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**OEM UPDATE**

## Water-based, environment-friendly technologies for automotive



*Products with new technology like electrical vehicles and non-polluting vehicles should be introduced at affordable pricing.*

**Krishna Bhandari, Vice President, Grauer & Weil (India) Limited Mumbai**

**K**rishna Bhandari, Vice President, Grauer & Weil (India) Limited Mumbai, talks about the areas of innovation his company has been working on and how automation can provide the much-needed boost to the auto and auto ancillary industry.

**What is your focus at Auto Expo 2020?**

The focus is to meet up with auto ancillary part manufacturers. Growel, being a renowned Indian manufacturer and supplier of metal finishing chemical, has a chance to supply and support the needs for these parts to manufacturers who will in turn supply to OEMs.

Such interactions also help to know the newer industry requirements and norms. This will not only help to increase the clientele but also increase chances of innovation possibilities. Another product range from NOF Metal Coating is Geomet coating, which is a water-based zinc aluminum flake coating. It is an environmentally friendly product widely used in the auto and auto ancillary industry. Our focus will be to inform the advantages of NOF water-based and environmentally friendly technology to the industry.

**What are the upcoming and safe technologies for auto part manufacturers?**

- Carcinogenic hex Cr replacements: Usually, a lot of parts (for example, shock absorber, etc.) in manufacturing processes needs the thick chrome coating. Traditionally, these are done using hex chrome electrolytes. We have developed feasible thick chrome plating technology using trivalent chrome electrolyte.
- Corrosion resistant trivalent chrome passivates replacing hex chrome-based passivation for zinc and zinc alloys and also for aluminum substrate
- ROHS compliant electro less nickel plating
- Corrosion resistant cyanides and toxic element free zinc and its alloy plating process
- Phosphate-free pretreatment process before painting which ensures desired adhesion requirements
- NPEO-free biodegradable cleaning technology
- Geomet is free from hexavalent

chromium and is a water-based technology widely used for protection against corrosion for fasteners, brake discs and many other items. Geomet base coat is available in silver colour. Different top coats like black, blue, and green are available which can provide the desired COF value.

**What should automobile companies aim for? Automobile companies should aim for the following:**

- Increased value for money for the clients: Reduce maintenance, increase mileage, easy financing, some sweepstakes, leasing to company at attractive propositions to enable companies to provide cars to the employees for usage, etc.
- Automotive companies should demonstrate how their products are not adversely affecting the environment. Products with new technology like electrical vehicles and non-polluting vehicles should be introduced at affordable pricing.

**Please discuss the usefulness of automation in the auto component sector.**

Some of the advantages of automation in the sector are increased productivity, reduction in rejection, saving of resources like energy, water, etc. to get benefits of economy of scale. Other areas of usefulness include homogeneous quality, easy JIT conformance, and ease in maintaining safe environment.

**What are the recent innovations in your company?**

Some of the recent innovations are

plating solutions without using hazardous ingredients such as carcinogenic hex Cr replacements. Usually, a lot of parts (for example, shock absorber, etc.) in manufacturing processes needs thick chrome coating. Traditionally, these are done using hex chrome electrolytes. We have developed feasible thick chrome plating technology using trivalent chrome electrolyte.

We have also developed corrosion resistant trivalent chrome passivates replacing hex chrome-based passivation for zinc and zinc alloys and also for aluminum substrate; ROHS compliant electro less nickel plating; corrosion resistant cyanides and toxic element free zinc and its alloy plating process; phosphate-free pretreatment process before painting which ensures desired adhesion requirements; and NPEO-free biodegradable cleaning technology, among others.

Geomet is free from hexavalent chromium and is a water-based technology widely used for protection against corrosion for fasteners, brake discs and many other items. Geomet base coat is available in silver colour. Different top coats like black, blue, and green are available which can provide the desired COF value. Zn Ni alloy plating for mild steel sheet offers better corrosion resistance at much lower thickness (around 3-4 mic) to replace galvanisation and/or galvanic coatings. This is very useful for fuel tank manufacturers. Geomet is an environmentally friendly product free from hexavalent chromium and is RoHS and REACH compliant. Its other benefits include low curing, energy savings, being water-based, and no VOC.