

Laser Materials Processing

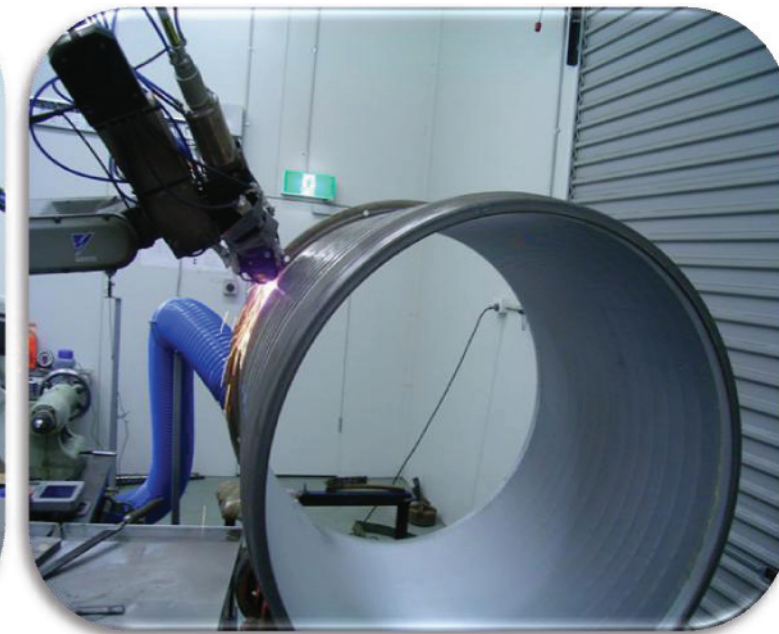
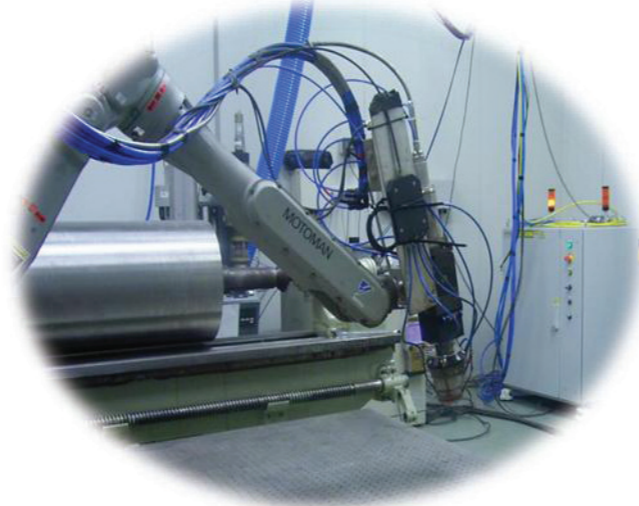
Hardchrome Engineering is now equipped with the state-of-the-art laser processing facility.

Our facility includes:

- A 4 kW Fiber laser coupled with:
- The latest processing heads
- Two 6-axis robots
- Vertical and horizontal rotating equipment

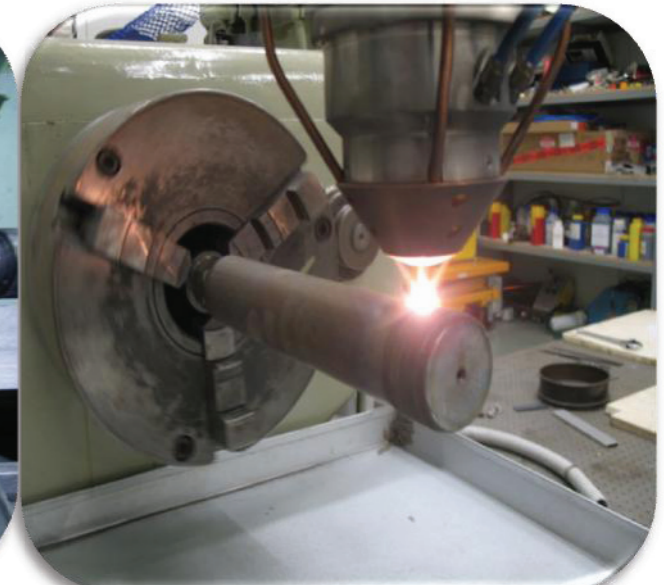
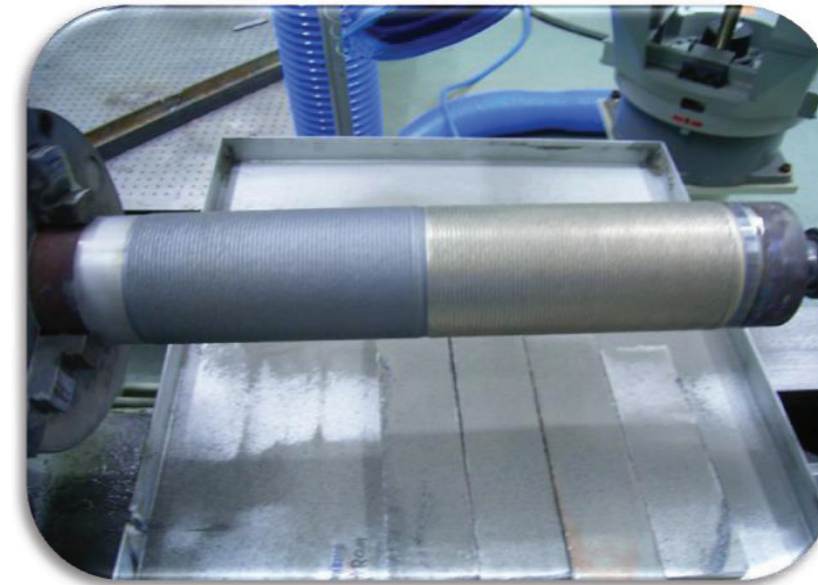
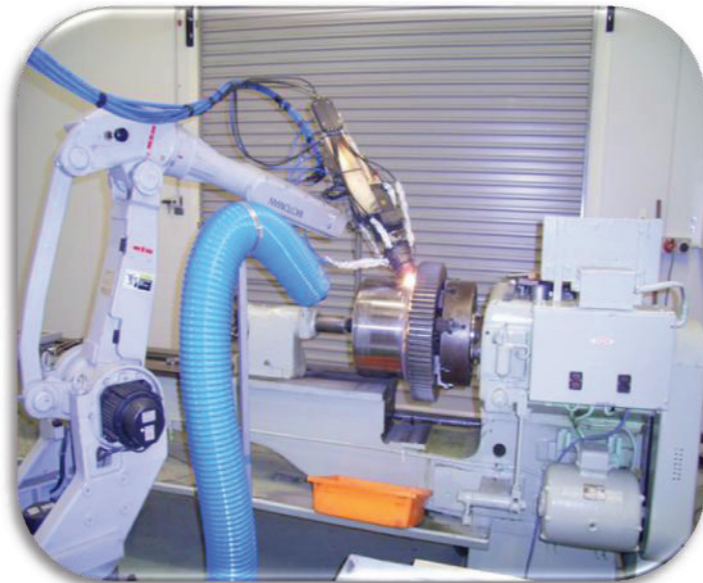
And:

- A 500 W pulsed Nd:YAG laser
- 4 axis CNC system



Laser cladding:

Laser cladding is the process of adding a pure metal or an alloy in its powder form to a new or damaged component for wear, corrosion, abrasion protection or for salvaging worn parts. This can be done with a full range of metals and alloys from tool steels, stainless steels to Tungsten Carbide/Ni powders and Stellite® powders. In laser cladding, the laser energy melts the powder which is injected to the surface of the component and metallurgically bonds it to the surface of the part. There is no coating peeling off, no cracking, no metallurgical defects and most



importantly no distortion in the part due to very localized very low heat input. The coating created by laser cladding is virtually impenetrable.

Parts laser clad with Tungsten Carbide out last any other part in high wear environments and conditions without this coating. The hard carbide particles with hardness of more than 2200 Vickers in a Nickel matrix create a wear and corrosion resistant layer which can be used in mining, oil, agriculture, construction and any other industry where severe wear is a problem.

At Hardchrome Engineering, our metallurgists are always prepared to discuss your technical needs and offer metallographic reports for your laser processed parts. We are also keen on getting involved in R&D projects on laser processing.

Contact us today to discuss your first or next laser materials processing experience at Hardchrome Engineering.

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