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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 39170-2020

Tools for moulding - Centring sleeves

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify and adopt ISO 9449.2007 "Hollow Locating Pins for Forming Moulds".

Compared with ISO 9449.2007, there are technical differences between this standard and the clauses involved in these differences have been passed on the outer margins.

The vertical single line (?) is marked. The corresponding technical differences and their reasons are as follows.

---In "2 Structure Type and Size", "2.1 Application Example of Hollow Locating Pin" and "Figure 1 Application Example of Hollow Locating Pin" are added

Example", gives an applicable example of hollow positioning pins;

---In "2 Structure Types and Dimensions", "2.3 B type hollow locating pin", "Figure 3 B type hollow locating pin" and "table 2" are added

B-type hollow positioning pin size" is a common type in China;

--- Change "d=25" corresponding to "D1=32" in Table 1 to "d=24", increase the wall thickness, and conform to other specifications in the table;

---In "3 Material and Hardness", change "Material and hardness to be determined by the manufacturer" to "A-type hollow positioning pin recommends GCr15,

The hardness is 45HRC~50HRC; 45 is recommended for type B hollow positioning pins, and the hardness is 42HRC~45HRC", which are commonly used domestic materials.

This standard has made the following editorial changes.

---In "1 scope", change "this standard specifies the dimensions and tolerances of hollow positioning pins for the positioning of the cushion block to the fixed seat plate in the mold"

"This standard specifies the structure, size and tolerance of the hollow positioning pin used for the positioning of the cushion or template in the mold to the fixed seat plate";

---In "1 Scope", "Suitable for hollow positioning pins of forming molds.";

---Delete "Unit is mm" in "1 Scope". In the upper right corner of Figure 2 and Figure 3, add "Dimensions in millimeters";

--- Change "2 size" to "2 structure type and size";

---In Table 1, change the nominal size from the inner diameter d to the outer diameter $D1$ as the nominal size, and move $D1$ and its value to d and its value above;

--- Move the tolerances of l and d in Table 1 to the mark in Figure 2;

--- In Table 1, $D1=18$ corresponds to $l=20$, $D1=22$ corresponds to $l=20$ and $l=25$. These three options are not recommended, and brackets are (x);

---Incorporate "Figure 1" and "Table 1" in ISO 9449.2007 into "2 Structural Types and Dimensions" and become "2.2 Type A Hollow Positioning"

The title of the figure "Figure 1 Hollow Locating Pin" is changed to "Figure 2 Type A Hollow Locating Pin"; the table title "Table 1 Hollow Locating Pin"

"Size" is changed to "Table 1 A type hollow locating pin size";

--- In "4 Marks", the mark format is modified according to GB/T 1.1-2009;

---In "4 mark", add the type of "hollow positioning pin" (A or B);

--- In "4 mark", in order to match Table 1 and Table 2 with the outer diameter as the nominal size, change " $d=12\text{mm}$ " to " $D1=18\text{mm}$ ";

--- In "4 mark", change " $l=20\text{mm}$ " to " $l=32\text{mm}$ ";

--- "References", use "GB/T 131-2006 Product Geometric Technical Specification (GPS) Surface Structure in Technical Product Documents"

The notation of "" replaces "ISO 1302.2002".

This standard was proposed and managed by the National Mold Standardization Technical Committee (SAC/TC33).

Drafting organizations of this standard. Taizhou Huangyan District Quality and Technical Supervision and Inspection Institute (Zhejiang Mould Product Quality Inspection Center), Shenzhen Ji

Yang Intelligent Technology Co., Ltd., Suzhou Feitai Precision Technology Co., Ltd., Zhengzhou University National Engineering Research Center for Rubber and Plastic

Moulds, Xiamen Yangmai Electric

Co., Ltd., Hefei University of Technology, Guilin Electrical Appliance Research Institute Co., Ltd., Anhui Jianghuai Automobile Group Co., Ltd., SAIC GM

Wuling Automobile Co., Ltd. Chongqing Branch, Xiamen Jingwei Mould Co., Ltd., Yiwu Guojun Mould Factory, Xi'an Kaiyijin Electronic Technology

Co., Ltd., Xiamen Keli Electronics Co., Ltd., Shaanxi Jinyoubang Technology Co., Ltd., Xiamen Kexin Electronics Co., Ltd., Xiamen Sanxing Electronics

Co., Ltd., Xi'an Ningkangte Data Service Co., Ltd., Xiamen Wanming Electronics Co., Ltd., Xiamen Meike Security Technology Co., Ltd., Xiamen Kun

Jin Electronic Technology Co., Ltd.

1 Scope

This standard specifies the structure type, size, tolerance and marking of the hollow positioning pin used for the positioning of the cushion or template in the mold to the fixed seat plate, and

A description of the material and hardness is given.

This standard applies to hollow positioning pins of forming molds.

2.1 Application example of hollow positioning pin

See Figure 1 for an application example of hollow positioning pins.

2.2 Type A hollow positioning pin

The structure type and size of A-type hollow locating pin should meet the requirements of Figure 2 and Table 1.