



## Surface preparation technique of thermal spray technology

Surface preparation surface thermal spraying is generally divided into pre-processing, purification and surface roughening the surface (or activation) of the three steps to carry out.

### 1.Surface preparation

Purpose: First, to make the surface suitable for coating deposition, increase the binding area; Second, it helps to overcome the shrinkage stress of the coating. For some parts of the workpiece in order to make the appropriate pre-processing of local stress dispersion coating, the coating increases the shear capacity. Commonly used method is to cut the fillet and pre-coat tank. One of the workpiece surface roughening thread is also commonly used methods, especially when spraying large parts used threading to increase the bonding area. Turning thread should note two issues, the first is to be suitable for spraying threaded section of rectangular cross-section, or semi-circular cross-section is not conducive to combine the coating. In addition, the thread should not be too deep, too thick coating otherwise increase the cost. The coated surface may also be "knurled" or set screw and turning the knurled together.

### 2.Surface Purification

Often used solvent cleaning, lye cleaning and degreasing heating methods to remove surface oil, maintain cleanliness. Cleaning solvents are used: gasoline, acetone, carbon tetrachloride and trichloro-hexene. Often used for large-scale restoration of the workpiece lye cleaning. Alkaline with sodium hydroxide or sodium carbonate are generally formulated, which is a relatively inexpensive method.

### 3.Sandblasting roughened

Blast cleaned surface can be formed uniformly and the uneven rough surface to facilitate the mechanical bonding of the coating. Cleaning with clean compressed air-driven jet on the surface of the grit, the substrate surface can generate a compressive stress, the surface oxide film is removed, so that part of the surface of metal in the lattice distortion, the physical combination of beneficial or coatings. Metal substrate obtained after the clean sand, surface roughness and high activity. This is an important pre-processing methods.