



A BOTTLE FOR ALL SEASONS



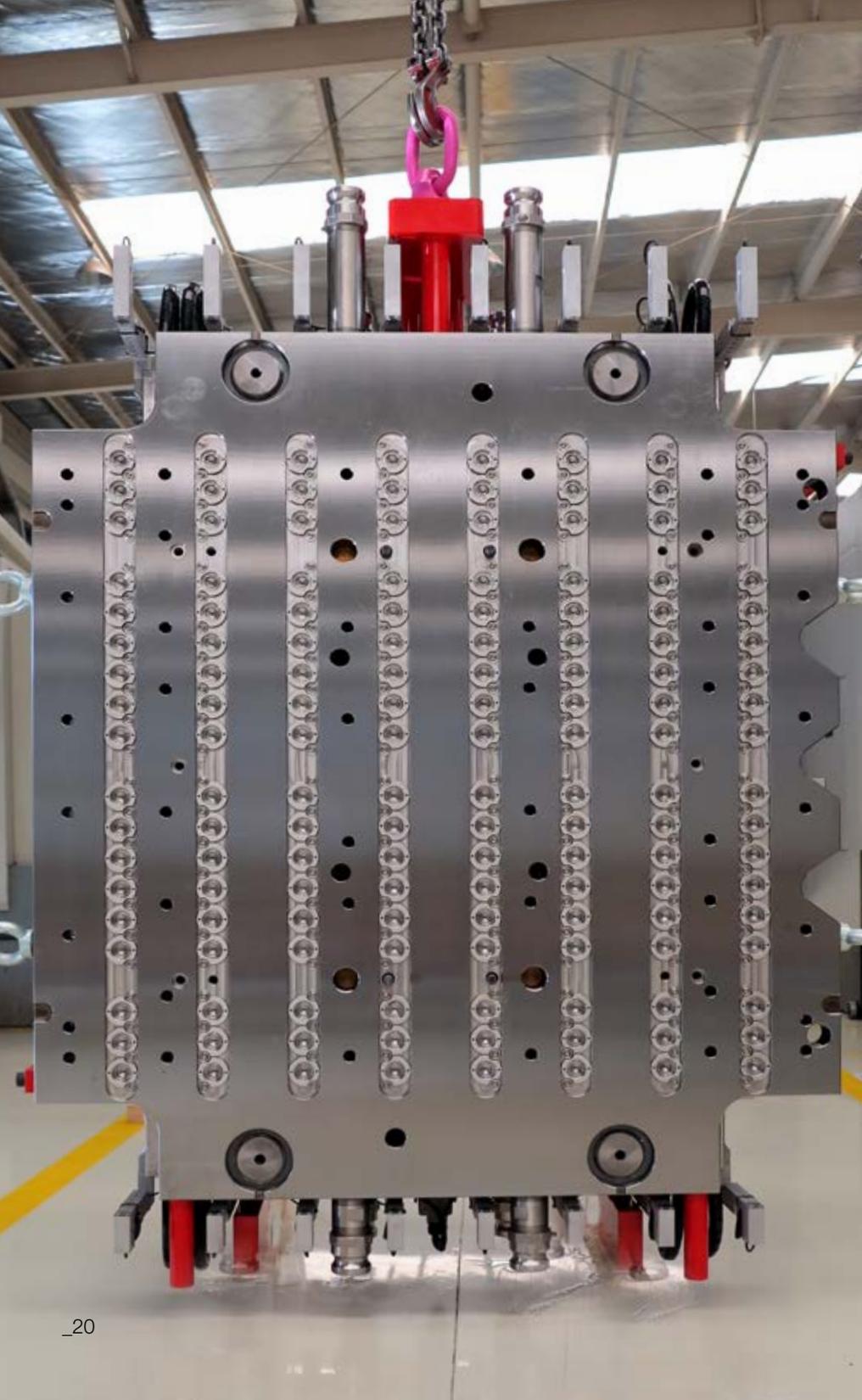
Major Chinese beverage company Nongfu Spring is making a name for itself in PET bottles with exquisite designs.

In a previous edition of SIPA MAGAZINE, we discussed how SIPA helped the company develop bottles shaped like whisks, for packaging a new range of teas. Today, we are talking about small - but perfectly formed - mineral water bottles.

What makes these bottles really stand out is the most beautiful labels. There are four different ones, each representing a season of the year. But to maximize the impact of the labels, which are nothing less than miniature works of art, Nongfu Spring wanted to set them on the purest canvas - or rather a flawless crystal-clear PET



From left: Mr. William Pasquali, General Manager SIPA Machinery Hangzhou, Mr. Zhong Shanshan, Nongfu Spring owner, Michael Sun Weibin, SMH Moulds Sales Director



bottle of the most simple and delicate structure.

SIPA rose to the challenge with input on preform development and injection molds.

The tool shop at SIPA Machinery Hangzhou is ideally equipped for jobs of this type, with its extensive capability in mold construction and refurbishing.

Nongfu is producing the bottles in three different sizes: 330, 535 and 680 mL.

SIPA has developed and delivered changeover sets for preforms for the smallest and largest bottles (weighing respectively 22 and 34 g) and a complete cold half for the medium-sized bottle, all within a very short delivery time. In all three cases, SIPA has also produced end-of-arm tooling (EOAT) and Airpik to fit on the automatic take-out system.

“The bottle designs had to be very ‘clean,’ with no ribs or panels, and that could only be achieved by using special technology in the design of preform molds,” says William Pasquali, General Manager of SIPA China.

“We also needed to work hard to create a mold that would enable production of preforms - and bottles obviously - with



utmost clarity. And of course, everything had to be delivered yesterday!

I think the finished results provide ample proof that we came through with flying colors! Because there are no ribs or panels on the body of bottle, the average wall thickness has to be higher than on regular bottles in the market, Pasquali says. “Otherwise, the vacuum resistance will be not good enough, and the result would be a short shelf life.

“That provides quite a challenge in terms of cooling for the preform molds, because it’s much more difficult to cool down a thick preform and still have a ‘normal’ total cycle time.”

SIPA met this particular challenge by creating cooling channels



with a much larger cooling surface than is normal. Lifetime of the components is still guaranteed, even though with the larger chan-

nels there is less steel in the mold, which affects structural strength. Nongfu is very happy with its new bottles. In fact, it awarded SIPA

a “special contribution” award for its work on the project.

