BLAST-CLEANING PROCESS

Objective

To remove, from metallic parts, platings and coatings that are very tough to get rid of when using conventional processes (sanding, scraping, chemical baths) or when polluting treatments are required (chemical baths).

Principle

The pure-water jet blast-cleaning process refers to the resistance behaviour laws of materials.
The water jet induces, on the product to be blast-cleaned, shearing force superior to the material's resistance limit.
There will then be an inter-granular link rupture and low mechanical resistance material will be blast-cleaned off. On harder platings, the water jet induces a very high bending stress which cracks the plating locally and leads to its removal through peeling action.

When platings and coatings are very hard to get rid of or strongly adhering, a projection medium is added to pure water (abrasive).

The platings to be blast-cleaned can be divided in two categories:

- **Low mechanical resistance platings:** Oxidation on metal surface - All types of paint - Elastomer coatings - Synthetic resin coatings.
- **High mechanical resistance platings:** Anti-wear metallic platings - Aluminium deposits - Stainless anti-wear deposits - Tungsten carbide deposits - Anti-wear ceramics deposits or thermal barrier - Zirconium oxide - Silicon nitride - Boron carbide and nitride - Calcareous scale - Oxide layers.

Advantages

- Short cycle time
- Blast-cleaned surface free of marks or cracks
- All materials are resistant to this process
- Non-polluting process
- Allows blast cleaning of hard to access areas