

JDV steps up metal-seat technology development

Modern equipment, years of manufacturing experience, sophisticated technology, strong R&D...valve manufacturers have to be equipped with all these achievements in order to have stable markets in the industry. JDV Control Valves Co., Ltd, a Taiwan-based valve manufacturer is among those successful companies in the valve business. The 37-year-old company has been dedicated to its control valve and ball valve market and has been recognized by customers on a global basis. Valve World visited JDV's headquarter in Taoyuan County, Taiwan and had a conversation with JDV's CEO Mr Steven Fan, and International Business Manager Ms Sylvia Liu, to learn about the company's profile and success.

By Yuzhong Shen

"In 1975 JDV started as a small family business by the company's president Mr Shu-Tien Fan in Taipei County, mainly producing ball valve products for some trading companies in Taiwan," Ms Liu introduces us to the company's history. "In the 1990s we started to use JDV as a brand for both domestic and overseas markets. Later Mr Steven Fan took over the company management, and expansions have been made in both manufacturing capacity and product lines. The reason is that the management realized that the competition in the valve industry has been increasing in many aspects, and moving into those products designed for critical or demanding duty applications has become necessary. As a result, in addition to the

floating soft seated ball valve products, we have expanded our product lines to trunnion type ball valves, metal seated valves and have subsequently developed V segment control valves and so on. Metal seated ball valves have since become our main focus and most popular products." Ms Liu tells us that JDV's current product lines cover a wide range of ball valve and control valve products with a special focus on the metal seated valve. These products include V-Segment Control Valves, Flanged Type Ball Valves, 3/4-Way Ball Valves, Cryogenic Ball Valves, Steam Jacketed Ball Valves, Thread/Weld Type Ball Valves, and Butterfly Valves., amongst which most products can be made in carbon steel, stainless steel or other special alloys

depending on customers' needs. She explains: "Our technology and experience in the metal seated valve allows our product to be used in a variety of industries including oil refinery, chemical, petrochemical, steel refinery, pulp & paper, power plant, mining, water treatment, polysilicon plant and so on. When the application involves high temperature, high pressure, corrosive, or abrasive medium, our metal seated valve can be a perfect choice for those processes."

Being one of the earliest control valve manufacturers founded in Taiwan, JDV has established a stable market covering major areas in the world, including Taiwan, Mainland China, North America, Britain, Germany, Malaysia, Thailand, Indonesia, Australia, Japan, South Korea, Czech Republic, Russia and so on. Ms Liu continues: "In order to support our overseas business we have set up branch offices in the United States, Czech Republic, Japan and China, where local staff will take care of the sales and customer service in the respective markets. In addition to that we also have other distributors in more than 20 countries, and at the moment our metal seated valves are very popular in the US and Europe markets especially, where we have been providing products with both JDV brand as well as customers' OEM brands." However, JDV has a different



approach in the mainland China market, which is under the direct management of CEO Mr Steven Fan. Mr Fan explains to us: "China, as one of the biggest economies in the world, has always been an important market for most valve suppliers. We took the initiative among others in Taiwan to look at the market since 2002. We set up a company in Shanghai and later, in 2007, we established a plant there. At the moment JDV Control Valves (Shanghai) Co., Ltd., is currently managing the sales, technical service and after-sales service for the China market, while other branch offices have been set up in 7 major cities in China."



Mr Fan emphasizes that currently the company's plant in Shanghai is mostly for local service operation including repairing and accessory assembly. JDV's main production plants are still located in Taiwan, and all the raw materials, spare parts and castings are purchased locally. Mr Fan says: "We have two production plants in Taiwan both in the Taoyuan County; the first one covering 8000m² has been the major production line until now, where all the valve products have been made. The second one is the newly built headquarters and plant, where we are going to set up the new R&D center and our core technology and know-how about thermal spray process will be realized."

Technology

The technology and know-how of metal seated valve manufacturing has always been a proud achievement within JDV, and Mr Fan reveals that it's also one of the company's key elements that differentiate

it from other manufacturers. He explains: "As you can see from the new plant here, we want it to focus only on the spray process and other newly developed technologies. In terms of hardened face coating for the metal seated valves, most valve manufacturers need to contract out this treatment to achieve the process by another company. However here at JDV we have the equipment and knowledge to finish the coatings by HVOF (High Velocity Oxygen Fuel) Thermal Spray Process ourselves. The HVOF tungsten carbide coatings are recognized as an ideal technology to provide high temperature and abrasion resistance. However previously it was mainly used in America and European countries where the price and delivery time were not very competitive. We would like to hold this core technology by ourselves, so we have made great investments and R&D work to import these technologies to our own plant, and now we have already started the application which



will greatly help our production cost and the delivery time more competitive and flexible compared with other metal seated valve manufacturers. In addition to that, our traditional experience and technologies on the metal seated valves are also crucial to the company's development. We started to focus on the metal seated technologies almost 20 years ago, which means we look at not only the finished product itself but also the whole manufacturing technique and know-how behind the products. Many valve companies are able to produce metal seated valves but it does not necessarily mean that they have the complete knowledge about manufacturing this product. Most of them will probably go to sub-contractors to have the core components finished and do the remaining assembly or other steps. In



can adjust it for different people. Taking valve seats as an example, some valve manufacturers take the readymade valve seat with branded materials which works OK but the application will be limited and depends completely on the material supplier. We have the understanding of these materials, and, after a series of tests, we are able to provide different products according to different requirements. In conclusion, our technology and focus on the metal seated valve allows us to improve the quality and develop new products with great efficiency, yet we are flexible to meet customers' different requirements."

Quality control

Talking about quality control, Mr Fan emphasizes that product stability and safety has always been the company's major concern. He continues: "In terms of quality control, the international certificates like ISO, API 6D, API 607, API 6FA, and CE/PED etc are of course a must for most valve suppliers. In fact every manufacturer will try to have the best product but nobody can guarantee the actual performance to be 100% problem-free. We focus very much on the design and testing process before final production, to make sure that the products will give stable performance. We believe that any aggressive or rushed efforts before production regardless of quality cannot lead to a long term business, instead focusing on the stability and performance as well as the international standards will bring us a stable market."

Speaking about fugitive emission control, Mr Fan confirms to us that both customers and local governments have been requiring a certain performance in terms of fugitive emission. He says: "Our products are very often exported to Europe and US, where fugitive emission has always been a major topic among the end users. Nowadays we receive more and more requests from all these customers asking for TA LUFT and ISO 15848 certified products. In addition to this, the end users and governments in Taiwan have very strong concerns on environmental issues as well. As you can see just in front of our new plant here there's a company with a 30-year production history. But recently they



have decided to close it just because of environmental concerns. The government has set a lot of regulations for this industry so the cost of this plant regarding water treatment, waste pollution, and staff health etc becomes a heavy burden. For these reasons we are very much aware of the challenges from the end user side, and we have invested quite a lot on the technologies and equipment for helium testing, VOC testing and other fugitive emission testing methods, to make sure that our products will achieve a minimum fugitive emission performance. At the moment we are working on fugitive emission testing within high temperature environments for our metal seated valves.

Market focus

Asked what will be the strategy for JDV's future development, Mr Fan tells us that the focus on the metal seated valve will still be a long term strategy. Says Mr Fan: "speaking of the market we will further penetrate the Taiwan, Mainland China, and South East Asian markets with our own brands, and hopefully we can integrate more sales channels and branch offices into our network. In the overseas market we will keep expanding our network of agents or distributors in various countries, where customers may work with us either with our brands or in the form of OEM business. However, in terms of products we will very much focus on our existing



products. We are able to provide better products in some applications because we have our focus there, for example, the metal seated technology used in our ball valves and butterfly valves. I think it's very important for us to have clear directions in some markets where we can have a stable business and keep improving the quality. With our efforts in these directions we hope JDV Control Valves will eventually become a brand that is recognized world wide."

product lines. I have had discussions with some large valve companies who are also market leaders in the industry, and many of them have complimented us on our



Facts & Figures

Name:	JDV Control Valves Co., Ltd
Founded:	1975
Head Office & Plants:	HQ: Yangmei, Taoyuan, Taiwan Plant 1: Shinwu, Taoyuan, Taiwan Plant 2: Yangmei, Taoyuan, Taiwan
Key markets:	Oil & Gas, Petrochemical, Chemical, Pulp & Paper, Mining, Power Plant, Water Treatment, Polysilicon Plant
Main products:	Floating/Trunnion ball valves, V-segment valves, Butterfly valves in metal seated and soft seated
Employees:	200