

Laser cladding has become a mainstream solution in the onshore and offshore Oil & Gas industry. Laser Cladding allows power densities that are not typically possible with conventional thermal procedures resulting in minimal heat input, minimal distortion and avoidance of post weld heat treatments.

Typical Applications

- Stabilizers
- LWD & MWD tools
- Drilling Heads
- Wear Bands
- Radial Bearings
- Mud Motor Parts
- Couplings
- Ball Valves / Seats

Advantages of Laser Cladding

- atomically bonded to the substrate,
- fully dense deposit
- no under corrosion possible
- low heat input and distortion
- low material dilution (<1%)
- used for new and repair applications
- surface as well as edge build-ups
- near net-shape deposit, less finishing effort
- high process control and reproducibility



Flexi-Clad™ PRO

Flexi-Clad™ machines are fully integrated and available with CNC control - PRO or Robotic control - ELITE and are further customisable with the addition of optional laser hardening head, wire feed head, internal cladding attachment and heavy parts package. EHLA (Extreme High Speed Cladding) can also be added

Hornet Laser Cladding Flexi-Clad™ series machines are designed to meet the demanding requirements for processing speed, ease of use, ease of maintenance, reliability and flexibility expected in the down hole tool market. All systems are supplied complete with Laser Safety enclosure.

Machine	Manipulation	WLL	θ max	Working range	Laser	Control
Flexi-Clad™ PRO	Horizontal	3,000 kg	1,000 mm	0 – 3,700 mm	4 kw	3-axis CNC
Flexi-Clad™ ELITE	Horizontal	3,000 kg	1,000 mm	0 – 3,700 mm	4 kw	9-axis Robotic
	Turntable	1,000 kg	800 mm	0 – 1000 mm		
+ Heavy Parts package	Horizontal	18,000 kg	1,000 mm	0 – 4500 mm	-	-

