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Coffee Machine Shell Plastic Mold

How to design Plastic Shell Injection Mold for a Coffee Machine? Coffee Machine has many plastic accessories and big plastic shell is one of the plastic components, here it refers to plastic shell mold and Coffee Machine Plastic Accessories molds as follows.

The shape of the Plastic Shell product for a Coffee Machine is very complex, the mold structure belongs to the classic cavity big slider, because the plastic shell product is large, the structure is complex, the product requirement is relatively strict, therefore, the design method of the mould structure is very rigorous, please look at the structure as shown in the diagram in detail.

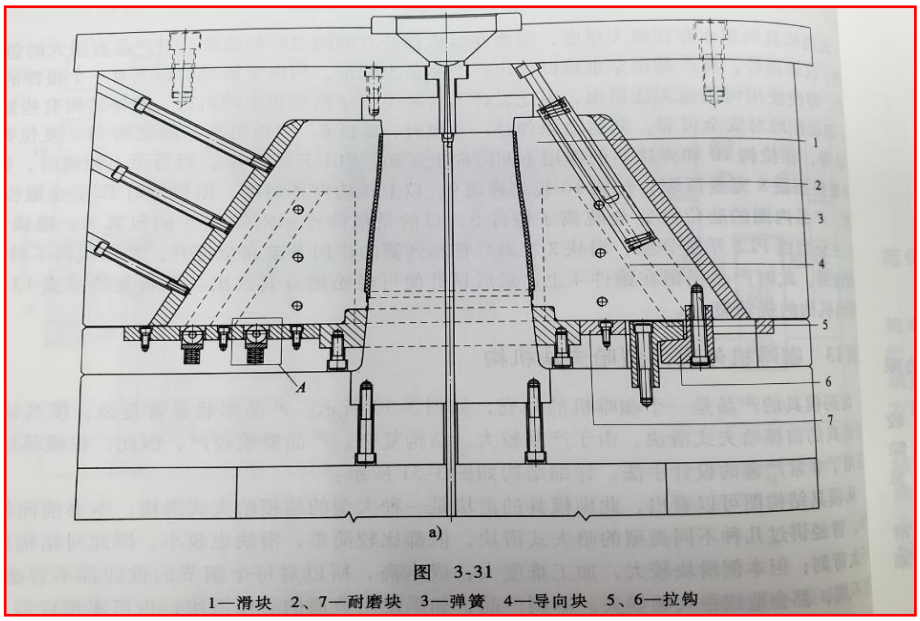


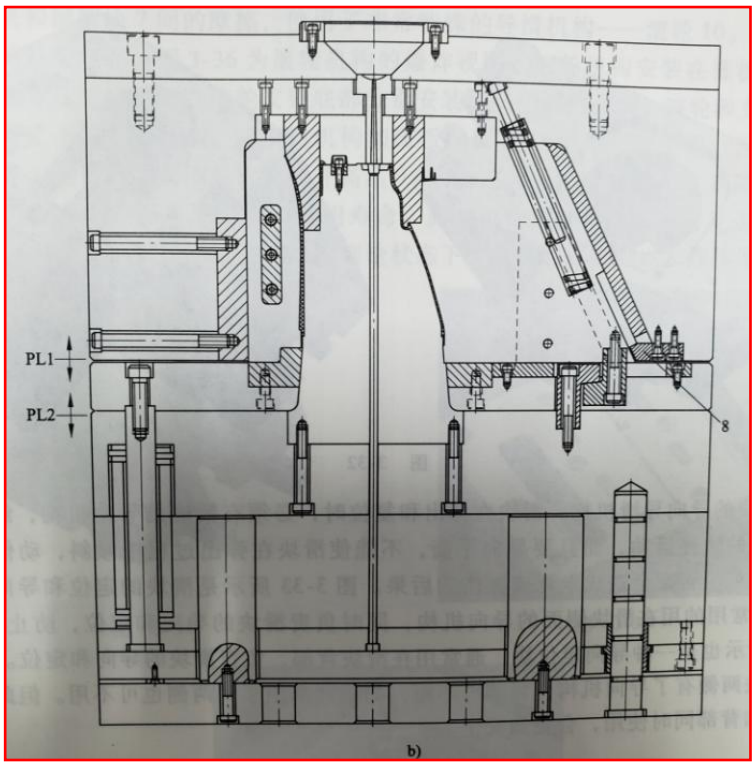
图 3-31

1—滑块 2、7—耐磨块 3—弹簧 4—导向块 5、6—拉钩

1- Mold slider 2- Mold Wear Plate 3- Spring 4- Leading Block

5,6- Drawing hook

From the Plastic Shell mold structure diagram above, it can be seen that the slide block of this set of Plastic Shell Mold is a large-scale cavity slider structure. This slider is relatively large, it's difficult to process on machining, as well as high cost, so the design of every detail can not be ignored, if not considerate, it will cause a lot of losses.



This Plastic Shell product can also be shaped by the use of ordinary core sliders, but depending on the shape of the product, the way the product comes out must be made using a stripper plate.

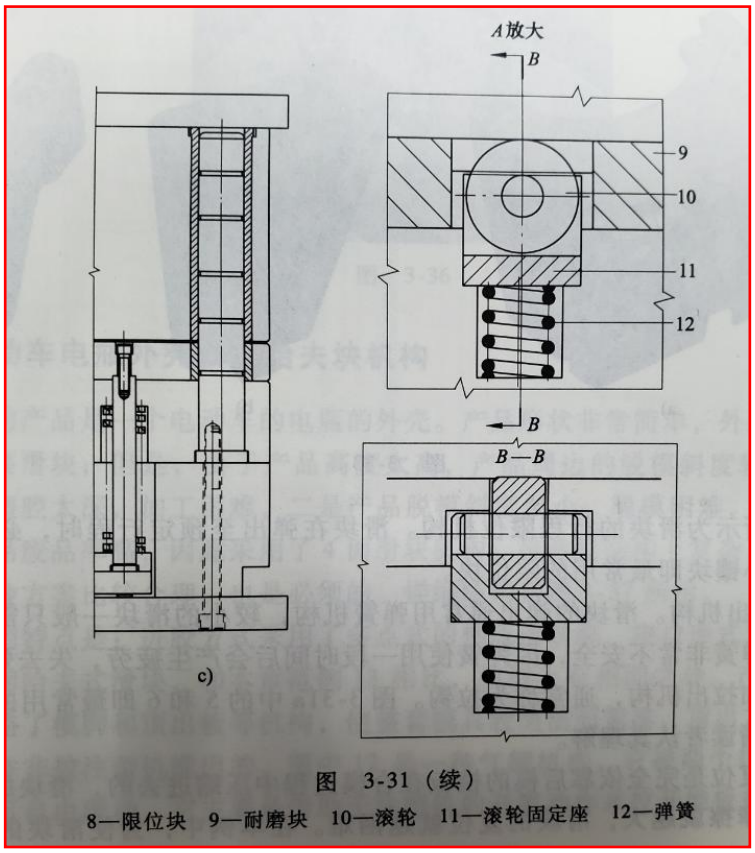


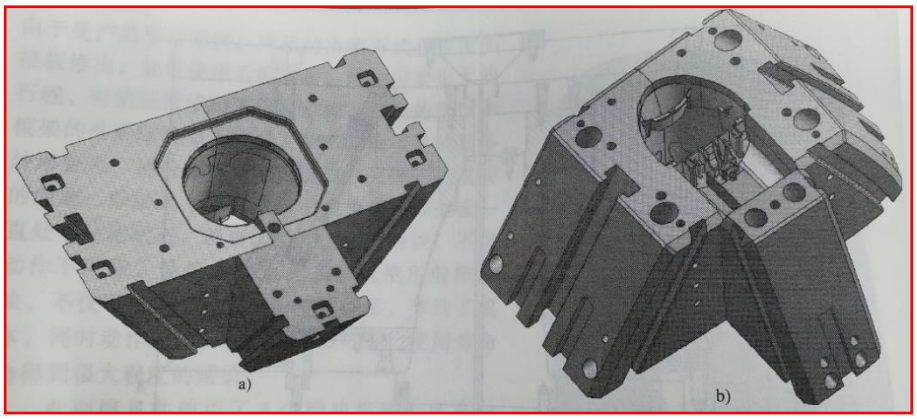
图 3-31（续）

8—限位块 9—耐磨块 10—滚轮 11—滚轮固定座 12—弹簧

8- Stop Block 9- Wear Plate 10-Trolley 11-Trolley Fixing housing 12-Spring

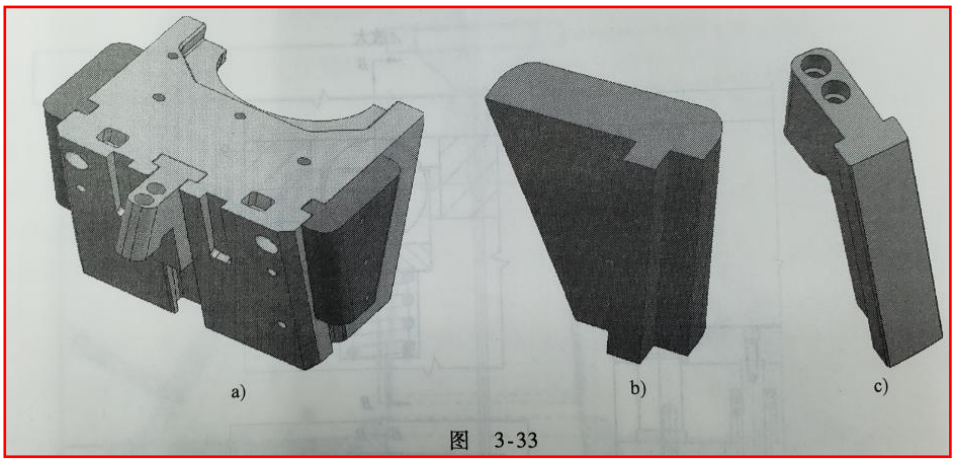
If the core slider is used, the slide block needs a large stroke, and may also need to use hydraulic cylinder mechanism, the thickness of the push plate and the shape of the mold base need to be increased a lot, then the overall shape of the mold is larger, and the manufacturing cost will be greatly increased. Another important problem is that it is not suitable to use large sliders on the push plate, which is not only unreliable in action, but also not long in service life. Now the use of the cavity sliders can not only greatly reduce the overall shape of the mold, saving costs, but also more reliable than the back die slider, the service mold life will be extended to a great extent.

The Plastic Shell mold has a total of three sliders to surround the entire product, as shown in the following illustration, for typical die sliders, you need to know the following points.



A. Positioning mechanism of slide block. All around the slider positioning, it is necessary to ensure that the slider in pop-up and reset are safe and reliable, accurate positioning.

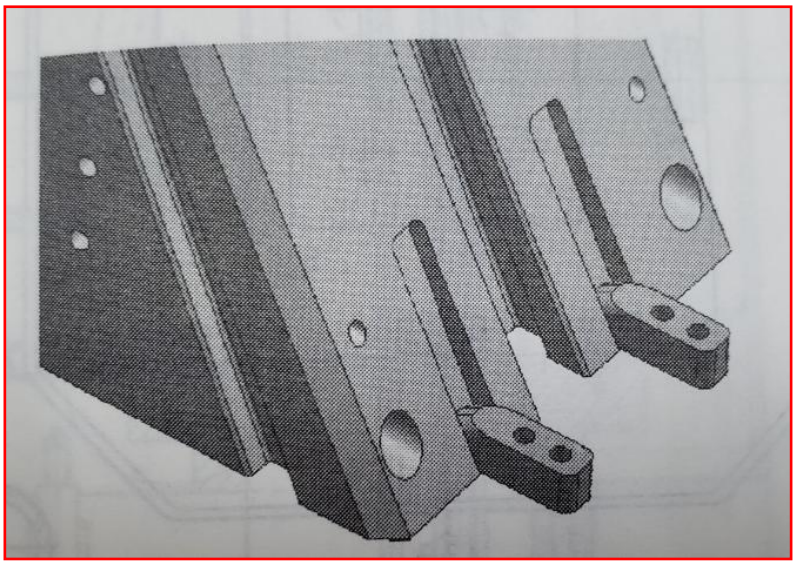
B. The guide slide mechanism of the slider. When the slider pops up and restores, it must have an accurate guiding mechanism to absolutely ensure that the slider moves in accordance with the set trajectory, and that the slider must be guided to balance. It cannot make the slider tilt in China during the pop-up process, and the movement should be smooth and reliable, and the movement should be smooth and smooth. Otherwise, it will cause the consequences of sticking or bruising. See below.



Picture b) is the most commonly used guide mechanism used on the side of the slider, at the same time is responsible for the guide and positioning of the slider to prevent the slider from swinging.

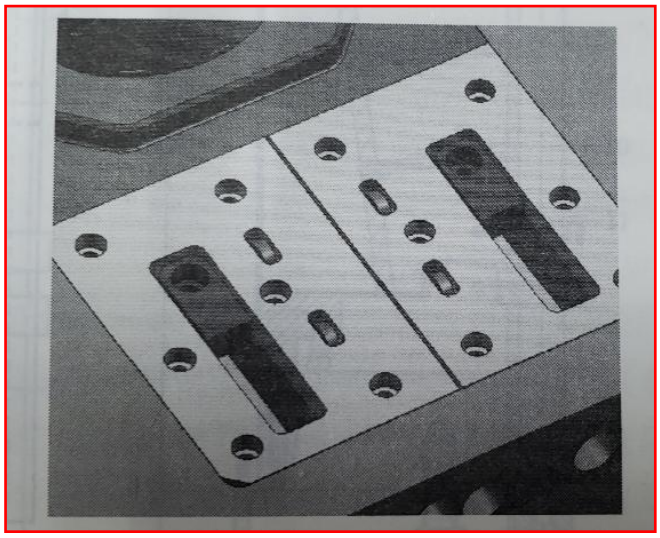
Picture c) is also Guiding block, usually used on the back of the slider, is responsible for the guide and positioning of the slider. Under normal circumstances, there is a guide mechanism on both sides of the slider, the back may not be used, if the back is used, neither can be used. But this slider is larger, and both sides and back will be used at the same time, will be safer.

C. The following is slider limitation block mechanism, the slider must have an accurate limit when it pops up to a predetermined stroke. The two small blocks in the diagram are the most commonly used limit blocks.

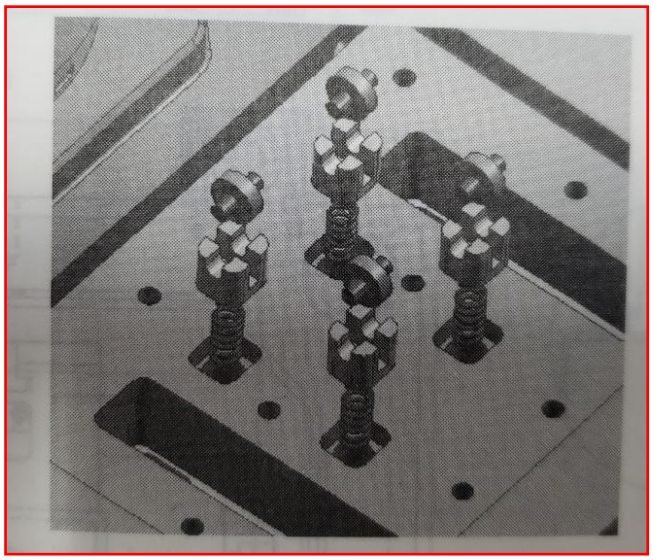


D. The slider ejector mechanism, the slide block ejector mechanism is usually a spring mechanism. Smaller sliders generally only need a spring, larger sliders, only rely on the spring is very unsafe, because the spring used for a period of time regret fatigue, loss of elasticity, so, in addition to the spring, also need to increase pull-out mechanism, commonly known as retractor.

The reset of this kind of slider depends entirely on the template of the core side of mold in the process of closing. The greater the slope of the slide block, the greater the friction between the slider and the back mold template. The more difficult it is to reset the slider. In order to make the slider reset more smoothly and reduce the friction between the slider and the wear-resistant plate, a very special guide-slip mechanism, the roller, is used. The following is the roller assembly status for the roller of core block of mold.



The following is the roller mechanism explosion view.



The roller mechanism is installed in the push plate and fixed by the pin and slide wear-resistant plate. Several strong springs are installed on the bottom of the roller support, and the roller and the support are floating up and down under the action of the strong spring. Because there is a 1mm space between the roller mechanism and the press plate, when the roller is completely pressed to the end, the cylindrical top surface of the roller is just like a wear-resistant piece higher than the 0.02mm or so, eliminating to a large extent the strong friction between the slider and the wear-resistant plate. The service life of the slider is improved. The disadvantage of this design is that the structure is complex, the machining is difficult, and the precision is difficult to control. If the precision can not be controlled in the theoretical state, the roller can hardly play a role. So, the very important point is how to accomplish a good mold design for plastic shell of coffee machine. Ceeto company is very professional for making plastic injection molds for many years.