

## The development of mechanical flour milling in China



Professor Wenbin Wu has worked in research and the scientific industry for more than three decades, specifically in the field of flour-milling equipment. Most recently he is the lead of the item group “The status and development of flour-milling equipment in China.”

He describes his contributions to the grain and oil industry as “designing and manufacturing milling equipment, products such as plansifters, seperators, Roller mills and Roll, purifiers.”

During his long and full career Professor Wu has set many national standards for milling equipment.

My story starts in fact as early at the fourth century. China began to use hydraulic mechanical drive, stone-mill grinding flour, ensuring that after thousands of years worth of history, the Chinese people have accumulated rich experience in the field of flour processing.

In my opinion, the development of the flour-milling machine will further enhance quality consciousness, improve equipment reliability, as well as the stability and the gradual implementation of the intelligence found in the machine. It is important that as an industry we advocate equipment innovation being combined with mill technology innovation, this in turn with strengthen basic theory research. Alongside the intellectual development, we must also strengthen the physicality of the equipment, this can be done by; updating old manufacturing equipment, improving equipment processing precision (and the equipment level).

By doing these things we will improve the sanitation and the safety of the equipment, we will also save energy – thus reducing costs. Essentially, if we pay attention to the technical training, we will undoubtedly strengthen the build of the professional teams.

It was in the 1930s that Shanghai, Beijing and other areas of flour enterprises began to buy American flour equipment. It was from here that flour processing was preliminarily realised as the step forward towards industrialisation. By the 1960s, China had formed a flour machinery process on an industrial scale. This met the national for flour production equipment.

Modern flour machinery industrial development began in the 1970s, through this decade the flour equipment type selection was made, we finalised the design and began the standardisation work.

At the same time, the imports of the processing equipment was more than 200 sets for the flour, this work including the machinery design and increasing the manufacturing level on a global stage.

In retrospect, Chinese milling equipment has jumped from small to big, weak to strong, an import to export process, all showing how our flour machinery is a prime example of our prosperity development we show the world today.

Flour processing and machinery production really came forward leaps and bounds after a national science and technology research boom in the 1980s. From then the milling machine, in its product structure, technology level and manufacturing quality has been greatly improved. The products can now fully meet the needs of the domestic flour processing enterprises in all capacities, they have become close to the quality of the international advanced levels, with a large number of our machines being exported to Southeast Asia, Africa, Eastern Europe, amongst many other countries.

Going forward from this of course, some companies in the industry have the potential to become the most well known companies supplying milling machines in the world.

Although our domestic flour machinery and overall technical level of manufacturing with the complete sets of equipment have certain advancements, or even part of the equipment has reached an internationally advanced level, they still have a certain gap to close with the other international first-class milling machinery products. Our key devices cannot compete with the international first class brands such as; Bühler, Ocrim, Golfetto Sangati, Alapala and Henry Simon etc. The main problem is the low level of the original design, the process and principle innovation is not enough, the development and the use of new materials is less, the consistency of parts processing and the information management of the enterprise is also not high, and the manufacturing personnel need to further improve their technical levels.

Today, flour machinery industry development in China has formed an industrial system and has considerable strength; it constantly improves product quality, and completes many varieties of basic tasks, showing it already has a strong competitive advantage. Following the several aspects listed to work hard is what will take the development of flour milling machinery in China to become a truly unstoppable market leader in the industry.

*Professor Winbin Wu*