



MicroArc Oxidation (MAO)
– Anodic Oxidation in a New Form



ON VICTOR'S **SAND BLAST**

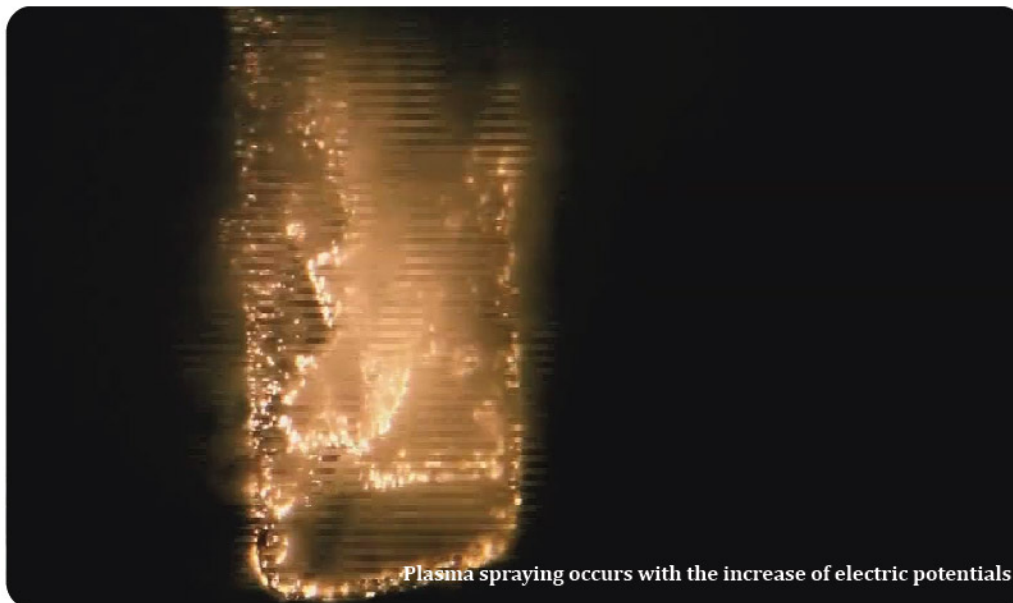


Electrostatic Rotary Spray Nozzle
– The Cure for Colour Variance



Making **Standardization** a Habit

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Plasma spraying occurs with the increase of electric potentials

To enhance the properties of aluminum surface, surface treatment like electroplate, laser coating, anodic oxidation, etc., are popular choices among which, MicroArc Oxidation (MAO) is an intensified surface treatment recently developed and emerged from the anodic oxidation.

MicroArc Oxidation (MAO), also known as Plasma electrolytic oxidation (PEO), is an electrochemical surface treatment process applying higher potentials for generating oxide coatings on metal parts. With the increase of electric potentials, plasma spraying occurs and starts to convert, with instantaneous change of high temperature and pressure, from amorphous alumina into crystalline forms such as corundum.



The advantages of crystalline surface treatment through MAO process at Victor can be categorized as following:

1. Enhanced properties of the surface in, among others, its tensile strength, and resistibility to heat, abrasion, corrosion and conductivity.
2. It's non-toxic and environment-friendly nature, as electrolyte bath is free from toxic or heavy-metal and highly

recyclable for re-utilization efficiency.

3. By changing the chemical composition of the bath substances, specific surface properties or various surface colours can be achieved.



ON VICTOR'S SAND BLAST

Sand Blast at Victor is an induction-style application by utilizing compressed air in the spray pipe (or gun) to induce propelling where the “sand” is sucked into the pipe via sand-duct and, forcibly propelled out of the nozzle against a surface under high pressure to complete a specific “blast” job as:

1. Removing Surface Contaminations like metal rust, oxidation, dirt or burrs.
2. Roughen a smooth surface as pre-treatment for ED, spray paint and jointing, or enhance adhesion between layers of anodized, coated or jointed parts.
3. Enhancing mechanical properties by changing surface stress state, increasing surface hardness, improving product against abrasion and wear-and-tear.
4. Smoothing a rough surface by evening surface roughness. It may also create a matt or diffused surface effect for a desired surface treatment.

Electrostatic Rotary Spray Nozzle The Cure for Colour Variance



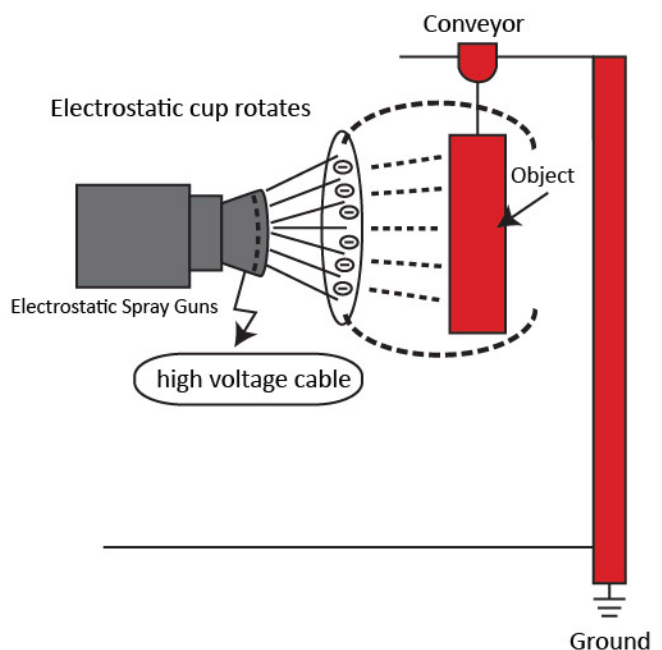
At Victor, the high-speed magnetic auto-adjust swirl cup is equipped in the application of primer and finishing coat to overcome colour variance commonly occurred during metal coat applications by using the generic spray nozzle.

When the electrostatic cup rotates in high speed, the coating inside gets centrifugal atomized. The atomized coating ions are electrically charged when spraying out of the cup, and the like charges repel each other so that the coating particles get even refined. Our swirl cup generates a rotary pressured air pushing the atomized coating down the spiral nozzle to reach the surface of a part. The nozzle is set at a 45 degree angle to minimize re-bounce and ensure surface quality.

The technical advantages of our Swirl Cup are as following:

1. External high-voltage starter to generate voltage/current of 85KV/500A to guarantee desired coating efficiency.
2. Swirl configuration is specifically applicable for metal coatings.
3. Swirl is driven by meglev air turbine to be friction-free.
4. Magnetic auto-adjust configuration creates a vibration-free high-speed rotation, as it doesn't involve a mechanic central axle.
5. Magnetic spray nozzle and its mold-shaped design are bound for easy installation or removal.

At Victor, we keep our equipment apace to meet the standards of Lean production. This safeguards the product surface quality.



Making **Standardization** a Habit

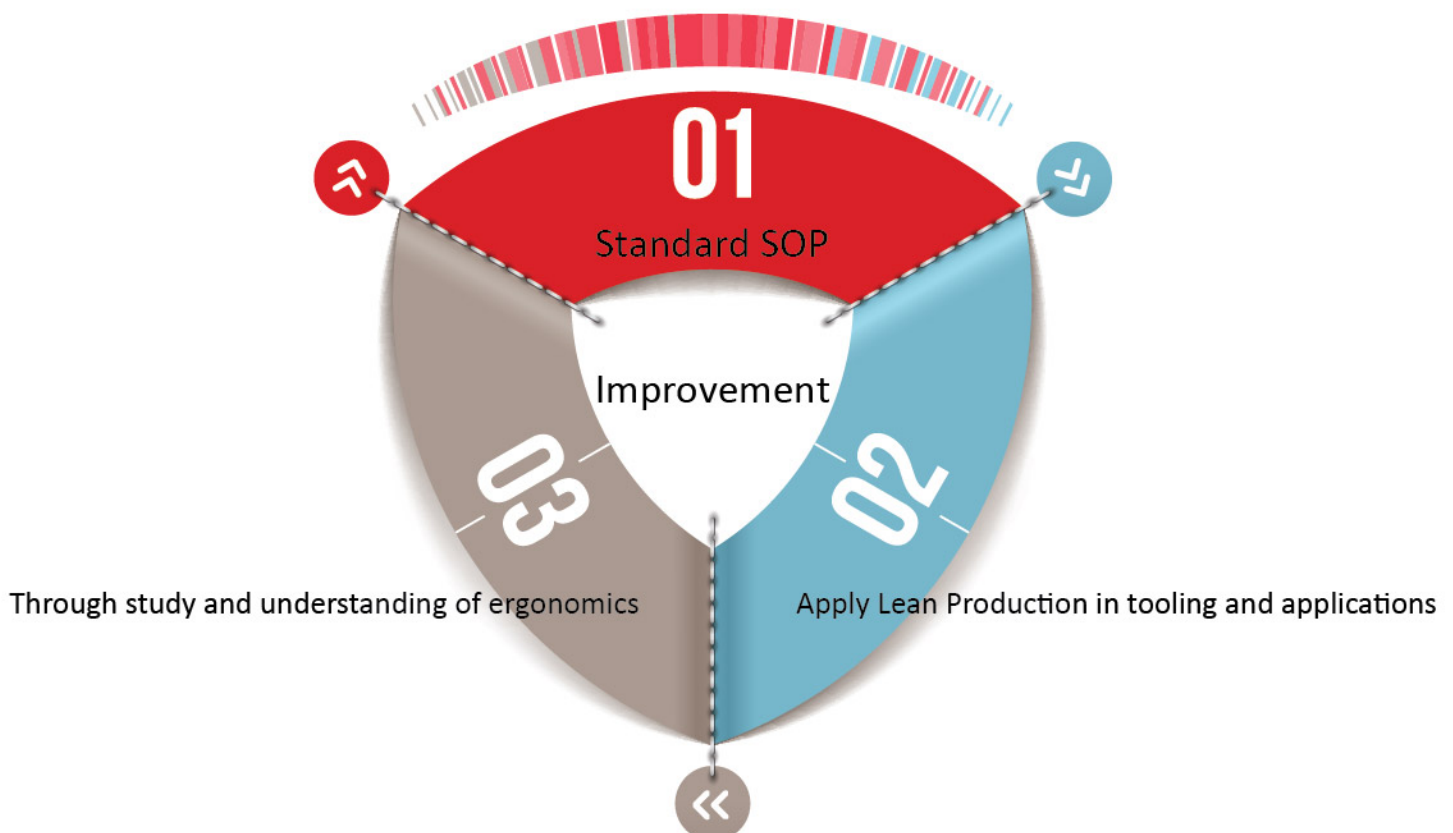
Standardization refers to a process optimization acquired through improvement over a certain operation. It is achieved, based on research and analysis on the operation system, by breaking down each and every step and movement over the process.

Through implementation of standardization, our employees are encouraged to discover problems, and then find solutions to the problems. This improvement has gradually become a habit.

1. A standard SOP is made by the Lean Standardization Team for each workshop to follow, followed by Performance Reviews to ensure the SOP is in fact implemented by each employee.
2. Apply Lean Production in tooling and applications, while discovering and proactively eliminating potential waste, to support process consistency and stability.
3. Through study and understanding of ergonomics, processes are designed to satisfy demand of safety, quality and efficiency so that accuracy and availability of scheduling are greatly improved. This helps the overall uplift of the productivity.

At Victor, standardization is our focus and in our ongoing practice; headed by our quality commitment, we devote ourselves to offer workmanship and product of consistency and excellence for our customers.

The flow chart of the standard



COMPANY PROFILE

Our company was founded in year 2000. Being a company specialized in sophisticated alloyed aluminum fabrication and high-end surface treatment, JM Victor is not only refined with hands-on experiences through years of accumulation through the sector chain of precision manufacture, but also with unparalleled wealth of knowledge enriched from company operation and management process, which enables the company to offer solutions in overcoming design and production bottlenecks in high-end aluminum fabrication.

In Jiangmen High-Tech Industrial Park, we have invested in construction of our new cyber-physical powered Smart Plant embracing the core Industry 4.0 design concept. The new plant, residing on an area of 100,000 square metres, comprising a global lab of aluminum-magnesium surface treatment and a smart CNC fab centre with its own casting house and stamping workshop, will add on a new chapter of consummate expertise to the venture of JM Victor.

Our Mission Statement

We stand by our commitment to share the harvest and happiness with our staff and workers, create value for our customers and cultivate a company culture with a vision. This is the foundation for the sustainability and continuity of our company and our business.



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