



*New Servo Stamping Press at Victor*



*500T Cold-Chamber Casting -  
Efficiency, Consistency, Energy-Saving under One Roof*



*A Brush-up on Anodizing Sealing Tech*



*PLM - introduction of our Smart-Management Butler*





## Preface

The Budding of Spring Blossom is yet Spotted,  
As we Observe the Law of Nature in Awe.  
A New Journey is Now Underway,  
For the Cycle of Life Starts a New Day.

Bid Farewell to a Fruitful 2016,  
Infused with Aspiration,  
We Step out to Embrace 2017,  
A New Year Replete of  
Challenges and Opportunities.



Lilia,  
Chairman  
Victor Aluminum

It is an extraordinary 2016 for Victor. Let's take a flashback on events of 2016, hold onto those cherish-able moments before turning the page of our 2017 journal with auspicious wishes.

### 1. Relocation to the new facility:

In August 2016, Victor moved to the current location which occupies an area of 100,000 sq.m. The new location is home to a Research Institute with advanced alloyed ALUM-MAG product finish treatment, Smart CNC Centers, Casting Shops, Stamping Shops, Multiple Top of the Line Anodizing and Powder Coat Lines, which is ready to service individualized customer requirement in product prototype, machining and surface treatment.

### 2. Introduction of New Equipment:

To accommodate various needs from the customers, Victor has introduced a series of advanced equipment including:

- 1) Aida 300T Servo Stamping Press features speed adjustability and high precision, best suited for precision mold formation through extensive stretch.
- 2) Lijin 500T casting machine, with fast projection speed and solid clamping force, used to produce larger molds up to 1250 sq.cm.
- 3) Pratic's CNC center to handle parts upto 6 meter.

### 3. Fully-automatic Anodizing and R&D Lines NOW In Commission:

- 1) The two fully-automatic production lines, holding 95 dipping tanks, are capable of concurrently handle 20 different colors and manage part size of up to 3.8m by 1.1m.
- 2) The R&D line is dedicated for development of various surface finishes, including hard anodizing, MOA, iridescent anodizing, mirror-effect buff anodizing, electrolyte, ED, acid etch, and exposure & development.

### 4. Brand new powder coat line NOW In commission:

- 1) This facility takes over an area of 1,500 sq.m and is capable of managing 600 sets of hanging racks to render products up to 0.3m by 1.2m.
- 2) The use of advanced static rotary cup technology supports higher coating efficiency better coating evenness, and less powder emission.
- 3) The use of water-miscible powder, the newer generation of eco-friendly paint, endorses our participation of green production for a salubrious environment.

## ❖❖❖ New Servo Stamping Press at Victor



Servo Stamping Press is currently the main trend in the stamping technology. Benefiting from the characterizes that the stamping power comes directly from the servo-engine which is programable, this press manages at ease themotion of its ram so that it meets the diversified and smart-applied stamping needs.

With continual expansion of production capacity and interminable pursuit of craftsmanship, we have recently introduced the AIDA new-generation 300T servo press. The new press is smart-operated and designed for all-in-one features, which greatly improves production efficiency and guarantees stamping precision.

### *Features of Servo Stamping Press at Victor*

- ▶ Replacing the energy-depriving parts like shafts and switching gears on traditional stamping machine with Servo-Motor to directly generate stamping force.
- ▶ By regulating its spinning speed, Servo-Motor is capable of devising ram speed in any position.
- ▶ Even for difficult parts, this press is capable of, based on the shape of the part, devising the best-suitable ram motion, which meets the stamping requirements of the formation of large and complicated parts as well of sheet/plates of high-tonsil strength.
- ▶ It accommodates stamping size for up to 1.2m by 2.6m.

## ❖❖❖ 500T Cold-Chamber Casting – Efficiency, Consistency, Energy-Saving under One Roof



The 500T cold-chamber diecasting equipment, our newly-joined member, is equipped with robo-picker, robo-mistsprayer, and robo-moltenfeeder, which leads to a fully-automatic omni-smart production management and lays the foundation for the establishment of Industry 4.0.

This equipment is featured for its advanced performance on mold ejection, mold clamping, and mold control, which makes it a perfect fit for production of the following products:

- ▶ Automotive and motorcycle parts
- ▶ Escalator steps and plates
- ▶ Industrial and Highway Lighting Shells
- ▶ Construction Parts
- ▶ Acoustic Devices
- ▶ Electronic parts.

### Features

- ▶ Diecast Projection Area: 400 – 1250 sq.cm
- ▶ Mold Ejection at 0.1-0.7m/s on low-gear, and on or over 8m/s for high-gear. Graduated ejection control; ejection speed, force and pressure-timing can all be automatically regulated, which improves quality consistency.
- ▶ Servo Mist-Spray allowssmart control over spot and flow dynamics as well as spray application on fixed-spot, fixed-timing, fixed-volume, multi-times, reciprocal applications, or on partial-area. This allows proper cooling and mold-ejection for various types of mold of complexity.



## ❖❖❖ A Brush-up on Anodizing Sealing Tech

During anodizing process, oxidized aluminum film is replete with pores that trap particles causing surface contamination. Sealing of the film helps reducing such problem, improving corrosion-resistance and electrical insulation. Among many types of sealing applications, high-temp sealing is a widely-used process.

High-Temp Sealing, is a process using a concentration of high-temp sealant at 90 degree Celsius or above to seal the oxidized aluminum film. It requires attention to the following parameters:

*1) the sealant is prescribed in deionized water to preclude sealing deficiency from excessive water-borne ions of calcium, magnesium and chlorine.*

*2) PH value is kept in the range of 5.5 – 6.5, and can be adjusted as necessary using ammonia or glacial acetic acid.*

*3) The nickel-ion level in the sealant is maintained between 1.5 – 2.5g/L: below the range, it affects sealing quality; while above the range, it causes sealant residue on product surface.*

*4) Sealing process is timed by film thickness and averages about 20 – 40 minutes for the best result.*

*5) Sealing temperature is maintained between 93 – 97 degree Celsius.*

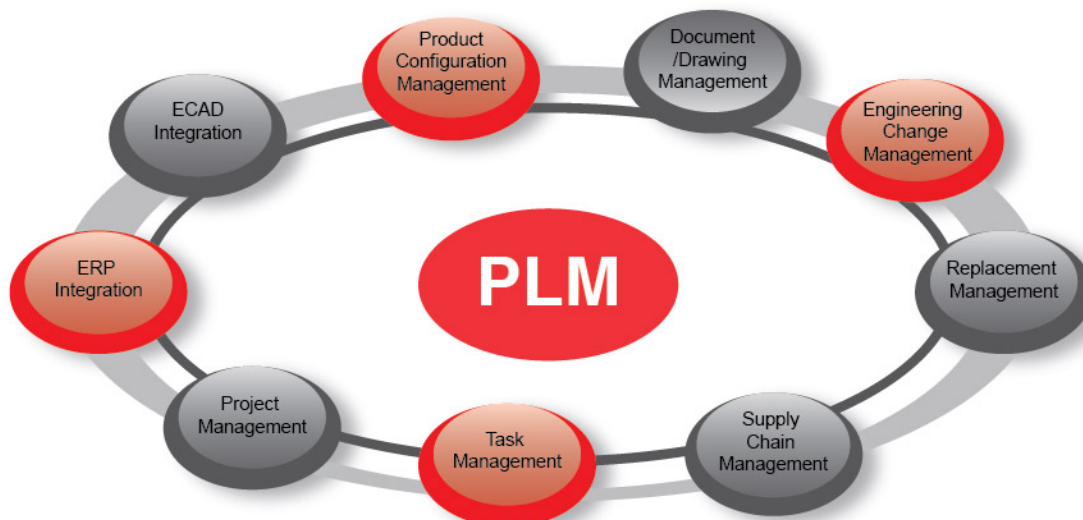
At Victor, product quality always has our undivided attention. The application of high-temperature sealing over stringent anodizing SOP at Victor commits our utmost sealing quality.



## ❖❖❖ **PLM** – introduction of our Smart-Management Butler

Before entering the Smart Manufacturing stage, the automation on software control management becomes more critical than that on production hardware. Victor has recently adopted and applied **PLM – Product Lifecycle Management** system that enables data and information management over product lifecycle from R&D, to production, application and beyond.

The goal of implementation of **PLM**, or **Product Lifecycle Management**, is to encourage departments within a company or divisions from among companies to coordinate effectively over target product so as to facilitate company optimization, keep product development in check, quickly respond to customer needs, and enhance market competitiveness of the product.



### *The main management modules on active Victor PLM system*

- ▶ Customer Requisition Management
- ▶ Quotation and Document/Print Filing Management
- ▶ R&D Project Management
- ▶ BOM, Design Modification, and Production Process Control
- ▶ Collaborative-operation with ERP and OA system
- ▶ E-distribution management on shop prints and SOPs.

**PLM** provides us a platform for uninterrupted information transmission and interchange and makes it possible to manage and share a full range of information over product lifecycle, which bolsters the formation of smart management in research and engineering at Victor.