

# Shanghai Huizhong Automotive Manufacturing

## Case study: Metal Fabrication

### Application

Arc welding

### Products

Chassis and parts to major automakers



## Smart robots help propel growth

**With the support of ABB robots, Shanghai Huizhong Automotive Manufacturing Co. Ltd. has successfully won major projects, greatly reinforcing its competencies.**

> It is no exaggeration that most cars made in Shanghai use parts and modules from Shanghai Huizhong Automotive Manufacturing Co. Ltd.

“We are the biggest car module supplier in China, and provide chassis and parts to major automakers in the country,” says Wang Jianhang, an engineer with Huizhong who has participated in many major projects for the company. “In addition, we also produce cars, buses and heavy trucks.”

Established in 1991, Huizhong is a wholly owned subsidiary of the Shanghai Automobile Industry Corpora-

tion, the largest vehicle group in China. Employing more than 6,500 people around the world, Huizhong boasts 12 plants in the country and has set up offices in the United States, Germany and Australia.

Currently Huizhong’s customers in China are Volkswagen, Audi, Hyundai, Ford, Fiat, Honda and Toyota. With such momentum behind it, the company has breezed onto the international Automotive OEM scene, joining the global competition.

Although China’s producers may have certain advantages in terms of labor costs, Huizhong clearly

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knows that, as a company competing on the international stage, it must provide satisfactory products and services. “Price is a very important factor, but it is not the most fundamental one,” Wang explains. “How to enhance our capabilities in research and development is most important. To reinforce our competencies, we have chosen to partner with reputed suppliers, and this strategy is working very well.”

Huizhong started to use ABB welding robots in 2005, and now has more than 60 robots including IRB 2400I and IRB 1410 as well as positioners IRBP500R and IRBP 750R in service, making parts for Ford and General Motors.

“In fact, 2005 was a turning point for our company,” Wang adds. “The project to produce subframes for Ford was of great significance for us.”

Wang explains that it usually takes 10 to 12 months to develop a product such as a subframe. Wang and his team, however, were required to finish the job in five months.

**“Time was extremely tight,”** he recalls. “The person responsible for the technical part of the project at Ford felt that it was totally a ‘mission impossible.’”

When Huizhong was searching for suppliers for the project, it chose ABB for the welding work and received four sets (a total of seven) of robots.

“ABB lived up to our expectations,” Wang says. “They spared no effort in supporting us and tried their best to meet our standards on clamps. The robots are fantastic, but to make the welding work perfectly, we still needed high-quality clamps to help with accurate positioning. ABB solved the problem by cooperating with its local supplier.”

Wang and his colleagues amazed Ford by presenting their design within five months. “I went to ABB every day for a month to discuss the design,” Wang recalls with a smile.

### >FACTS

#### ABB Robots in Huizhong

- Huizhong has about 60 ABB welding robots working on the Ford and General Motors projects.
- The user-friendly robots won Huizhong’s approval, not least because their operation panel can display Chinese characters.
- On the Ford line, a total of seven robot stations can complete welding on 110 subframes per shift.



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Soon Ford expanded its production, and Huizhong also increased its number of ABB robots. Now in the noisy workshop 14 robots weld at seven workstations.

“Different workstations have different welding tasks, and now we can produce a total of 110 subframes per shift,” says Zhou Hui, supervisor for the Ford subframe line.

**Having worked for Huizhong** for 10 years, Zhou has operated a number of different welding robots. What impresses him most about the ABB robots is their user-friendliness. “We installed more robots last year,” he says, “and the updated operation panel is equipped with a touch screen that can display Chinese characters, which is really convenient for our workers. Although Ford’s production expansion does put pressure on us, we can handle it easily with the help of these robots.”

Thanks to ABB’s improvements to the fixture, the reliability of the parts has improved greatly. “It seems very easy, but ABB made a great effort on the improvement,” Wang says. “To ensure the quality of the fixture, ABB undertook the design work itself, a task that used to be performed by its supplier.”

**With the success** of the Ford project, Huizhong again allied with ABB, winning the H-Car project from General Motors. In this project, Huizhong produces the rear axle and subframe and has more than 40 ABB robots working on the project.

“I hope Huizhong will work even more closely with ABB to win even more support,” says Wang.

“It would be perfect if ABB could join us when a project is still in the preliminary design stage.”