

# Electroless Nickel 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, Semiconductor parts, Machinery for general industries / Fe, STS, Cu, Al	
Usage		Memory disc, Plating on non-conductive metals, Replacement of hard chromium plating for computer parts and through hole plating on PCB	
Thickness (General criteria)		1~70µm hours	
Applied specifications	National defense 0115-0018 (1.4) MIL-C-26074 AMS-C-26074 ASTM-B-733, 656 FEIS 114 AMS 2404 KSD 8344 AIPS 02.04.008	Thickness	38µm for type 1 (No heat treatment) 13µm for type 2 (Heat treatment)
		Adhesiveness	No separation of coating from the base metals
		Hardness	Limited to type 2 (Rockwell tester) and type 3 (Vickers tester)
		Stress relief	At 191±14°C, for more than 3 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	NADCAP, BOEING, AIRBUS, PARKER, MHI
		Internal	HYUNDAE WIA, DOOWON, KAI, ADD

## Equipment condition

COTEC	2,000 × 900 × 1,500 mm (4 Units)
-------	----------------------------------



# Electroless Nickel Plating

Capable of coating complex parts

## Our technologies and their applications

### Strength

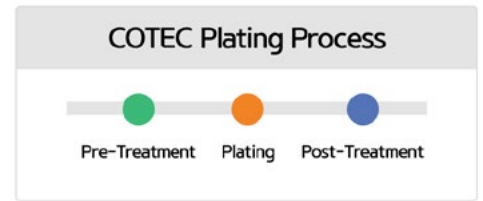
- Forms a uniform coating layer even on a complex surface.
- Less porous than electric coating.
- No need for complicate racking.
- Forming a coating layer on non-conductors with a proper pre-treatment.
- Has physical properties that are different from the electric plating.

### Weakness

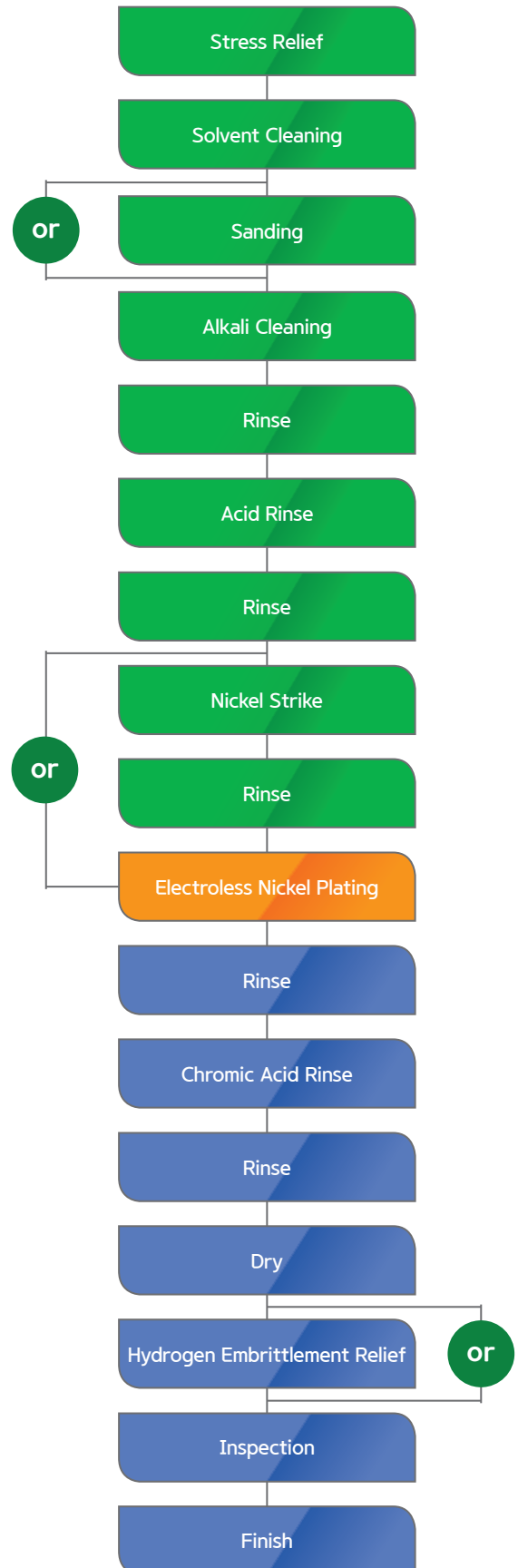
- Its production cost is higher than the electric coating.
- Short life due to unstable coating solution.
- Difficult control of coating solution.
- Slow coating speed.


### Applicable parts

Memory disk, Coating on non conductive material, Replacement of hard chromium coating, Plating on Computer parts, Through Hole on PCB



## Process



 The above plating process is the property of COTEC Corporation.