De-bonding Stainless Steel / Carbon Fiber Assembly

**Objective**
To separate bonded stainless steel / carbon fiber assemblies by heating tang, softening the adhesive bond

**Material**
Stainless steel and carbon fiber inserts

**Temperature**
300 °F (149°C)

**Frequency**
200 kHz

**Equipment**
- Ambrell 2kW induction heating system, equipped with a remote workhead containing two 0.33µF capacitors for a total of 0.66 µF).
- A helical induction heating coil designed and developed specifically for this application.

**Process**
The bonded part is placed within the helical coil and RF power is applied. Once the metal tang has been warmed, the adhesive bond with the carbon-fiber insert is weakened enough to separate the two sections.

**Results/Benefits**
- process is more environmentally-friendly without the use of noxious chemicals
- process times reduced through direct application of heat
- process efficiency, only the tang is heated