



Grauer & Weil (India) Ltd.



GROWEL'S FINISHING SYSTEMS

Trust the leader in metal finishing



Grauer & Weil (India) Ltd.

With an experience of 50 years, Grauer & Weil (India) Ltd, is among the very few worldwide to offer an integrated package of chemicals, plants, intermediates, specialty chemicals, dactozing, effluent treatment systems and waste recovery techniques from spent solutions.

In pursuit of providing customers with a total solution in surface finishing requirements, particularly to meet their demands of environmental friendliness, energy and water conservations and world class finish; Growel has focused on cutting edge process technologies, designing expertise in process plants and pre and post sales customers support.

Following an unending pursuit of excellence through fundamental and applied research, we are recognized by prestigious industry bodies - like the Indian Council of Science and Technology - for commitment, & quality. We are backed by a team of over 300 highly skilled marketing and technical service engineers.

We are instrumental in consolidating the best in products and technologies through selective expertise from world leaders in Germany, USA, UK, Japan, and Spain. Our expertise is fine-tuned in the demanding environments of the metal finishing industry in domestic and international markets.

Growel conceptualises, designs, manufactures and installs a wide range of surface finishing systems.



Fully automatic PLC controlled plating system

SURFACE FINISHING PLANTS

We specialise in the manufacturing of plants dedicated virtually to the entire range of plating processes. Our production programs include:

- » Manual to fully automatic PLC (Programable Logic Control) controlled plating systems
- » Continuous Plating Plants » Degreasing » Effluent Treatment Plants & Recovery Systems
- » Auxiliaries and other specialised testing equipments for the plating industry.

Catering to a growing spectrum of industries: Automobile, Hardware, Electronics, Jewellery, Aeronautics, Railways, Defense etc...

» **As an obvious extension of their expertise Growel now offers their services in steel wire, coil pickling and phosphating plants**

- Pretreatment and powder coating systems
- Pretreatment and cathodic electrocoat systems

MANUAL TO FULLY AUTOMATIC PLC CONTROLLED PLATING SYSTEMS

Manufacturing of plating plants involves virtually all the branches of engineering, from fabrication of steel/steel alloys, polymers, glass films and other non-ferrous materials like titanium, tantalum etc., to hydraulics, pneumatics and electronics.

Modern plating plants are designed with various options to minimise pollution and help in maintaining clean environment in the work space. Plant engineering has evolved to offer highly efficient dedicated systems for specific plating processes. Under the licence from M/s Manz Galvano Technik GmbH of Germany we now offer plating plants with features to optimize the performance of systems. The plating plants offered with rack type loading, combination of rack & barrels, dedicated barrel Loading options.



PP & SS Barrels

BARRELS

Plant Engineering has evolved to offer highly efficient dedicated systems for specific plating processes. We now offer some of these novel features: Special barrel designs can optimize plating effectiveness by 40 to 60%. These techniques result in a substantial saving of operational cost as also load on effluents.

CONTINUOUS PLATING PLANT

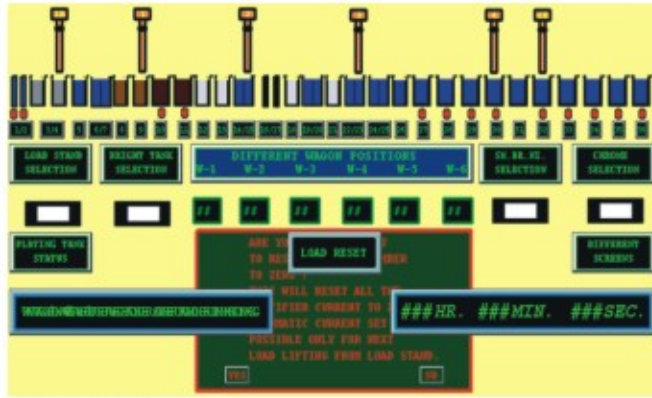
Continuous plating systems are designed for high speed operations, more specifically for plating of strips, wires and tubes. They comprise of a complex material handling system in keeping with the plating requirements, in an extremely dynamic state of movement. Straight line configurations are made up of a shallow active tank through which singular or multiple strands of the workload is carried at high speeds with specifically designed D.C. contact system. The pre-treatment modules may consist of brush cleaning facilities typical to such processes

The entire conveying system has to synchronise with the spooling drive which is often provided by the customer.



Continuous plating lines for plating of strips, tube wires etc.

PLATING PLANT AUTOMATION



screen shot of scada

Automation in today's plants offer features

- » To monitor and select different wagon positions & plating tank positions.
- » To monitor the operation of all wagons.
- » To check & monitor the status of various plating and cleaning tanks for parameters like process time, plating thickness, temperature, current etc.

"The advent of electronics in the world of engineering has created wonders in the performance of plating plants. Consequently such state-of-art machines are able to offer precise control and monitoring of all throughputs, thus ensuring high and consistent levels of quality and performance."

Computers today help integrating the total operation of a plating plant for a given production program & in depth report on operating parameters & diagnostic reports on errors & failures are available to analyse the performance of plating plants. These factors, together with a spectrum of other possibilities, have made automation virtually indispensable in metal finishing plants."

EFFLUENT TREATMENT PLANTS AND RECOVERY SYSTEMS

Growel Goema (I) Ltd., a joint venture with the renowned Goema AG of Germany [a subsidiary of the Best Water Technology Group (BWT)], offers a wide range of systems for such applications. Our systems are based on the latest international technique for waste minimisation at source.

Acid Recovery System

This highly evolved technique incorporates an effective 'Rinse Technique' with an integrated 'in-line' water re-circulation system. This offers high economy in process plant operations involving high volumes of inorganic acids.



Ion Exchanger Re-circulation System

Our range of supplies include:

- PLC controlled, fully automatic in-line water re-circulation system, based on Ion Exchange principle. The system can produce water, suitable for any metal finishing application.
- Fully automatic or semi-automatic effluent treatment plants for chrome, cyanide, nitrite, phosphate, heavy metals, other acids and alkalis etc. The plants invariably consist of rugged filter press for effective de-watering of sludge.
- Recovery systems for chromium, heavy metal, precious metals, acids etc.
- Sophisticated system like Ultra-filtration for treatment of emulsions and Reverse Osmosis (RO) for removal of Total Dissolved Solids (TDS).



Fully Automatic ETP Plant