

# Zinc Plating



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

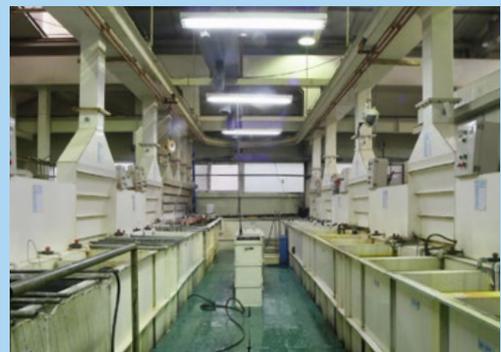


## Production items and applications

Department / Material		Aircraft parts, Defence, Atomic power, Machinery for general industries / Fe, STS, Al	
Usage		Corrosion resistance, Primer painting, Appearance	
Thickness		3~30 $\mu$ m	
Applied specifications	National defense 0115-0016 ASTM B 633 QQ-Z-325 KS D 8304	Thickness	Applied specifications : Thickness, Adhesive, Release tension, Hydrogen release
		Adhesiveness	No trace of separation after bending.
		Stress relief	At 191 $\pm$ 14 $^{\circ}$ C, for more than 3 hours
		Hydrogen embrittlement relief	Depending on product's microstructure and hardness, relief time differs. At 191 $\pm$ 14 $^{\circ}$ C, for more than 3 hours (HRC 32~39) At 191 $\pm$ 14 $^{\circ}$ C, for more than 12 hours (HRC 40~47) At 191 $\pm$ 14 $^{\circ}$ C, for more than 22 hours (HRC 48 for more than)
		Corrosion resistance	Salt spray test (48~96hrs) For high corrosion resistance, contact for further information
Acceptance		External	
		Internal	DOOWON, HYUNDAE WIA, HANWHA, LIG NEX 1, KAI, ADD

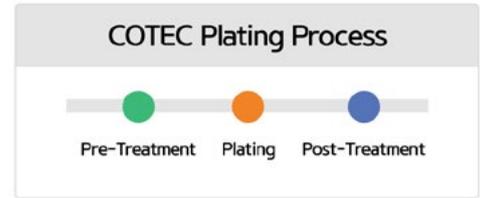
## Equipment condition

COTEC	Acid	3,000 $\times$ 1,000 $\times$ 1,500 mm
	Alkaline	3,200 $\times$ 1,000 $\times$ 1,500 mm



# Zinc Plating

Capable of coating complex parts



## Our technologies and their applications

### Alkali zinc plating

#### Characteristic

- It is generally applied electro deposition zinc plating.
- It generates zincate, lowers the concentration of the zinc solution, and promotes good uniformity, thus resulting in bright luster.
- Its bath is relatively easy to control.
- Its waste has a highly concentrated cyanate level, making it expensive to treat the waste.

#### Applicable parts

- Automotive parts Electric parts, Industrial products

### Zinc oxide plating

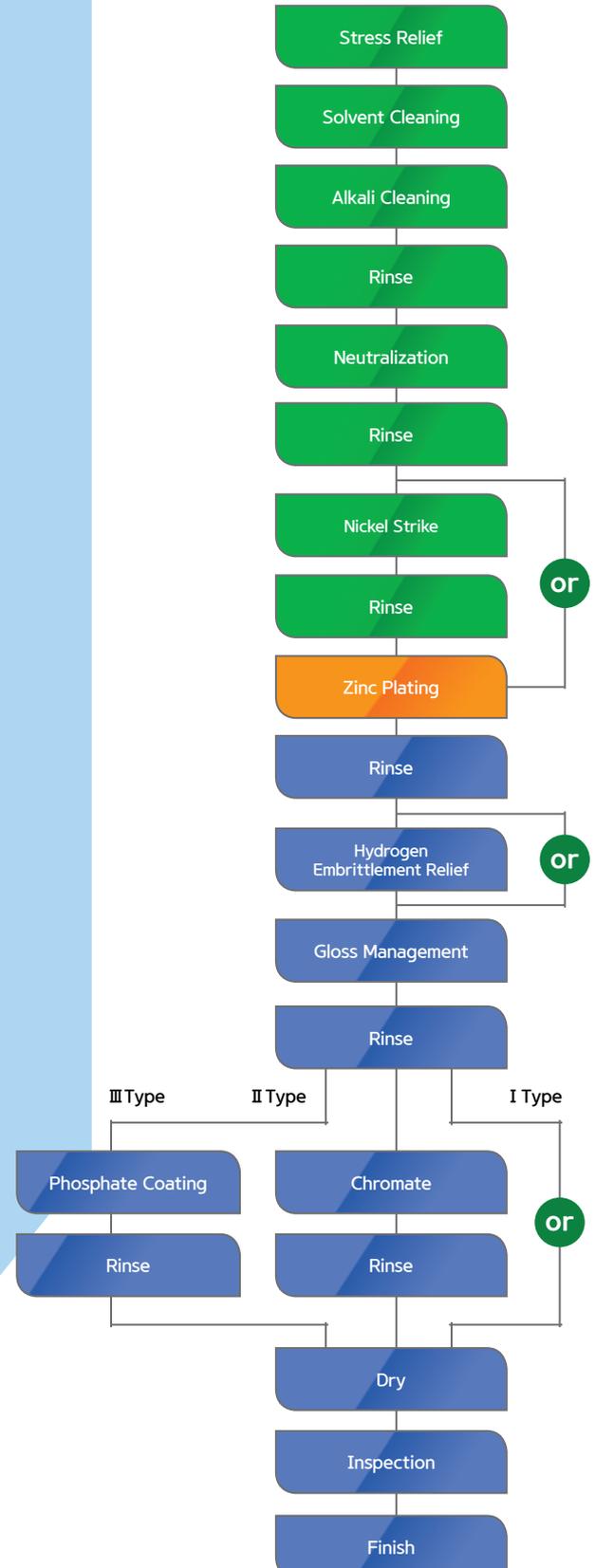
#### Characteristic

- Zinc sulfate ( $ZnSO_4$ ) is usually used and Zinc chloride is also used.
- Good for anodic zinc plating.
- Used for plating the steel wire and steel plate.
- Its luster is less bright and is difficult for chromating.
- Its current density is 1 - 3A/dm<sup>2</sup> but can be increased to 10 or above if agitated.
- If the anodic mixed solution is not removed, the plating can be rough, generating pinholes on the plating surface.
- Organic impurities shall be filtered out using active carbon while the iron component shall be electrolytically filtered away by using the second iron salt.

#### Applicable parts

- Automotive parts, Electric parts, Parts for supplies, Daily supplies

## Process



The above plating process is the property of COTEC Corporation.