

## High Performance Non-Cyanide Zn Brightener

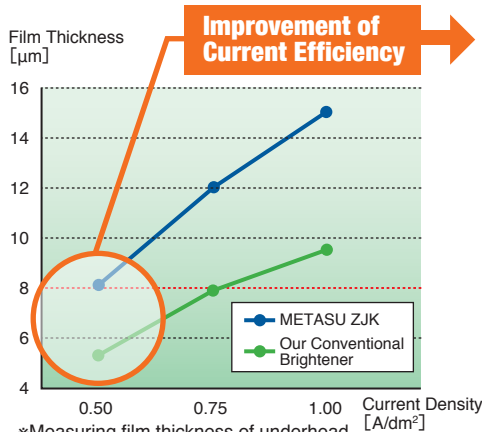
## HIGH THROW ZINC® METASU ZJK Process



METASU ZJK Process is non-cyanide Zn brightener, which has improved middle and low current plating efficiency for barrel application. It will provide superb throwing power.

### 1 Production Cost

Cutting production cost by improving current efficiency for low current area



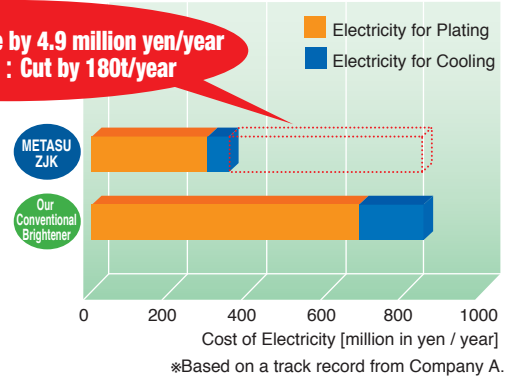
Possible to plate properly with application of low current

Electricity Cost : Save by 4.9 million yen/year  
Emission of CO<sub>2</sub> : Cut by 180t/year

■Plating Conditions

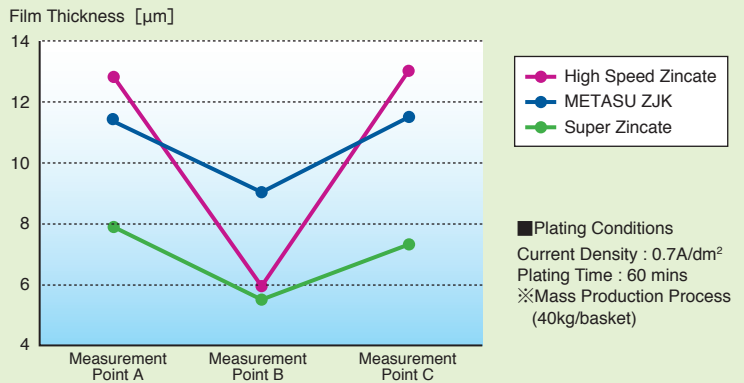
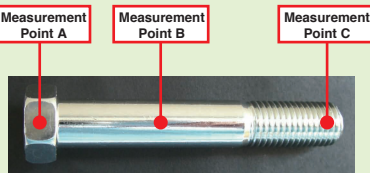
		METASU ZJK	Our Conventional Brightener
Plating	Time	70 mins	70 mins
	Temperature	30°C	25°C
Current Density		0.5A/dm <sup>2</sup>	0.8A/dm <sup>2</sup>

※Estimate under assumptions that cost of electricity is 13.5Yen/kWh and emission of CO<sub>2</sub> is 0.48kg/kWh.



### 2 Throwing Power

Great plating feasibility and throwing power



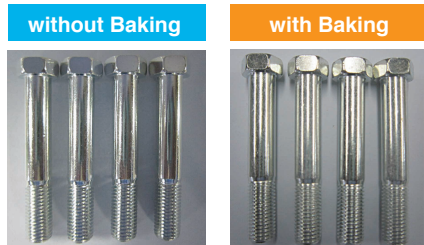
■Plating Conditions  
Current Density : 0.7A/dm<sup>2</sup>  
Plating Time : 60 mins  
※Mass Production Process (40kg/basket)

### 3 Appearance

Beautiful brightness even after baking process and excellent passivation matching

■Conditions : Baking 200°C for 4 hours

#### ●Appearance after Plating



#### ●Appearance after Passivation



Trivalent black chromate : METASU YFB / Trivalent white chromate : METASU YFA