

ELPANG Upgrade 500

A system that improves corrosion resistance without new facility investment by utilizing existing electro-galvanizing lines. It enables low-price-competition-based electroplating businesses to expand into the high-corrosion-resistant, high-value galvanizing replacement market.

The electro-galvanizing market has reached its limits with price competition alone! The ELPANG System enables you to secure even the galvanizing replacement market.

The market is changing

The electro-galvanizing market is facing intensifying competition among companies, making it increasingly difficult to achieve competitive differentiation through price competition alone. Meanwhile, customers are demanding higher corrosion resistance, uniform appearance quality, precise dimensional stability, reliable quality after processing, and comprehensive process control data.

Now is the time to move beyond “price competition” and transition into the “high-corrosion-resistant, high-value” market capable of replacing galvanizing.

Why ELPANG Upgrade 500 Is Needed

Pure zinc plating alone has its limitations

Conventional electro-galvanizing offers excellent appearance and dimensional precision, but under high-corrosion-resistance requirements, performance limitations may arise. The ELPANG System forms an inorganic protective layer to suppress the penetration of corrosive factors, upgrading conventional electro-galvanized products into high-corrosion-resistant products. **This system maintains the advantages of electro-galvanizing while improving corrosion resistance to a level capable of replacing galvanizing.**

Product Line-up

Category	Sealer-Applied Electro-Galvanizing	ELPANG Upgrade 500
Application Purpose	-	Performance Enhancement of Sealer-Applied Electro-Galvanizing, HDG Replacement
Corrosion resistance (SST White Rust)	72hr	72~120hr
Corrosion resistance (SST Red Rust)	240hr	300~500hr
Replacement Range	Electro-galvanizing	Hot-dip galvanized Z275~350 (39~49μm)
Application Conditions (Plating Thickness) (Based on XRF measurement)	6~12μm	3~10μm

Expected Benefits upon Implementation

01 Utilize Existing Facilities

Upgrade performance using existing electro-galvanizing lines without investing in new large-scale equipment.

02 Strengthen Competitiveness with High-Corrosion-Resistance Products

Achieve higher corrosion resistance than conventional electro-galvanizing and differentiate from competitors.

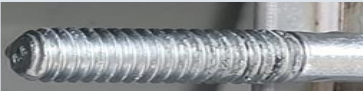
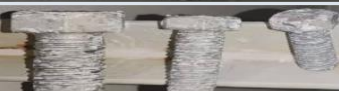
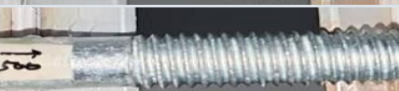
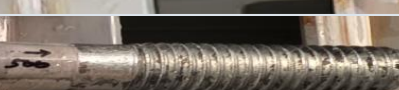
03 Move Beyond Price Competition

Shift away from low-price competition and improve profitability with higher-performance product specifications.

04 Enter the HDG Replacement Market

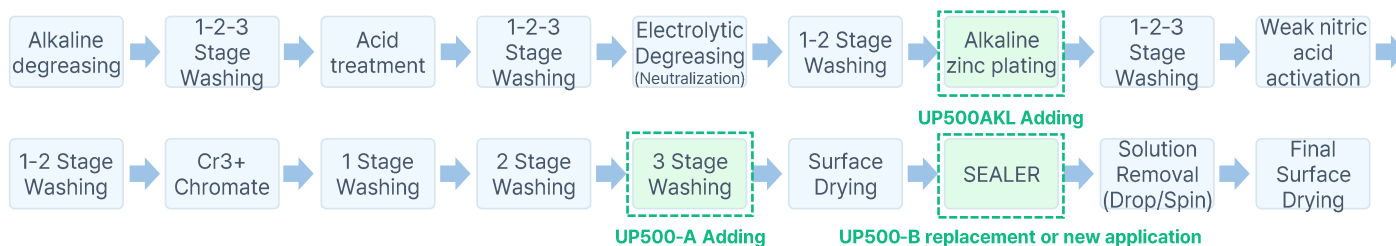
Apply as an alternative where HDG is limited by coating thickness, dimensional changes, or appearance issues.

Corrosion Resistance Performance Comparison

Category	Conventional Electro-Galvanizing (3~5μm)	ELPANG Upgrade 500 (3~5μm)	Hot-Dip Galvanizing (50~70μm)
Before Test			
SST 12hr			
SST 48hr			
SST 72hr			
SST 120hr			
SST 226hr			
SST 300hr			

* The performance data specified herein is achieved only when the zinc plating and trivalent passivation processes are properly controlled. Therefore, please conduct preliminary testing before application.

ELPANG Upgrade 500 Solution and Application Process



- **Alkaline plating additives(Zinc bonding water-based inorganic material):** UP500AKL (Added to existing plating chemicals), refer to TDS
- **Pre sealer(Structural Reinforced Water-Based Inorganic Material) :** UP500-A (Added to the third-stage rinse after chromate treatment), 1 stock solution : 100 water
- **Main sealer(Reactive water-based inorganic material) :** UP500-B (Replacement of the existing sealer or new application), Rack = 1 stock solution : 10 water / Barrel = 1 stock solution : 5~7 water
- **The original plating color will be maintained**

ELPANG Operating System Program

ELPANG provides an operation management system to help customers maintain target performance consistently.

Process Condition Management

Manage specialized formulations and bath conditions.

Quality Performance Management

Continuously manage SST performance and quality issues.

Data System Support

Support production stability and process optimization.

* Operated as monthly online training and a subscription service. Please contact us separately for service fees.

Secure a high-performance product lineup with ELPANG Upgrade 500 / 720 and upgrade your market position!

For customers requiring higher corrosion resistance or ELPANG facilities for the production of large steel structures, please contact KEMP separately regarding the ELPANG Full System (SST 720 hr / 1,000 hr).



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