



Seyei chief executive office Claire Kuo (centre) and team.

INNOVATION

Drives Stamping Systems

FORWARD

Metal stamping machine tools are seeing updates with new servo motor technology and intelligent machines.
By **Michael E Neumann**

The global automotive industry is in better shape than it was five years ago, especially in the US where profits and sales have recovered following the recent economic crisis, and in China where growth remains strong, according to McKinsey & Company's recent study on what is driving the global automotive industry to 2020 and beyond.

The management consultancy found four key challenges that OEMs need to address to get a piece of future profitability:

- **Complexity and cost pressure:** There will be more platform sharing and more modular systems. At the same time, regulatory pressures will tighten, and prices in established markets are likely to be flat.
- **Diverging markets:** OEMs need to adapt to changing regional and segment patterns of supply and demand with respect to their production and supply base footprints,

supply chains, and product portfolios; and the emerging Chinese aftersales market offers new growth opportunities.

- **Digital demands:** Consumers want more connectivity, are focused on active safety and ease of use, and are increasingly using digital sources in making their purchase decisions.
- **Shifting industry landscape:** Suppliers will add more value in alternative powertrain technologies and in innovative solutions for active safety.

A Piece Of The Pie

To capture future growth and find profit from these challenges—and to mitigate their risks—OEMs cannot simply turn to their traditional toolbox. They need to review and adjust their strategic priorities, deploy the appropriate investments and resources, and develop new skills to execute these strategic objectives.

Editorial

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Quick Look: Global Automotive Report 2016

A global automotive report released by Euler Hermes highlighted that the three key markets for sales are China, US, and Europe.

In China, sales grew by 15 percent (24 million units) in 2016, but a slowdown to around five percent is expected in 2017. A 1.5 percent decrease in Japan is caused by the continuously adverse effects of the value-added tax increase in April 2014.

US sales grew by 0.2 percent (17.9 million units) in 2016 but a contraction of one percent is expected in 2017. In Europe, sales expanded by seven percent (15 million units) in 2016, while “zero percent” growth is forecasted in 2017 due to the Brexit effect and the end of Spain’s incentive regime.

Brazil and Russia continue to suffer from the economic crisis. Markets have contracted by 21 percent and 11 percent respectively. A subtle recovery is anticipated in 2017.

Press equipment manufacturers like Seyi are following suit. The company delivered a 400-ton straight side servo press and an 800-ton straight-side eccentric gear servo press to automotive OEM Daimler Group in 2016, and the company will soon complete an 800-ton straight-side servo press for Tesla Motors in USA.

The company has focussed on three main themes, which were also on display at the recent Taipei International Machine Tool Show 2017.

Servo Technology

Along with creating less noise, servo motors also offer energy savings over hydraulics. However, the largest advantage is the ability to control slide position and velocity. Practical applications of this precise control includes what the company calls “vibration motion curve”, which is especially suitable for deep drawing and creating diverse metal parts. A “pendulum curve motion” can also reach speeds of 170 strokes per minute.

Press Line Management

The company has been developing a production process called “Intelligent Press Line Management Systems”, which can manage all necessary production items, including operator, machine, tooling, maintenance, process and more. The integration of hardware and software, big data, analysis on the cloud are also included to meet clients’ requirements.

工業4.0智慧型沖壓線系統作業流程與運作模式 Operation Model of Intelligent Press Line Management



The production process of Seyi's "Intelligent Press Line Management".

Automated solutions for metal stamping will have multiple robots to assist with production.

Automation Solutions

The company already has automated solutions for tandem lines led by 1,200 to 2,400 ton presses. Transfer systems, material input and conveyor equipment can also be provided. The company also recently partnered with industrial robotics supplier ABB to offer metal stamping automation systems, including one press with one robot, one press with multiple robots, and multiple presses with multiple robots.

Working In Tandem

The car industry faces challenging times, according to a report by Euler Hermes. The rise of the shared economy, new partnerships with disruptive technology companies, high volatility in some emerging countries, the race to launch autonomous vehicles, and diesel scandals rocking big players are happening all at the same time.

Yet, a global presence remains a must for car manufacturers to benefit from global growth. Car manufacturers and their suppliers will need to continue adapting their offerings to stay competitive.

“The automotive industry has always been one of the fastest growth engines for Seyi. We will continue to work with customers in this industry, and focus on tier one and two OEM customers,” said Seyi chairman and chief executive officer Claire Kuo. ⚙️

To capture future growth and find profit, OEMs cannot simply turn to their traditional toolbox anymore.