

# Application Success Stories

## Digital Operation Management For Challenging Coating On XXL Parts

**CIMC**  **中集通华**



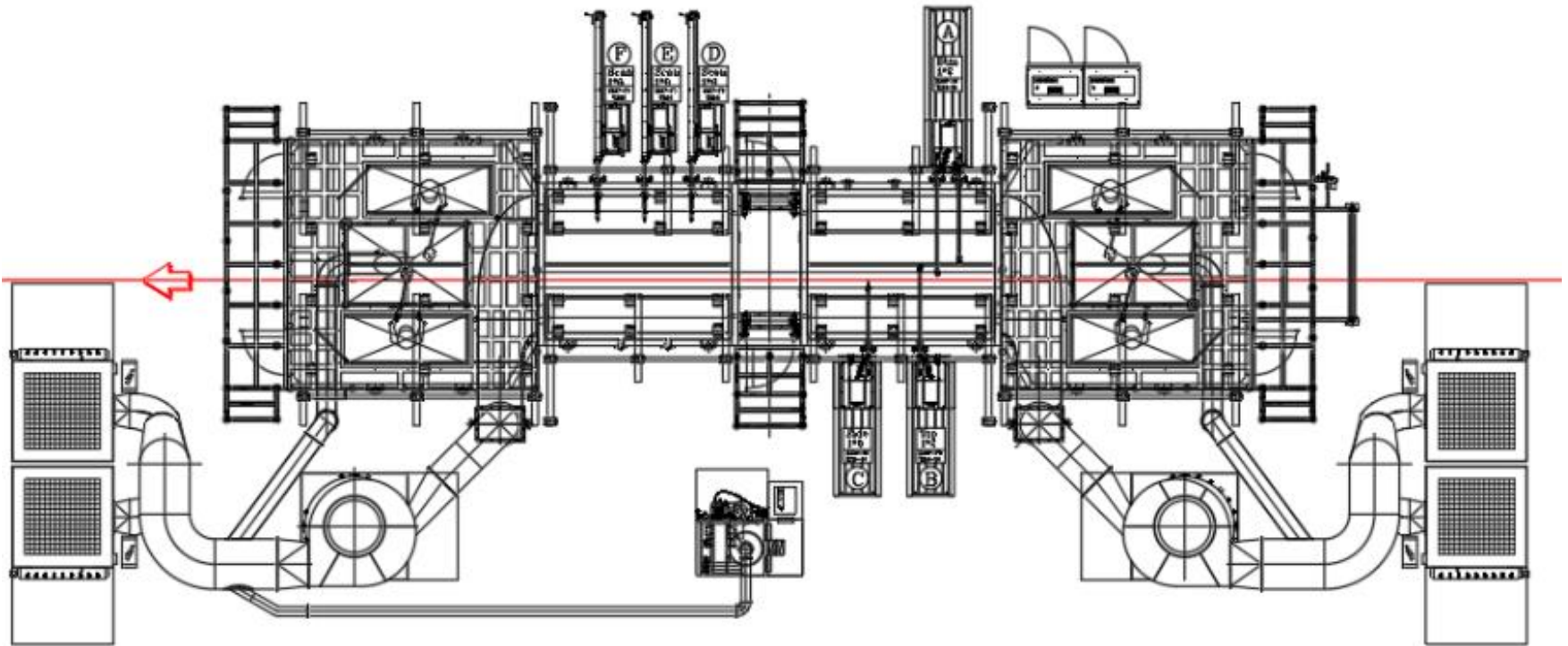
3D Contour  
Detection

XXL - Difficult Parts  
Coating

High Automation  
Level

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## Layout



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## Installation Key Data

### **Object sizes:**

Max : 17'000mm x 1'300mm x 2'700mm

**Conveyor Speed:** 2m/min

### **Scope of delivery:**

30 x OptiGun® GA03 Auto gun

4 x OptiFlex® 2W manual gun

6 x ZA07/ZA13 - 23/XT10-10/14  
reciprocator

2 x MagicCompact® BA02 Booth

2 x PLC MagicControl CM30 system

4 x Monocyclone after filter

1 x OptiCenter® OC02

3 x Dynamic Contour Laser Scanner





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## Company Profile

Yangzhou CIMC Tonghua Special Vehicles Co., Ltd. is an important subsidiary company of CIMC Vehicles (Group) Co., Ltd. in east China. In 2015, the company sold 16,549 vehicles with sales reaching 1.84 billion yuan. The company uses advanced technical equipment and complete detection systems for their production. It mainly produces 300 different kinds of tank cars, tank boxes, semi-trailer and other high technology and high value special vehicles. The company has an annual production capacity of 30,000 vehicles of all types, whereas the annual production capacity for tank car is 4000 cars a year.

## Company Expectation

The chassis of special cars has a complex shape of large size. From the environmental and cost perspective, the company decided to introduce two more cost-effective powder coating lines in the new plant to replace the wet painting process used in the past. The positive effects from the successful experience developed with CIMC in GZ, the outstanding Gema contour detection system performance, the constant hard work and support of the Gema engineers contribute to the ultimate cooperation and project success.

## Key to Gema Success

- Automated detection of complex part geometries in the front and rear of the object (even on thin struts and projections) can be achieved by the new Gema dynamic contour detections system with laser scanner.
- Two MagicCompact booths join together into a special XXL large size booth with four after filters, whose extended exhaust capacity reaches up to 4800m<sup>3</sup> (set in pairs at entrance and exit). The compact layout perfectly fits for huge parts that require high powder volumes. The design of the booth ensures a clean working environment.
- The powder coating line is integrated in a digital network throughout the whole plant zone to ensure data exchange with higher level server. This digital management mode also complies with the demands of Industry 4.0.