrome process.
4. E-Clad™ can be applied in thin applications (and up to 10mm) more rapidly than hard chroming and therefore turn-around times can be reduced.



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