INTERNATIONAL STANDARD

ISO 24233

First edition 2008-02-15

Tools for moulding — Tool specification sheet for diecasting dies

Outillage de moulage — Formulaire de spécifications d'outils pour moules pour fonderie sous pression

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Published in Switzerland

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ISO 24233:2008 https://standards.iteh.ai/catalog/standards/sist/409ba0e2-03b3-4590-8e72-4fda61c4d99a/iso-24233-2008

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 24233 was prepared by Technical Committee ISO/TC 29, Small tools, Subcommittee SC 8, Tools for pressing and moulding.

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Tools for moulding — Tool specification sheet for diecasting dies

1 Scope

This International Standard presents a tool specification sheet for diecasting dies, for use both when requesting (at the tendering stage) and when ordering the tools. The sheet specifies the data necessary for material acquisition, equipment and the structural design of diecasting dies, including the tool surfaces, as well as information relating to machine-specific data, types of operation and warranty.

This International Standard is not applicable to compression moulds or injection moulds.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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ISO 12165, Tools for moulding — Components of compression and injection moulds and diecasting dies — Terms and symbols

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12165 apply.

4 Use of the specification sheet

The use of the specification sheet will allow offers of various suppliers to be compared. By this means, misunderstandings, misinterpretations or claims of damages can already be eliminated or minimized at the time when the tools are ordered.

An electronic version of the specification sheet presented in Annex A is available at

http://standards.iso.org/iso/24233

The user is permitted to make copies of the sheet.

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Annex A

(normative)

Tool specification sheet for diecasting dies

1 General information					
Customer:			Date:		
Person to contact for all technical question	is:		Request N°: Telephone: Telefax: E-mail:		
Offer N°: D	rawing N°:		State of modification:		
Die designation:			Total amount of pieces planned:		
Drawing N°:	STANDARD	PREVI	Prototype tool Production tool		
☐ Drawing for request ☐	Approved die drawing	en.ai)			
Material of component to be moulded: ISO 24233:2008 https://standards.iteh.ai/catalog/standards/sist/409ba0e2-03b3-4590-8e72- Part- or finish-worked component: Finish-worked component Raw part					
Casting/Diecasting alloy:					
Type of machine:	'ertical	☐ Horizontal			
Casting method:	cold chamber	☐ Hot chamb	er		
Size of diecasting machine (locking pressure): in MN					
☐ Subsequent specification for tool offer					
☐ Subsequent specification for tool ordering					
Supplier of standards:					
External supplier:(external work bench)					
2 Requirements/Guidelines					
2.1 The die design concept shall be presented to the customer for approval prior to purchase of the material or start of production of the tool.					
2.2 The manufacture of the cores and cavities shall be carried out in accordance with the actual drawing for the diecasting die design.					
2.3 If there are any uncertainties with respect to the drawing data, agreement between the manufacturer and customer is necessary in each case.					

2.4 Sampling of the tool should prefe	rably be done in the hardened s	state.				
2.5 Sampling of the tool shall be carried out with the diecasting compound given in the die drawing.						
2.6 The performance of the tool in full automatic cycle shall be verified.						
2.7 The rights of ownership of electrover to the orderer.	rodes, software (CNC program	s) and original construction	n documents are handed			
2.8 The buyer shall specify the data relating to the contents of the die type plate.						
3 Description of die order						
3.1 To be provided for:	Offer 0	rder				
		By the customer	By the orderer			
Blank drawing						
Finished part drawing						
Shrinkage drawing						
CAD-data (2D/3D interface)						
Sample						
Die design						
Master pattern						
Shrinkage pattern iTeh	STANDARD PE	REVIEW				
Raw material	(standards.iteh	ai) 🗆				
Die assembly	(Staffdaf dS.ftCff					
Standard parts	ISO 24233:2008					
Electrodes https://standards.	iteh.ai/catalog/standards/sist/409ba 4fda61c4d99a/iso-24233-20	I I				
Machine data sheet						
Other						
3.2 Scope of delivery relative to di	Ð					
		By the customer	By the orderer			
Design with parts list						
Drawing of components, cores and ca	avities					
Drawings of plates						
Drawings of electrodes						
Drawing of wire pattern						
CAD data						
List of coordinates						
Die type plate (visible on the tool)						
Set of electrodes						
NC programs						
Connection cables						

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3.3 Sampling						
	Provided by customer	Provided by orderer				
Samples/Amount/Pieces:						
Test report						
4 Diecasting die design						
4.1 Type of die						
Diecasting die for cold-chamber diecast	☐ Diecasting die for cold-chamber diecasting machine with horizontal pouring sleeve					
☐ Diecasting die for cold-chamber diecast	ting machine with horizontal pouring slee	ve three-plate construction				
Diecasting die for hot-chamber diecasti	ng machine					
Diecasting die for cold-chamber diecast	ting machine with vertical pouring sleeve					
4.2 Specification of casting parameters						
Specific casting pressure	<u> </u>					
Locking force	in MN					
Die opening force	in MN	**************************************				
Casting volume	STANDARD PREV	/IEW				
Size of casting chamber	(standards.iteh.ai)					
Die cavity filling time						
Gate cross-sections https://standar	ds.iteh.ai/catalog/standards/sist/409ba0e2-03 4fda61c4d9 <mark>9a/</mark> iso-24233-2008	b3-4590-8e72-				
Heat volume	<u> </u>					
Heating and cooling system	<u> </u>					
Simulation of setting	<u> </u>					
Slide size	<u> </u>					
Slide shape	<u> </u>					
Size of core puller cylinder	<u> </u>					
Casting shape	<u> </u>					
Ejector travel	<u> </u>					
Slide travel	<u> </u>					
Loads						
Forces acting during the casting process	<u> </u>					
Design of die cavity	<u> </u>					

4.3 Set-up/Transport			
4.3.1 Set-up			
	Supplier	International o	r national standard
Lifting bridge	□		
Transport securing unit	□		
Resting feet	□		
Lifting eye bolt	□		
Stop screw	□		
Tool centring	□		
Locating ring			
— movable half (MH)	□		
— fixed half (FH)	□		
4.3.2 Clamping on machine			
	Supplier	International o	or national standard
Die clamping by — screws iTeh STAND	OARD PI	REVIEW	
— clamping units (Standa	ards <u>-</u> iteh	.ai)	
— quick-action clamping ISC https://standards.iteh.ai/catalog/s) 24233; <u>2008</u> tandards/sist/409ba	a0e2-03b3-4590-8e72-	
	199a/iso-24233-20		
— flush on all sides			
— overhanging in lateral direction	□		
— overhanging in longitudinal direction			
— overhanging on all sides	□		
Special clamping plates			
Adapter plates			
Clamping grooves	□		
4.4 Casting system and venting system			
Specific documentation required for construction/calculation	Drawing	☐ Calculation	☐ Other documents
Arrangement and size of casting run	☐ Drawing	☐ Calculation	Other documents
Gating and venting	☐ Drawing	☐ Calculation	Other documents
Accessories when using vacuum, additional parts provided at the gate to facilitate pressing, where relevant	Drawing	☐ Calculation	☐ Other documents

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