

InterPulse Gas Tungsten Constricted Arc Welding (GTCAW)



Aerobrazo Engineered Technologies

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InterPulse Gas Tungsten Constricted Arc Welding (GTCAW)

Greater Versatility and Precision Than More Conventional Processes for Industrial Gas Turbine Components

Aerobrazed Engineered Technologies is a specialised business unit of Wall Colmonoy Limited with expertise in InterPulse Gas Tungsten Constricted Arc Welding (GTCAW).

InterPulse GTCAW is the latest in TIG welding technology. It is used to salvage weld repair super nickel and single crystal alloys for the civil, military and marine gas turbine industries.

The InterPulse operates at 20,000Hz and produces a precise electromagnetic field, created by the ultra-fast power supply. This provides a much higher weld quality and control over more conventional processes.

The soft arc created makes TIG welding less reliant on heatsinks, whilst distortion is kept to a minimum. Aerobrazed uses high-purity gas for super alloys which is cleaner than some other gases used. Some additional benefits include:

- Reduced heat input
- Minimal Heat Affected Zone (HAZ) and arc width
- Improved heat management
- Increased arc force or penetration
- Improved arc control
- Useful when welding demanding single and directional crystal components
- Weld pool is reduced when adding filler wire to the dilution providing final microstructure benefits



Aerobrazed Engineer using InterPulse GTCAW on a Titanium Divergent Petal

Alloys Used:

- Cobalt Alloys
- Nickel Alloys
- Super Duplex Alloys
- Super Nickel Alloys
- Titanium

Industries:

- Aerospace
- Civil, Military and Marine
- General Engineering
- Maintenance, Repair & Overhaul (MRO)
- Nuclear
- Oil & Gas
- Power Generation

Certifications and Approvals:



Rolls-Royce Aerospace UK
Welding MIL-145