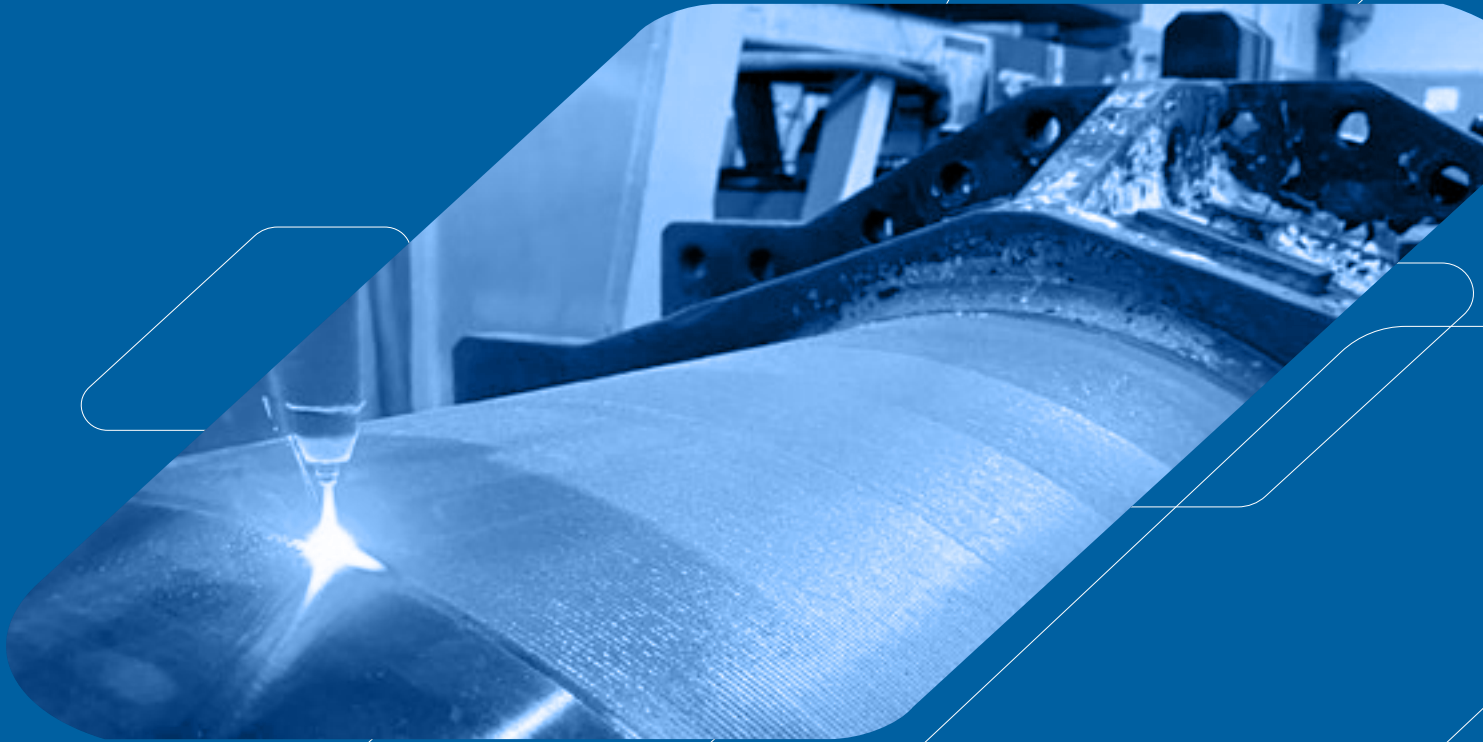




PRODUCT APPLICATION - ECGMGH2020

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

CHARACTERISTICS COMPARISON OF HARD CHROME PLATING AND LASERBOND® E-CLAD

Characteristic	Hard Chrome Plating	Laserbond® E-Clad
Envirionmentally Friendly		
Occupational Health and Satety		
Delivery Lead Times		
Abraision Resistance		
Corrosion Resistance		
Coating Hardness		
Bond Strength		
Component Material Flexibility		
Coating Material Flexibility		

Legend

Positive/supportive characteristic

Negative/unfavourable characteristic



Finished E-Clad Tubes

THE KEY FEATURES AND BENEFITS OF E-CLAD INCLUDE:

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:
3. 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.
4. E-Clad has no interconnected porosity or cracks resulting in superior corrosion resistance.
5. In electrochemical corrosion testing with 3.5% NaCl solution, E-Clad showed corrosion rates 2–3 times better than hard chrome coatings.
6. Laserbond® E-Clad™ is delivered in a much more environmentally sustainable and safer manner than the hard chrome process.
7. 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.

