

Barded Tube – Tube manipulation and vacuum brazing case study

A miniature barbed stainless steel tube needs is bent at 90 degrees without damaging the barb or tube. The tube is then placed inside a machined housing and vacuum brazed into place.

Special tooling is made to bend the barbed tubular part, which has an outside diameter of 2mm. The part is inserted into the machined stainless steel block, and vacuum brazed into place.

Vacuum Furnace Brazing is the most cost-effective method for joining precision components in corrosion and heat resisting materials. It is the preferred method for producing high integrity joints in stainless steels and nickel-based alloys using predominantly nickel based filler materials.

Brazing is carried out in a vacuum of around 10⁻⁴ mbar and without flux. Assemblies come out of the furnace clean and without discoloration and distortion, the absence of flux means that the joint is completely filled without voids ensuring joints of very high integrity.

