



International Electroplating Ltd.



INTERNATIONAL ELECTROPLATING (PRIVATE) LIMITED



"Your Partner in Metal Finishing Processes and Machinery"





MESSAGE BY CHAIRMAN



In industrial world accelerated revolutionary process is at full swing. Everyday inventions are putting the globe into the new dimensions. Increasing demands and rapidly changing styles are creating the thrust for more productive and innovative way of production. On the other hand the threatening energy crises and the industrial waste are damaging our green and ocean lives and overall our environment is at stake.

Now the all scenario needs for our preparedness, insight and strategy which ensure the minimization of Global warming process and Cruise for Must Win Battle. Our R & D team in surface finishing enterprise is doing its utmost to develop such materials, substances and Salts which not even promote a green world but also protects Surfaces of articles more effectively from natural deterioration and vesting a charming look. Our Technical team is endeavoring to set Surface finishing Technology on modern pattern.

Our commitment toward develop and design automatic surface finishing plants will insure the saving of time, money and energy of our business partners. We are pleased to facilitate our business partners to provide our services in solving their problems at their plants. We want to educate and develop the people working in this field and bring them to the level of modern world. I believe, the essence of our success is to Build and Win Together.



ABOUT US:

INTERNATIONAL ELECTROPLATING (PVT) LTD

IEL is in the Electroplating Business since 1983. We strive as an entrepreneur, when the surface of the world was getting fade. Over the Years we have established a leading position in chemical trading industry as a reliable and reputable chemical supplier and service provider. We have a clear vision to set a revolution in surface finishing industry with the help of high standard products, valuable services and Automatic Electroplating Plants.

The Values we share, Surely make your face Glare

We have a distinction to value the long term relation and partnership based business. The Perspective, our Partners have is Top of Our Mind. Our Research Chemists and Technical Engineers constantly communicate with our customers to maximize the exchange of information. Wherever located, our teams enjoy sharing knowledge and solving your problems, a principle that is fundamental to our business model.

Just Beyond the Surface

Beyond the role of a specialty chemicals supplier, IEL is the friendly expert in Surface Finishing with a 360 vision on the environment and the resources consumed. We constantly strive to enhance Surface Treatment with innovative, easy to use and environmental friendly processes.

Beyond IEL Technologies, Service and Products, IEL is your dedicated partner thinking and acting beyond the surface.

We continue to make every effort to deliver products that provide full satisfaction and delight our Customers.





IEL SCOPE OF WORK:

IEL is a full line Electroplating Chemicals Supplier . It supplies chemicals, raw materials, plants and accessories to the market place. IEL, in addition provides, Training and Consulting Services. The company also provides with on-site maintenance for the process with the help of its technical support team. This greatly reduces the production losses incurred in case of process anomalies. The company also offers free chemical analysis for various processes it offers. The technical experts also help the clients to achieve their quality and production objectives by studying the process details. The company offers consultation and turnkey projects for its clients.

Our Technical Support Team works by helping you to use our technology and expertise in your Metal Finishing business.

By giving you all the information and training through various aspects of plant design and installation, we ensure increase in productivity and improve your profitability.

The company also offers its expertise in the field of electroplating and surface treatment formulations. The company offers to collaborate with companies with similar interests to provide better products and technologies at a very competitive price in various markets. The company has a belief in the ideology that there is more prospect of growth in sharing the results of Research and Development in any field thus having a combined effort.



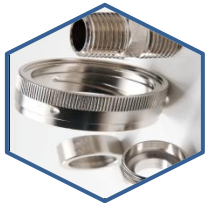


PRODUCTS:



INTERNATIONAL ELECTROPLATING:

At IEL we offer a variety of electroplating chemical processes for metal finishers. When it comes to electroplating and chemical plating, we are provided to be a leader in the industry. Our electroplating chemicals are of remarkable quality. Further mentioned are the details of the products range owned by IEL.



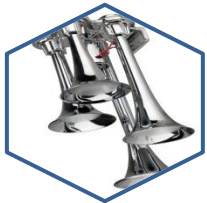
Nickel Electroplating

Nickel is suited for all kind of rack and barrel plating applications, produces uniform, brilliant, shining



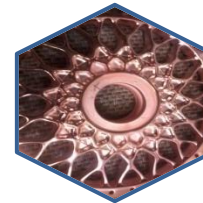
Zinc Electroplating

Extremely leveled, bright, alkaline non cyanide zinc process on sodium or potassium based zinc plating.



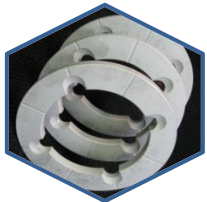
Chrome Electroplating

Chrome additives is a very good replacement to decorative chromium deposits.



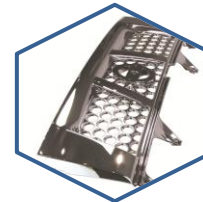
Copper Electroplating

A ready to use copper salt, produces tick bright, highly leveled copper coating



Tin Electroplating

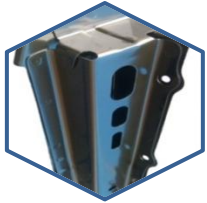
Produces easily solderable bright tin deposits with excellent tarnish and corrosion resistance.



Electrophoretic Lacquer

The electro-coat finish may meet the end user's requirements in a single coat application

PRODUCTS:



Electro-coats

The electro coat finish may meet the end user's requirements in a single coat application. A top coat may be applied over the electro coat to change the color and improve the overall UV durability and corrosion properties of the coating



Basic Salts

Salts of the metal being used for plating are added to the solution. These salts are water soluble, which is essential to the plating process, as the dissolved salts ensure a more even coating of the plating material.



Aludiaing

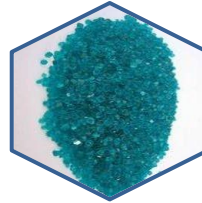
We believe to provide high quality Aludiaing Process that is a very short process to coat different items.

We offer competitive pricing to our clients to cater to their application requirements and specifications.



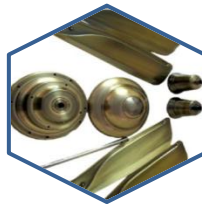
Raw Materials

Raw materials are materials that have not been processed. They are in the form in which they are found in nature without any thing done to them. Raw materials are made into other things.



Salts Prepared

Salts are also prepared by methods other than neutralization. A metal can combine directly with a nonmetal to form a salt; e.g., sodium metal reacts with chlorine gas to form sodium chloride.



Metals

Metals can be plated for various reasons. These may be for functional reason such as to improve wear or corrosion resistance to purely aesthetic reasons.



Phosphating

A ready to use copper salt. produces tick bright, highly leveled copper coating



Labels

Labeling is any written, electronic, or graphic communications on the packaging or on a separate but associated label.



PRODUCTS:

Nickel Cathode from Electrolysis / Nickel Cathode from Electro-winning:

Size: 860x880mm Plates in 4x4 Inches Squares

Standard: GB/T6516-2010

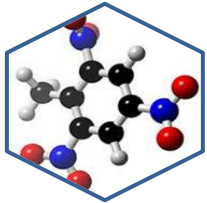
Application:

Production of Stainless Steel, Nickel Alloy, Alloy Steel and Cast Steel, Electroplating, Electroforming and Battery material, Nickel-containing profiles, nickel powder and highly purity nickel salts, catalyst production.



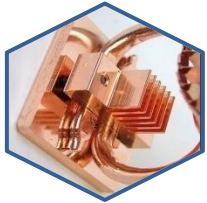
Grade	Ni9999	Ni9996	Ni9990	Ni9950	Ni9920	
Ni+Co (%min)	99.99	99.96	99.9	99.5	99.2	
Co (%Max)	0.005	0.02	0.08	0.15	0.5	
Impurities (%Max)	C	0.005	0.001	0.01	0.02	0.1
	Si	0.001	0.002	0.002	-----	-----
	P	0.001	0.001	0.001	0.003	0.02
	S	0.001	0.001	0.001	0.003	0.02
	Fe	0.002	0.01	0.02	0.2	0.5
	Cu	0.0015	0.01	0.02	0.04	0.15
	Zn	0.001	0.0015	0.002	0.005	-----
	As	0.0008	0.0008	0.001	0.002	-----
	Cd	0.0003	0.0003	0.0008	0.002	-----
	Sn	0.0003	0.0003	0.0008	0.0025	-----
	Sb	0.0003	0.0003	0.0008	0.0025	-----
	Pb	0.0003	0.0015	0.0015	0.002	0.005
	Bi	0.0003	0.0003	0.0008	0.0025	-----
	Al	0.001	-----	-----	-----	-----
	Mn	0.001	-----	-----	-----	-----
MG	0.001	0.001	0.002	-----	-----	

PROCESSES:



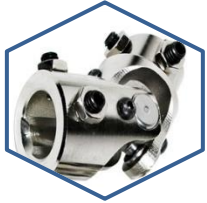
Surface Degreasers Process

- Alkaline Soak Cleaners
- Alkaline Electrolytic Cleaners



Copper Plating Process

- Cyanide Copper
- Bright Acid Copper
- Acid Copper Single System



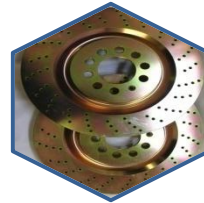
Nickel Plating Process

- Dull, Bright & Black Nickel
- Anthracite Grey Nickel
- Satin Nickel
- Nickel Activation
- Electroless Nickel Process



Plating Process

- White Bronze Plating
- Yellow Bronze Plating
- Nickel Free Grey Plating
- Nickel Free Black Plating



Zinc Plating Process

- Cyanide Zinc Plating Process
- Acid Zinc Plating Process
- Alkaline Zinc
- Zinc Protective Coating



Chrome Plating Process

- Micro Crack Chrome Process
- Hard Chrome Process
- Black Chrome Process



Silver Plating Process

- Silver Plating Process



Gold Plating Process

- Gold Plating Process
- Acid Gold Bath Process



PROCESSES:



Tin Plating Process

- Acid Tin Plating
- Satin Tin Plating



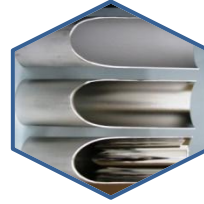
Process For Aluminium

- Process for Aluminium



Blackening & Coloring

- Black Antique
- Antique Bronze
- Rust Iron Finish
- Tin Antique



Electro Polish

- SS Electro Polish
- SS Satin Electro Polish
- Brass Electro Polish



Brass Plating Process

- Brass Plating Process



Metal Strippers

- Nickel Stripper For M.S.
- Nickel Stripper For Brass
- Lacquer Stripper
- Nickel Stripper for ZIN





NICKEL-FREE PLATING:



Nickel-Free Plating is a type of hypoallergenic plating. Nickel is a highly durable metal that holds its color well and has a reasonable price tag; understandably why it is one of the most popular materials of choice for jewelry manufacturers.



White Bronze Plating

This Plating is mainly used as Barrier Plating. The bath is free of Nickel & mainly consists of Tin, Copper & Zinc in a particular ratio, so that the coating has approximately 58% of Copper, 40% Tin & 2% Zinc. The bath is Cyanide based & acts as a non-porous Plating above 5 microns. But even a thickness of 1.5 to 2 microns is enough for costume jewelry. The Plating is allergy free & is quite cheap in comparison with Palladium & Cobalt.



Nickel Free Grey Plating

The Bath is Cobalt based & mainly used to produce light grayish blue finish on artificial Jewelry. The bath is supplied in a concentrated form.



Yellow Bronze Plating

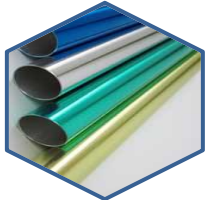
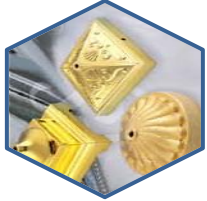
This Plating is mainly used as Barrier Plating. The bath is free of Nickel & mainly consists of Tin, Copper & Zinc in a particular ratio, so that the coating has approximately 68% of Copper, 30% Tin & 2% Zinc to produce a yellow golden color and can be used as an undercoat for gold plating. The bath is Cyanide based & acts as a non-porous Plating above 5 microns. But even a thickness of 1.5 to 2 microns is enough for costume jewelry. The Plating is allergy free.



• Nickel Free Black Plating

This bath is cobalt based & is mainly used in Nickel free artificial Jewelry for people Allergic to Nickel. The Plating produces dark Black color & Lacquering is also required. The bath is supplied in a concentrated form & must be filtered initially while making a new bath.

CSP COLOR SPRAY PLATING PROCESS:



Conventional surface treatment technologies are namely Electroplating and Vacuum Plating.

Color Spray Painting (CSP) is the new addition to these 2 conventional surface treatment technologies. The CSP technology in view of its recent development; it had been in recent years attracted the attention and acclaimed recognition by many renowned surface treatment specialist and companies attention of its capabilities and viewed it as the revolutionary plating technology after electroplating and vacuum plating.

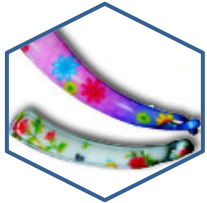
The CSP Technology strength lies in the fact that it does not possessed post treatment effect of severe environmental pollution via waste water and toxic discharge conventional electroplating technology and most importantly; the start up investment cost of CSP is significantly lower then that of conventional plating technology. Thirdly; CSP application scope compliments to that of conventional vacuum plating technology which has a high defective production rate in the plating process due to factors such as shape irregularities and sizes of objects to be plated.



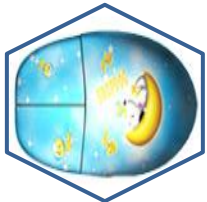
WTT WATER TRANSFER TECHNOLOGY



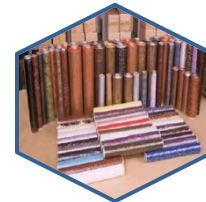
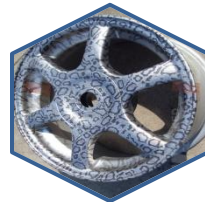
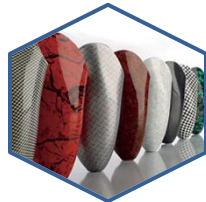
Increased standard of living brings about a new level of needs from discerning consumers today. Apart from the utilization value of a product, consumers demand the aesthetic value attached to it.



This presents an opportunity to surface treatment to place a part in this value adding role. The digital-positioning water transfer printing technology allows a plain surface of a product to be transformed immediately into colorful one.



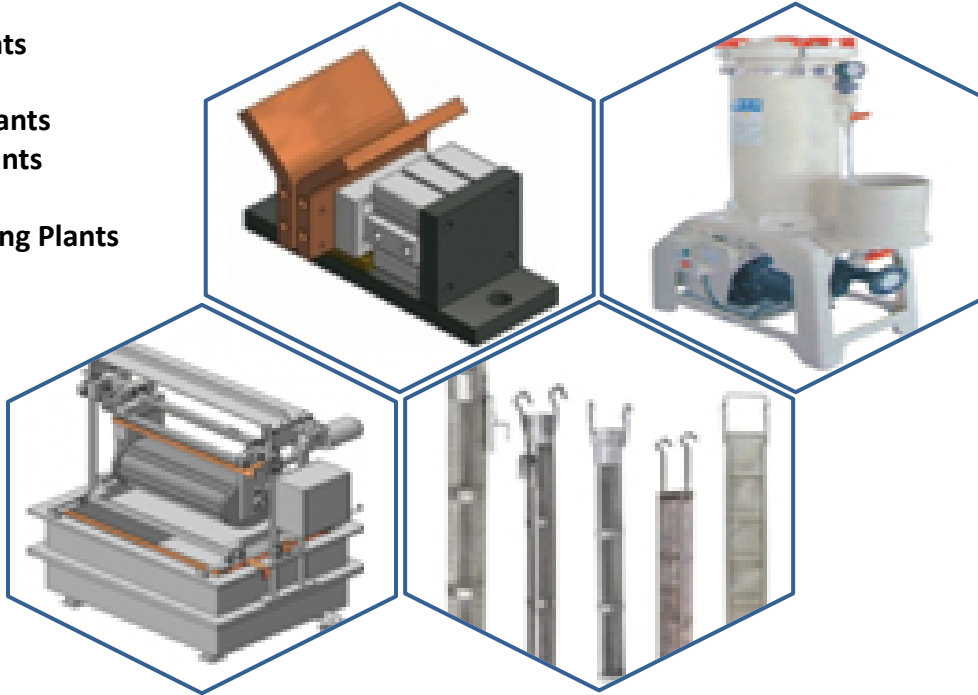
Normal printing technology only work best on flat product surface; products with irregular surfaces would encounter a high degree of production defects in printing; however with the development of Digital-positioning water transfer printing technology; challenges faced by conventional printing technology such as offset printing, screen printing; thermal printing could be effectively overcome.



MACHINERY:



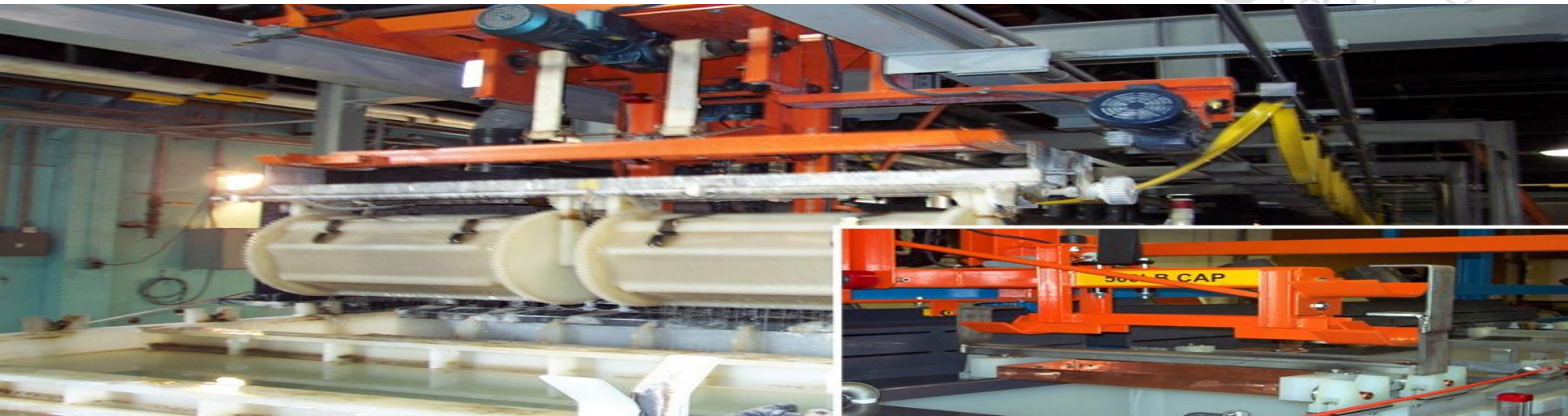
- Nickel Plating Plants
- Zinc Plating Plants
- Chrome Plating Plants
- Copper Plating Plants
- Tin Plating Plants
- Gold & Silver Plating Plants
- Accessories



AUTOMATIC PLATING LINE:



- Fully Automatic Plating Line
- Fully, Semi & Manual Control Modes
- Customized Design
- Mild Steel / PP Tanks
- PLC Based Control System
- Human-Machine-Interface (HMI)
- Electric/Gas Heating System
- Fume Extractors with Ducting



AUTOMATIC PLATING LINE:



- Air & Mechanical Agitation System
- High Quality/Accuracy Rectifiers
- High Quality Filter Pumps
- Energy & Time Saving
- Cost Saving
- Spare Parts Support
- 24/7 After Sales Support



AUTOMATION & CONTROL:



- Fully Automatic Process Control
- Programmable Logic Controller (PLC)
- Human-Machine-Interface (HMI)
- Tracking of cranes throughout the line
- Centralized and Remote Control
- Emergency Shut-Down System
- Proximity & Photo-Electric Sensors
- Production reports
- High Availability,
- Easy improvement and maintenance



PROCESS TANKS MS/PP:



MS Tanks

Size: As per plant requirement

Material: t5mm MS Sheet

Reinforcement: 8# Channel Steel

(Special Rubber lining on critical application tanks)



PP Tanks

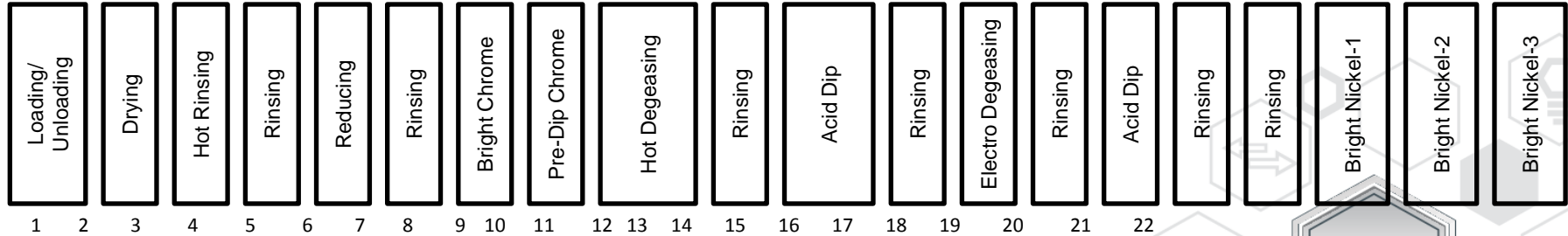
Size: As per plant requirement

Material: t15mm PP Sheet

Reinforcement: 8# Channel Steel with PP t=4mm



TYPICAL AUTO-PLATING LINE LAYOUT:



Plant Process

Loading/Unloading --> Drying --> Hot-Rinsing --> Reduction --> Rinsing --> Bright Chrome --> Pre-Dip Chrome --> Hot Degeasing*2 --> Rinsing --> Acid Dip*2 --> Rinsing --> Electro Degeasing --> Rinsing --> Rinsing --> Bright Nickel*3

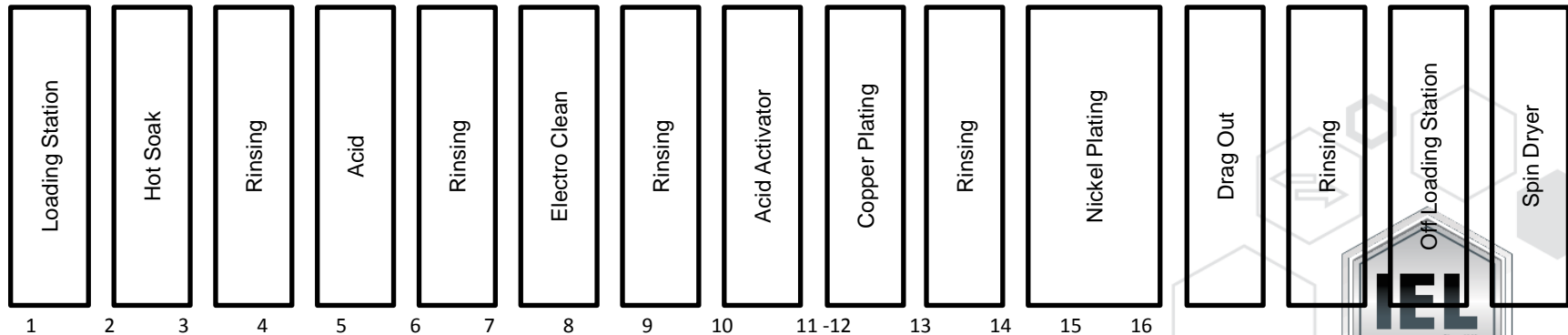


TYPICAL AUTO PLATING LINE (SYSTEM LAYOUT)



Pos	Tanks Process	Rectifier	Heater	Mech Agitator	Filter Pump	Blower	Air Agitation
1	Loading / Unloading						
2	Drying	x	Heater	x	x	x	x
3	Hot Rinsing	x	Heater	x	x	x	x
4	Rinsing	x	x	x	x	x	x
5	Reducing	x	x	x	x	x	x
6	Rinsing	x	x	x	x	x	x
7	Bright Chrome	Rectifier	Heater	x	x	x	x
8	Pre Dip Chrome	x	x	x	x	x	x
09-10	Hot Degeasing	x	Heater	x	x	Blower	x
11	Rinsing	x	x	x	x	x	x
12-13	Acid Dip	x	x	x	x	Blower	x
14	Rinsing	x	x	x	x	x	x
15	Electro Dedeasing	Rectifier	Heater	x	x	x	x
16	Rinsing	x	x	x	x	x	x
17	Acid Dip	x	x	x	x	x	x
18	Rinsing	x	x	x	x	x	x
19	Rinsing	x	x	x	x	x	x
20	Bright Nickel	Rectifier	Heater	Agitator	Filter Pump	x	Air Agitation
21	Bright Nickel	Rectifier	Heater	Agitator	Filter Pump	x	Air Agitation
22	Bright Nickel	Rectifier	Heater	Agitator	Filter Pump	x	Air Agitation

TYPICAL PLATING LINE LAYOUT (DULL PLATING LINE)



Plant Process

Loading Station--> Hot Soak--> Rinsing --> Acid --> Rinsing --> Electro Clean --> Rinsing --> Acid Activator --> Copper Plating --> Rinsing --> Nickel Plating *2--> Drag Out --> Rinsing --> Off Loading Station--> Spin Dryer

TYPICAL AUTO DULL PLATING LINE (SYSTEM LAYOUT)



Pos	Tanks Process	Rectifier	Heater	Agitator	Filter Pump	Blower	Air Agitator
1	Loading Station						
2	Hot Soak	-	Heater		-	-	Air Agitator
3	Rinsing	-	-		-	-	Air Agitator
4	Acid	-	-		-	-	Air Agitator
5	Rinsing	-	-		-	-	Air Agitator
6	Electro Clean	Rectifier	Heater		-	-	Air Agitator
7	Rinsing	-	-		-	-	Air Agitator
8	Acid Activate	-	-		-	-	Air Agitator
9	Copper Plating	-	-		-	-	Air Agitator
10	Rinsing	-	-		-	-	Air Agitator
11-12	Nickel Plating	Rectifier	-		Filter Pump	-	Air Agitator
		Rectifier	-		Filter Pump	-	Air Agitator
13	Drag Out	-	-		-	-	Air Agitator
14	Rinsing	-	-		-	-	Air Agitator
15	Off Loading Station						
16	Spin Dryer						



RECTIFIERS:



- Oil Cooled Rectifier
/Water Cooled Rectifier
/Air Cooled Rectifier
- Input Voltage: 380-440 VAC – 3 Phase, 50Hz
- DC Voltage Output
- DC Current Output with Shunt
- Rectifier equipped for connection to remote control
- Energy Saving



FILTER PUMPS:



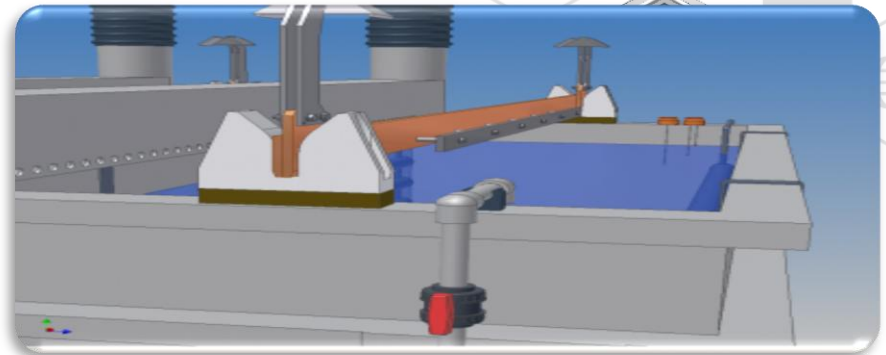
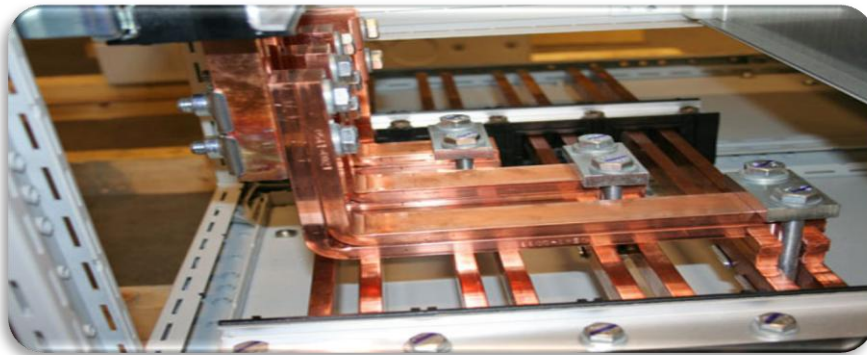
- High Pressure
- Material: FRPP
- Voltage: 380-440 VAC – 3 Phase, 50Hz
- Cut-off switch protects the motor from overloading or when it experiences single phase voltage waves
- Self-cleaning System (Optional)



COPPER BUSBAR SYSTEM:



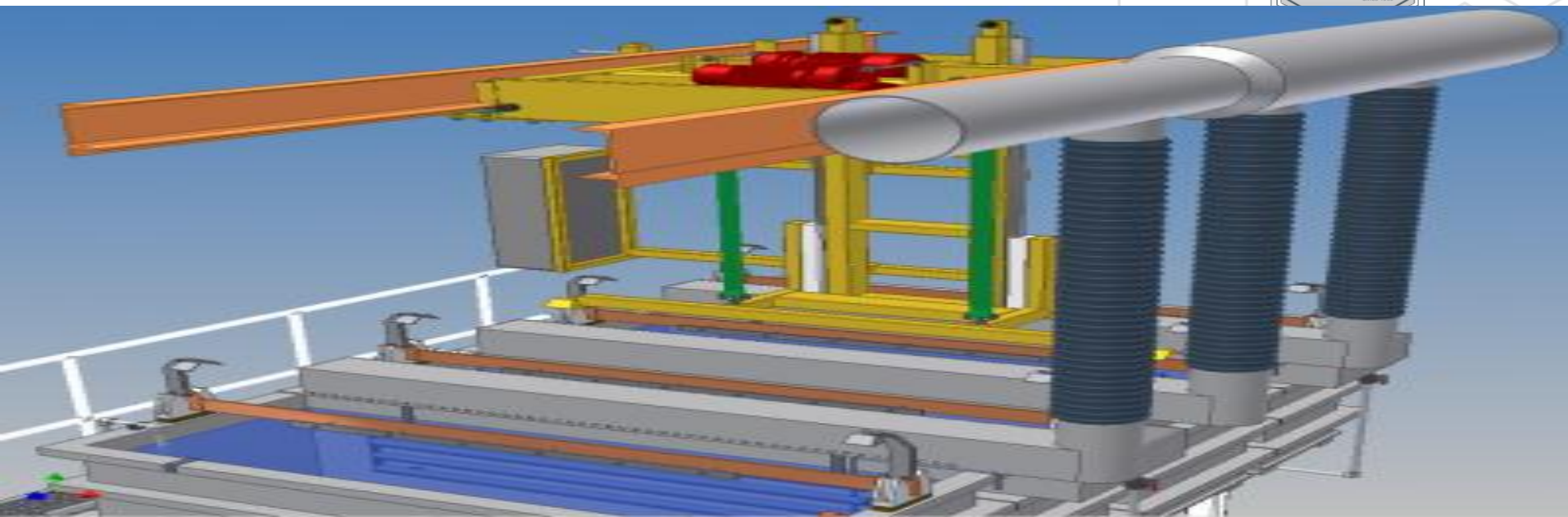
- Pure Copper Busbar
- Anode/ Cathode Bars
- Special Design according to Process requirements
- Over Voltage/Current Protection
- Ground Protection



FUME EXTRACTION:



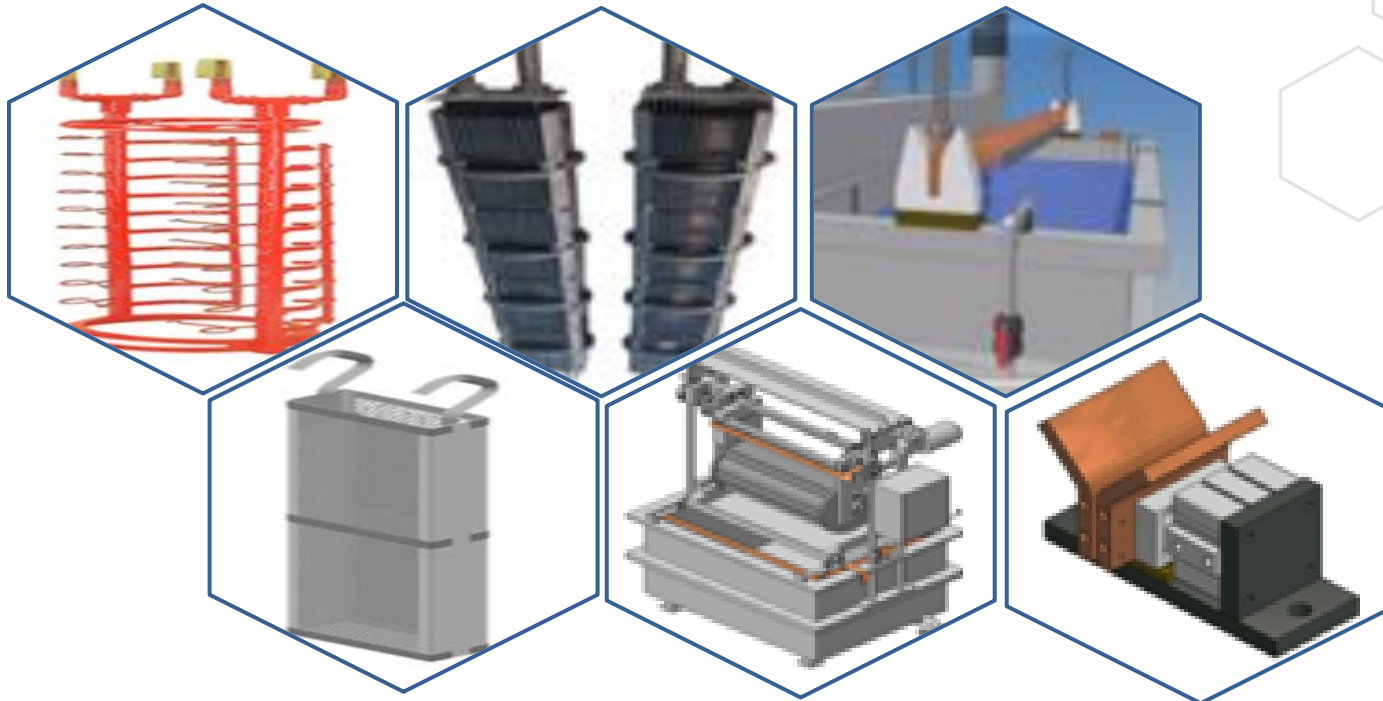
- Critical Chemicals Fumes Extraction
- Very Dangerous for Human & Equipments
(Power & Control Panels and Rectifiers)
- Heavy Power Blower fans
- Interlocking with main Control System



PLATING LINE – ACCESSORIES:



- Jigs for Materials Handling
- Anode Baskets
- Electric Heater
- Busbar Systems





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