

# Antiwear Valve: True Upgrad



and reliable suppliers. Our goal is to utilize “intelligent manufacturing” and produce quality products, so that our customers can relax and enjoy life!”

## How to Realize Zero Distance Between End-users and Antiwear?

### It’s Intelligent Management.

In the era of Industry 4.0, the intelligent manufacturing concept is not that distinctive. However, after deliberating the market demand and industrial characteristics, Antiwear has gained a unique understanding on the “intelligent manufacturing” concept, and extended it to “intelligent management”. Besides upgrading the equipment for automation, the company also invested a lot to build up an “intelligent connected factory”. Its value orientation is piloted by customer demand and combines systematization, standardization, digitalization, intelligence and lean & flexible manufacturing to effectively solve customer problems with prompt response and reliable quality control. Mr. Deng said: “The Chinese valve industry emerged rather later than others. To achieve “corner overtaking”, we have to reform towards intelligent manufacturing and break through the traditional mode of production and delivery. Traditional manufacturing is encumbered by a long production cycle and difficulty in tracing quality. The only way to improve the production capability of the whole valve industry to a higher level is to leverage the power of intelligence, information technology and digitization.”

Focusing on upgrading towards intelligent manufacturing, Antiwear is forging an intelligent production line featuring super-discretization. Meanwhile, it is also building up a connected factory which combines big data and cloud computing, digital delivery management system, lean manufacturing, global quick response system and supply chain integration, etc. The objective is to realize the “zero distance” between the customer and Antiwear; redefine the production cycle and quality management; establish a C2M intelligent business platform on the basis of super-discretization.

With the overall application of intelligent management, Antiwear accomplished the innovation and upgrading of “valve solution”. After more than 10

*Compared to European and American countries, the Chinese valve industry emerged later but with remarkable momentum of development. For many years, a lot of Chinese valve companies have been endeavoring to take a share of the international valve market. In order to achieve this objective, these valve companies have to change the inflexible impression of the international market by proving their strength and capabilities. This could be the most critical challenge they have ever encountered, as they have to achieve many fundamental goals including changing “Made in China” to “Intelligent Manufacturing in China”; replacing the demographic dividend with a technology dividend; replacing the price advantage with a product advantage and replacing OEM production with brand strategy.*

*In order to address these challenges, Antiwear Valve takes a unique approach – to build up a sound reputation and link up with the international market by steadily practicing under the principles of “wise manufacturing”, “R&D takes the lead” and “small factories”. Recently, Valve World Americas spoke with Antiwear to discuss how they boosted R&D capabilities and core competition by leveraging intelligent controlling and monitoring on production and quality, and how they put down the traditional operation model and carried out integral upgrading by forging a global scale “ants alliance” on the basis of small factory.*

By Laura Wang

## What Makes Antiwear?

### It is Reliable.

Established in December 2008, Suzhou Antiwear Valve Co., Ltd. is a high-tech enterprise powered by innovation and cutting-edge technology. Its business offering broadly covers product and equipment R&D, production & manufacturing, sales and service. After ten years of development, Antiwear has become a leading brand which covers a complete range of industrial valve design and manufacturing. It provides not only quality and wear resistant valve products but also solutions for

the whole flow control industry. Ever since its establishment, Antiwear has remained committed to its cultural DNA of “It’s Reliable”. It stands for reliability in product, prompt service and reliable people, aimed towards creating more value for customers and satisfying the mission to “Help you enjoy the good life!” by solving their practical issues.

Antiwear can provide complete valve and system solutions for both basic and severe service applications. Major products include: butterfly, gate, globe, check, ball and specialty valves. Extensively used in various industries such as coal, chemical and petrochemical, power generation, refining, water service, architecture, paper, metallurgy and the fine chemical industries. Regarding severe service, Antiwear developed and produces double disc valves, oxygen valves, S Zorb valves, PDS high frequency valves, double wedge high temperature valves, triple offset butterfly valves, among others, with wide record of success. Based on proven performance, the quality of Antiwear products has been recognized as being better than imported world class brands. For example: after 5 years of operation, the HT HP oxygen valves are still performing well; the PDS high frequency valves have made a breakthrough of 4,000,000 on/off cycle life, and are still reaching higher and higher record. Antiwear always uses real world record

and data as the only proof and criteria for quality inspection!

For years Antiwear has tackled various problems regarding system operation and secured long term smooth operation by providing customers with quality and reliable products. Meanwhile, this company is active in in-depth collaboration with various industries, such as water treatment and paper industry, etc. Mr. Deng Changsong, Deputy GM of Antiwear Group, explained: “We recognize that these industries are not lacking in options for products and suppliers. What they need is quality products



# ing Features Break Tradition



years of development, Antiwear is now performing intensive research and exploration in the fields of silicon chemical, coal chemical, petrochemical, wet-process metallurgy, etc. Many remarkable solutions have been created on the basis of extensive practice. Today, Antiwear provides not only quality products but also flow control solutions; the quality of bulk product – rather than any single specific product - is assured in terms of performance, stability and reliability. It is also worth mention that Antiwear has created the bold idea of “one code solution” and brought it into reality: just simply scan a bar code and the user can solve any valve problems.

## Why is it Antiwear?

### It is Never Falling Behind in R&D.

“Work steadfastly on technology to study and enhance R&D capability” – is the unchangeable Antiwear creed. Mr. Deng said: “Why is the Chinese valve industry lagging behind those of advanced European and American countries? Because we lack core technology. R&D is difficult and trying work. It is most likely to fail many times at a significant costs. But that is the basic way for a company to become competitive. One will get stuck in the price war if the only care is about immediate interest and feel satisfied with OEM business. One will never attain any core competition if they lack brand awareness and a sustainable development strategy.”

Regardless of how the market changes, Antiwear always makes R&D the first priority. Since its establishment, the

company has been committed to new product development and applications. For this purpose, it invests over 10% of annual turnover into R&D every year. As a result, the sophisticated and capable R&D team has created a world leading platform for intelligent R&D work and testing. In order to satisfy the needs of general condition and severe service customers, they also developed diversified products for both general and specific applications.

The Antiwear R&D team consists of professional engineers, technical salespeople and certified service technicians. Mr. Yan Qibin, Head of the R&D center, is a certified senior engineer with the honorable title of “Talent invited to Wujiang County under flexible policy”; graduated from chemical equipment and mechanical department. As a matter of fact, the whole Antiwear team is devoted to continuous development and innovation in order to enhance productivity and technical capabilities. The complete R&D process is also under stringent control – it is required to verify the rationality of the product design before bulk production by means of 3D simulation and FEA analysis, in order to ensure the reliability and stability of the final product.

In recent years, Antiwear invested in a fully digital R&D test bench which enables real time recording and remote transmission of all test data and both low and high temperature test benches have been put into use.



## Who is Antiwear Working With?

### It is an Ant.

Antiwear has set up an integrated strategy regarding the global market – the ant alliance of small factory. For Antiwear, simple expansion is not necessarily the correct way for development. Large scale factories mean large floor space, high cost, significant investment and a low rate of return. Instead, Antiwear believes that the future will be the stage of small factories. Mr. Deng explained: “In a global scale, we will rapidly duplicate small factories which leverage the power of standardization, digitization, intelligence and information technology. This mode of development involves lower capital investment, less human resources and higher return rate. We believe this is really the future of factories in the discrete manufacturing industry. In the next stage, Antiwear is going to commence rapid duplication of small factories. It is foreseeable that in the near future, Antiwear small factories will be seen all over the globe. Accordingly, we would like to invite more provident fellow players to join our small factory program.”

In such an intensively competitive market, it is essential to keep up with the times and remain innovative. Antiwear chose to discard the pattern of large scale factories and act as the spokesman of “Ant factory”. This reflects that the company really values the entrepreneurship which is a combination of “integrity, consistency, competence, attentiveness, teamwork and wisdom”. Ants symbolize the power of the collective effort. An ant is always hard working. They are even stronger than an elephant when they are grouped up as a team. One single small factory might not be worth mentioning, but they will surely become a significant power once they are interconnected and networked.

The corporate culture of Antiwear: transparent, reliable, motivated, innovative. Antiwear is an “open” company. It values sharing of resources, achievements and benefits. On the foundation of its aspiration, Antiwear created a sound full range ecosystem for business. Besides, it is also looking for partners in the global market to work together towards the same objective.

Whether in China or in the global market, Antiwear’s mission remains unchanged: to be a professional, vigorous and socially responsible international brand. Mr. Song concluded: “As said before, we have three major goals to work on within the coming years: keep a rapid pace of product development to satisfy changing demands of the market; achieve the transformation and upgrading towards intelligent manufacturing, so as to realize the full range coverage of software utilization and establish the connected factory and C2M platform; rapidly duplicate small factories which empower us to provide quality products, instant response and timely service!”

The views and opinions expressed in this article are those of the profiled company and do not reflect the position of Valve World Americas.

## ■ CASE STUDY #1

Lock hopper rotating twin discs valve



**User Name:** Yunnan Dawei Ammonia Co., Ltd

**Application:** Shell-SCGP Gasification  
**Size:** DN300

**Pressure Rating:** CLASS 600lb

**Medium:** Coal Powder, Nitrogen, Carbon oxide

**Operating Temperature:** 80~120°C

**Raw Material:** WCB

**Cycle Frequency:** 2~3cycles/Hour

**On-line Life:** 4 years without any maintenance

**On-line date:** 2009-09-09

**Off-line date:** 2013-07-16

## ■ CASE STUDY #2

HP & HT oxygen service metal seated ball valve



**User Name:** Enn Group

**Application:** GE-Texco Gasification  
**Size:** DN200

**Pressure Rating:** CLASS 1500lb

**Medium:** High purity oxygen

**Operating Temperature:** 250°C

**Raw Material:** INCONEL625

**Pressure Differential:** 12MPag

**Cycle time:** <2s

**On-line date:** 2013-07-28, still online in running

## ■ CASE STUDY #3

High Frequency PDS ball valve



**User Name:** Zhejiang Satellite Energy Co., Ltd

**Application:** Innovene PP process  
**Size:** DN50

**Pressure rating:** CLASS300lb

**Operating Temperature:** 150°C

**Medium:** Polypropylene powder

**Raw Material:** F316SS

**Cycle Frequency:** 240 cycles/Hour

**On-line:** 2016-5-10, still online in running