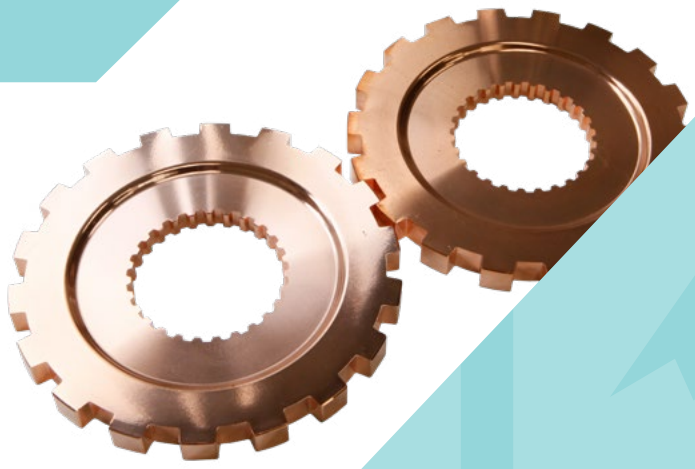
Copper Plating

COTEC has various surface treatment technologies and the company concentrates on products development and quality control to develop various surface treatment items



Production items and applications

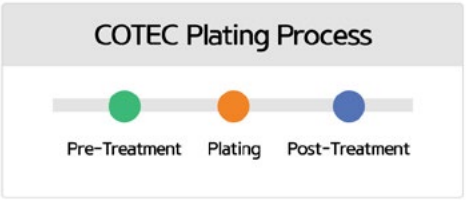
Department / Material		Aircraft, Defence, Atomic power, Machinery for general industries / Fe, STS, Al			
Usage		Undercoat for Ni, Ni-Cr plating, Carburization prevention			
Applied specifications	MIL-C-14550 National defense 0115-0025 AMS2418	Thickness	CLASS	Thickness(㎛)	Application
			0	25 - 127	Shield for heat treatment
			1	25 or thicker	Prevention of carburization and decarburization, Coating for hole in PCB
			2	13 or thicker	Undercoating for nickel and other plating
			3	5 or thicker	To prevent th substrate from moving to tin layer and so damaging the solderability
			4	3 or thicker	Same as class 3
		Soldering	Solder shall be easy and fully conver the substrate. No foam, Blowhole, Pore or other defects allowed. Solder shall be securely adhesive to the substrate. (No trace of separation allowed. It shall not be peeled with sharp tool in testing)		
		Stress removal	At 191±14°C, for more than 3~4 hours		
		Relief of hydrogen embrittlement	The brittle time depending on material organization state and hardness At 191±14°C, for more than 3 hours (HRC 32~39) At 191±14°C, for more than 8 hours (HRC 40~47) At 191±14°C, for more than 23 hours (HRC 48)		
Acceptance		External			
		Internal	HANHWA, KAI, KAL, LIG NEX 1, ADD		

Equipment condition

COTEC	1,500 × 700 × 1,200 mm

Copper Plating

Capable of coating complex parts



Our technologies and their applications

Cyanated copper plating

Characteristic

- It can directly coat the steel.
- Its plated surface is better than copper sulfate plating.
- Copper crystals geenrated from it is very small.
- Plating speed is very fast.
- It can be applied to almost all materials.
- It is toxic as it has cyanide in it.
- Waste disposal and ventilation are required.

Applicable parts

- Defense equipment parts, Aircraft parts

Copper sulfate plating

Characteristic

- Less contaminating, less costly and good smoothness.
- Used for undercoating for top coat, color coat, electroforming and plating on PCB.
- Bad adhesion on steel or zinc diecasting materials, thus difficult to direct coat them.
- Good smoothing, and easy to get brightness by removing the buffing trace.
- Its adhesiveness is inferioir to alkaline bath.
- It is indispensablt to electroplating on plastics after chemical plating.
- High currency density can be applied.
- Electric conductivity is good.

Applicable parts

- Electronic parts, Defense equipment parts, Decorative parts

Process