

Yuangao Valve's quality leads to stable market

Shanghai Yuangao Valves Industry Co., LTD (FHV), a sophisticated and professional valve manufacturer, is gaining continuous success in both domestic and overseas markets. Now their own brand "FHV" has already captured a share of the market in the Middle East, South America and east European countries. Not only is this a sound brand in China, but the company has also been awarded the title of outstanding supplier by several national projects, and long term partner of some well known overseas valve brands. Valve World visited Yuangao Valve's Shanghai Plant located in Qin Pu District, Shanghai and talked to director MrZheng Shisan, to investigate the latest developments and future plans of this company.

By Yuzhong Shen

History of Development

Going back 20 years to 1990, when Yuangao Valves was in its infancy, the two founders, MrZheng Shilu and MrZheng Shisan had only 2000m² workshop and simple equipment to hand. Over several years, they changed their objective from quantity to quality and soon became a well recognized and accepted valve producer through the production of reliable quality items. Yuangao then began to expand its facility in Shanghai. In 2003, the company

moved its headquarters to Shanghai and restructured into the currently operating Shanghai Yuangao Valves Industry Co., Ltd. Meanwhile, Yuangao recruited many high level management staff who were well experienced in different fields, such as technology, production, quality, supply and finance. Further, Yuangao worked with a well known business consultancy company to improve management capabilities and optimize internal structure, with the aim of converting the company from a simple valve producer to a composite valve manufacturer involved in the whole industrial chain including R&D, design, manufacturing and service. Today, Yuangao is the leading

supplier for several national projects. Its export structure has changed from 100% OEM to just above 50% with its own brand "FHV".

In 2011, the valve industrial zone invested in by Yuangao in Zhejiang Province started operations, gradually setting up a casting plant, forged steel valve plant, plug valve plant and filter plant here. Thus was established Shanghai Yuangao Valves Industry (Group) Co., Ltd, an integrated large valve complex with its R&D, design, sales and production facilities split between two bases in Shanghai and Zhejiang Province. The total area is 78000 m², including the plant area of 70000 m².

Product and application

Nowadays, Yuangao's product range is wide and extensive. Besides the standard gate and check valves, manufactured in accordance with API, BHV, Russian and GB code, the company is specialized in producing various kinds of high pressure, large diameter valves. Take the gate valve as an example: Yuangao has the rich fabricating skills and experience in the production of 1500LB, 2500LB high pressure valve, whose quality is recognized by long term customers. The major raw material used varies from the

common WCB(A105), stainless steel series to high/low temperature resistant materials and CN7M(20# alloy), Monel and specific Titanium, etc. In addition, Yuangao has built up a great deal of castings inspection and manufacturing experience. Meanwhile, their management capability has developed over the years, and the company has gained CE Certification from Europe Union, API 600, API 6D, API Q1, API

ISO9001/2008, API ISO/TS 29001 certification, TS Grade A Production License for Pressurized Pipe and Special Equipment and API6FA fire Proved Certification. Said Mr Zheng Shisan, "We are proud to say that Yuangao now has much design and production experience in respect of large diameter valves or valves for high pressure, high temperature and pressure, special material and special application conditions. Today, therefore, Yuangao is known as a sophisticated and professional valve design and production complex."

Some years ago Yuangao ceased their role of following the standard market and moved forward to high class design and production. Their products are widely used in petrochemical, chemical, metallurgy and coal chemical applications, their brand has earned a high reputation in China and they also have many loyal business partners in the overseas market. MrZheng explained: "Our products are the first choice of many major domestic projects and are widely used in severe application large scale petrochemical and coal chemical projects, such as Shen Hua Ningxia Coal Chemical project and Yun Kuang Group. Because of their reliable quality, our products are highly prized by many customers." MrZheng continued: "Thanks to the quality, punctual delivery time and effective communication, Yuangao has been authorized as a major OEM valve manufacturer by some well known European brands. However, our



strategy in the domestic market is to make steady progress with our own brand. For Europe, and Americas we plan to gradually develop our OEM market share and try to establish our own brand. So far, the "FHV" brand accounts for 50% plus of our total export volume."

In pursuance of high quality

The Yuangao team feels very proud of the recognition shown by local and overseas markets. Such performance is achieved by constantly pursuing high quality under the direction of the company. MrZheng said: "Taking the quality management system as the key issue, Yuangao strictly complies with the QC system. Through better quality, we have enhanced our QC management system and built up a practical control system which covers whole process from primary processing through the intensive processing. Firstly, we optimize the supplier management system by evaluating the supplier in terms of delivery performance, QC awareness, service levels and a combined capability appraisal, so as to conduct a dynamic management assessment on the supply chain so putting in place an effective system which covers both the quality and delivery; secondly, we impose effective internal supervision on the whole production process from raw material through to dispatch. We have compiled a job responsibility manual and an operations manual for each job function, as well as putting in place reasonable processing standards and testing procedures. We also carry out overall skills and capability training and conduct training programs covering basic valve knowledge, material selection, heat treatment and operational skills. The





results are already evident in the form of a resilient and quality sensitive QC team. Not only do they conduct strict observation on daily routines but also supervise, develop and give guidance on practical work in the workshops, with the aim of securing the highest quality every day. In order to research and develop the air-separation valve, we purchased a fully automatic low temperature material testing facility and low temperature valve testing facility to ensure the quality of our air-separation valves."

Yuangao's QC System thoroughly covers the whole production procedure from raw material to packing, especially the QC on raw materials. Being the starting point of the whole production process, castings are critical to the quality of valves. Mr Zheng Shisan explained: "That's why we insist that the castings suppliers not only have domestic TS Certification but also qualified technology and skills, full testing facilities and a quality control

system in addition to overall capability. In order to improve the outer appearance and intrinsic quality, we are equipped with a shot blasting machine, sand spray and grinding machines, as well as a heat treatment electric furnace."

Yuangao is also rigorous on pressure testing. There are 11 valve performance testing beds of various kinds as well as helium leak detectors available. This has resulted in improved quality of Yuangao's valves and, in turn, has satisfied customers' needs. Yuangao's testing facilities are very advanced and include chemical analysis instruments, a mechanical performance universal testing center, hardness tester, magnetic particle inspection machine, thickness testing machine, handy spectrometer and ultra sonic detector. "We emphasize a rigorous check on raw materials by implementing a complete testing procedure from the very start of the production process. Yuangao's policy is to conduct pressure



tests to meet and the exceed industry standards and to achieve zero leakage," said Mr Zheng Shisan. Due to their exacting standards for product quality, Yuangao takes significant care at every stage in the service procedure and all production records and documentation are well maintained. Packing is also an important issue which can affect quality after a valve has been loaded for transportation since careful and effective packing can protect valve against damage during its journey. Yuangao always treats packing with the care it deserves. "Often the importance of packing is overlooked because it is thought that valves are made of steel and are not easily damaged," Mr Zheng Shisan told us. "In fact, valves are often subjected to a long period of storage and/or transportation under severe conditions. Careful and effective packing can significantly help to maintain the quality during this time." He added: "As for the



quality of our service, our focus is to maintain our product quality and delivery time. Yuangao carries out this policy in as efficient a way as possible from a time and financial resources point of view." MrZheng told us: "Notwithstanding the advanced equipment, we think management is also a key factor. Yuangao has determined to be a systematic, internationalized and highly standardized company. We have recruited many high level management staff well experienced in different fields, such as technology, production, quality, supply and finance in order to achieve this. Together with our improved management capability,

the company becomes more attractive to our employees and therefore the working efficiency is raised."

Development plan

When asked about Yuangao's development plan, MrZheng said with confidence: "Our turnover reached 0.25 billion RMB in 2010. Sale are divided equally between the domestic and overseas markets. Our objective is to achieve 0.6 billion RMB in three years. In the past decade, we have converted from a valve producer to a composite valve manufacturer involved in the whole industrial chain. Over the next three years,

we will reinforce our position in the domestic market as a reputable valve manufacturing and design company. In the international market, we will continue to promote our high-end large size and special material valve as our specialty. Our brand has obtained a certain recognition in Middle East, South America and East Europe countries. This has highly motivated us towards building FHV into an international brand in the next decade. In other words, to further promote the sales volume of "FHV" product and popularity in the global market." To achieve this Yuangao is making a series of significant investments and

carrying out necessary works. Besides the establishment of Zhejiang Valve Industrial Zone invested in by Yuangao, it's also continuously improving equipment and facilities in this zone. With the aim of independently developing a higher class valve series, such as valves for severe applications such as coal chemical industries, Yuangao built up a R&D team of 20 people. In the second half of 2011, the company will begin the R&D building project at the Shanghai Plant: the new product testing workshop and self-owned foundry. Along with that, the RT photography chamber (X-ray, γ-ray detecting) will be put into operation to provide better conditions for research on high temperature, high pressure and special application/material valves. This will be of great help to the research works into extending the life cycle of coal chemical valves. "Its worth mentioning," added MrZheng, "that besides the development of hardware, we are also active in optimizing our management system, such as renewing ERP system and changing to a precise production pattern on the basis of a software controlling system. We are also enhancing our training program to improve employees' overall capability. We invest not only in techniques and equipment but also the working conditions and living environment of our staff. We are improving our HSE policies. The building you see opposite is well equipped, having been specifically built for our staff. I believe, through the above mentioned investments which cover both technical and human oriented management aspects, plus the diligence of "Yuangao people", FHV valve products will surely gain more appreciation from an ever increasing domestic and international market."

