

ROBVALVE prides itself on its triple-offset valves and the technology behind this concept. The company states that generations of its triple-offset valves are still serving well in various applications. Currently, ROBVALVE's key product is the latest and the most advanced triple-offset valve in its portfolio. Valve World interviewed Mr. Fan, General Manager of its Chinese factory about the engineering behind triple-offset valves, the company's latest triple-offset products and ROBVALVE's confidence in developing business opportunities.

By Laura Wang



Mr. Fan: "From both the technical and quality perspective, our products are top-tier in the world. In terms of resistance coefficient, interchangeability of parts, valve tightness, and torque, etc, our products outperform many

technical parameters, including Kv, Cv, flow other leading brands

## ROBVALVE: powering a remarkable brand with triple-offset design

It was in 2020 when Valve World Asia first interviewed General Manager Mr. Fan Quanjun. At that time, we asked him if the localization initiative in China was an opportunity or a challenge for ROBVALVE who built its factory in Tianjin, China. According to Mr. Fan, "it is most certainly an opportunity!" He had every reason to be optimistic as the triple offset series has proved itself in many

applications across the globe. "With our advantage in the technology behind triple-offset valve development, we were quickly recognized in all international markets so our valves were and are widely used in various industries including power, oil, chemical, LNG, etc.", Mr. Fan said. "More than that, our company has never been restrained by its scale. Therefore, it can provide customized service according to users' specific

needs and process conditions. Keeping pace with times and market developments is another advantage. New process media and changing process conditions are steering our product development so that we can proactively respond to end users' requirements. With the establishment of ROBVALVE Chinese factory, it's reasonable to expect further improvement on efficiency and cost control, and better triple-offset products as well."

### Flashback

Early in 2021, the Valve World team went to Tianjin and visited ROBVALVE for the second time. Mr. Fan Quanjun was more than happy

to share his knowledge about how the China subsidiary managed to upgrade and develop the China market, and how it 'redefined triple offset product user experience by optimizing brand positioning and marketing strategy in the global market.' But first, a short flashback. In 2015, ROBVALVE China was established in Tianjin, which is one of the four municipalities of China. When Mr. Fan became the general manager, after having worked since 1985 in the (Chinese) valve industry, he clearly noticed that the company was ideally placed to capitalize on its specific positioning and unique advantage in a very competitive market. Therefore, core

### About ROBVALVE

ROBVALVE was established in Lyon in 1979, the industrial and scientific center of France. Right from its 'birth', the company focused on triple-offset valves. The company states that in the past four decades, it has continuously improved its product design. Durability and reliability are key characteristics of its products, ROBVALVE claims. "Generations of ROBVALVE triple-offset valves are still serving well in various applications all around the world. These many years of application in oil refineries, power plants, chemical facilities, the LNG industries and many others have yielded invaluable customer feedback and rich experience to guide ongoing developments. At present, ROBVALVE's key product is the latest and the most advanced generation of its triple-offset product. As verified by third party witnesses, the new product successfully passed various tests, such as the regulating characteristic, low fugitive emissions, vacuum degree, fire safety and cryogenic testing, etc. These tests were conducted by world-leading test institutions such as CETIM and SCP, with the fire safe test being performed on the test bed approved by Total."

technology development and product quality are very important to him. Thanks to the common understanding of business operation ideas, Mr. Fan started to do business and exchange technological knowledge with ROBVALVE France, which ultimately lead to the establishment of ROBVALVE China, six years ago.

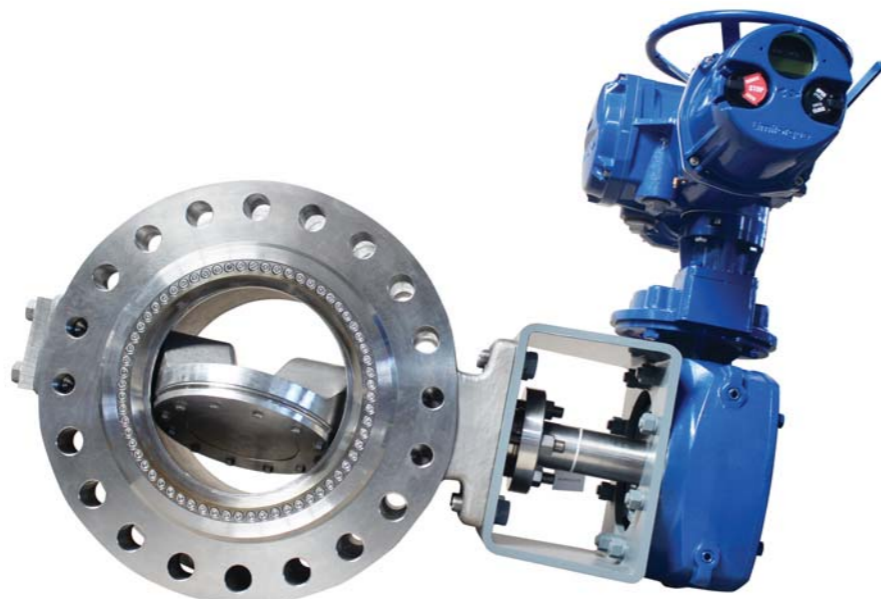
### Higher pressures, temperatures

The triple-offset market ROBVALVE focuses on is without doubt mature. These valves are available practically everywhere in the world. "But what's the exact meaning of triple offset and what are the subtle yet important differences between various designs?" Mr. Fan states. "The answers are not necessarily that clear. Perhaps that is why some clients are concerned about selecting and trusting triple-offset valves; this partly limits the full potential of this type of product, especially in the realm of higher pressures, ultra-high temperatures and cryogenic conditions."

Currently, ROBVALVE has two triple-offset valves in its portfolio that are geared towards higher and lower temperatures. The BUV32 is designed to handle temperatures from minus 29 degrees Celsius to 750 degrees Celsius. The BUV33 is designed for cryogenic applications, ranging from minus 196 degrees Celsius to 250 degrees Celsius.

### Production cycle

Regardless of high-pressures, high-temperature and cryogenic conditions, ROBVALVE has the ability to manufacture in large quantities while maintaining product quality. "Our core technology is not only represented in our R&D process but also in the entire production cycle, from fabrication, manufacturing, QC, assembling, testing, packaging, all the way down to special process control," Mr. Fan says. "We have digitalized these processes to a large extent. Take production inspection for example. Many types of special sealing curve tests related to triple-offset valves are always tricky challenges. Even 3D-coordinate measurement is not an easy task. Regarding this problem, we choose to tackle it during the process of manufacturing by entering the 3D-coordinate parameters into the equipment. This results in the is highly accurate dimensions and qualified tightness of key sealing elements. In other words, we can accomplish size and quality control



Exclusively patented by ROBVALVE, the 'Knife Seal Solid Ring' is perfect for higher temperatures, cryogenic applications, high-pressure and high viscosity mediums, such as hot-melt adhesive and fused salt.

during the manufacturing process. We will continue to invest in our R&D and production capacity (see box Retrofitting project).

### Passing ability

The emphasis on product design and manufacturing excellence has paid off, Mr. Fan states. "Our valve presents better passing ability than other brands of same size and pressure class, namely higher

flow rates and lower flow resistance coefficients, which helps our customers to achieve maximum efficiency and benefit. There are other advantages that I'd like to mention, such as a bi-directional constant pressure and zero leakage. Also, an optimized disc-shaft and flow path design leading to better passing ability (Kv, Cv) and less pressure drop. Furthermore, the sealing system features stable face-face



### Retrofitting project

Early 2021, ROBVALVE China launched a large-scale retrofitting project for its plant and offices. The project is expected to be completed in September 2021. The retrofitting operation is based on ROBVALVE's global strategy and positioning with the aim of building ROBVALVE Chinese factory into a manufacturing base serving the world market.

Mr. Fan adds: "This retrofitting project involves redesigning and upgrading the existing exhibition area, manufacturing shop and office area. And on top of that, we'll add a leisure area, a guest lounge, a training area, etc. The design that was presented by our headquarters in French is well adopted into the overall style here. The color tone is mainly 'ROBVALVE-green'. It reminds us of the green and environmentally friendly development strategy. The aim is to realize a harmonized accomplishment of brand development and ecoprotection at both the foundational and extensional level."

The most impressive part of the retrofit is the intelligent and interactive manufacturing area. Three large scale LED screens are installed in the center of the work shop. Each step, from manufacturing to storage, logistics, QC, all the way down to production scheduling, is exhibited on these screens. The company has also introduced a 5G-cloud which is currently the most suitable for manufacturing industry. It combines ERP, CAM, PDM and MES in one shell and acts as an intelligent flexible manufacturing platform. Detailed information of each step in the whole chain is available online in a secure environment. An in-house independent computer room and data center ensures the effective adoption and application of intelligent manufacture management.

contact. This prevents interference by the open-disconnect character and secures the life span. Next the torque sealing enables evenly distributed stress on the sealing face at the seal position and improving the reliability of sealing system. Also, we have used an independent and replaceable seat/seal ring system which can be replaced on-site at relatively lower cost. Finally, all valve components are interchangeable and replaceable."

Mr. Fan continues: "Our triple offset valve products work well in the most critical applications in power plants, such as quick shut-off, emergency pressure relief, regulation, etc. They are also suited to mixed media in the chemical industry, even for the particulate condition. With the advantages in torque, life span, manufacturing costs and convenient installation, our TOV's can replace ball, gate and globe valves in many different applications including LNG. That means a huge potential in market development."

### Core value

After highlighting the retrofitting plan, Mr. Fan says that "this retrofitting project is not the core part of ROBVALVE China's operation. Our focus is more about integration. We decided to integrate the technical ideas with the complete supply



ROBVALVE's products are widely used in power generation, heating, renewable energy and heat generation (biomass boilers etc.). A good example is the Waste Incineration Power Generation Project by the French energy company Valor Bearn.



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chain and tremendous market potential. So the advantages of each party can be complementary to those of the other. Our core value remains controlling and verifying the manufacturing process. This is where our value lies for our customers." It's worth mentioning that ROBVALVE China has managed to upgrade its production facility in general during the retrofitting project. "We installed a custom-made, high class five-axis CNC for specific purposes. It can carry out all the processing steps with simply one time clamping and can handle the maximum size of DN6000 (240"). This means we can serve wider range of applications. It assures better product and service to our customer while powers our development and market positioning," notes Mr. Fan.

### Upgrade

Speaking about market positioning, the company is poised to upgrade its brand image. "The establishment of ROBVALVE China is definitely a powerful booster for the ROBVALVE globalization strategy," Mr. Fan says. "The basis remains our advanced technology coupled with operational excellence. Our R&D capability rests with our technical team in France which features over forty years of experience. Manufacturing is both in France and China. Market development is spread throughout all our subsidiaries (France, China, Singapore, Dubai and America). This allows localized service to boost brand marketing. With the ultimate goal of forging a remarkable brand, ROBVALVE has determined to leverage the advantage of each major

market and effectively provide quality products for suitable applications. As for ROBVALVE China in particular, we are not a large company yet. But depending the professionalism and innovation, we have a spectacular future. The sophisticated products, flexible service and high-end control system, combine to enable ROBVALVE China to manage the daily operation according to ever changing market needs and target cost. In the future, we will adopt more intelligent control measures and production patterns to give us faster response and greater capability to react to the latest end-user requirements."

### About ROBVALVE Chinese factory

#### Key principles:

- Advanced core technology
- Prioritized product quality
- Top technical support and customer service

#### Key geographical markets

- Europe
- North America
- China
- Asia-Pacific

#### Triple offset valve offerings

- From 3" to 240" (DN 80 to DN6000)
- Class 150 to 1500
- Series production and customer specials