



Oil & Gas

Flexi-Clad™

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 distortion and avoidance of post weld heat treatments.



Flexi-Clad™

Flexi-Clad™ machines are available with full 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.

Typical Applications

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

Laser Cladding Advantages

- 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

Machine	Manipulation	WLL	Ø	Working Range	Laser	Control
Flexi-Clad PRO	Horizontal	3000 kg	1000 mm	0 - 3700 mm	4 kw	3-axis CNC
Flexi-Clad ELITE	Horizontal	3000 kg	1000 mm	0 - 3700 mm	4 kw	9-axis Robotic
	Turntable	1000 kg	800 mm	0 - 1000 mm	4 kw	9-axis Robotic
+Heavy Parts Package	Horizontal	18000 kg	1000 mm	0 - 4500 mm	-	-

