

第七章 JB/T 2435—1978 铸造工艺符号及表示方法

本标准适用于砂型铸钢件、铸铁件及有色金属铸件。

1. 标准中各种工艺符号及表示方法均分为甲、乙两类形式表示。

甲类形式是在蓝图上绘制的铸造工艺图。

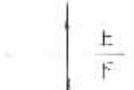
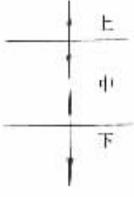
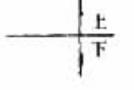
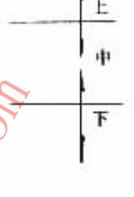
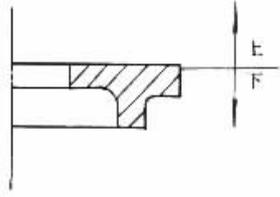
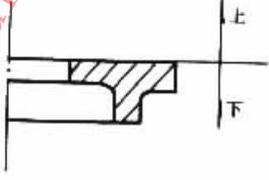
乙类形式是用墨线绘制的铸造工艺图。

2. 铸造工艺图(甲)表示的颜色规定为红、蓝两色。

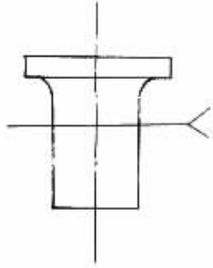
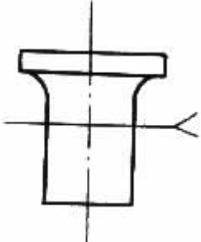
3. 标准中列入常用工艺符号及表示方法 24 种,不常用的工艺符号及表示方法可由各厂自行规定。

4. 铸造工艺符号及表示方法的规定如下。

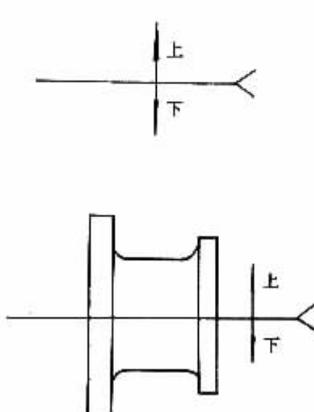
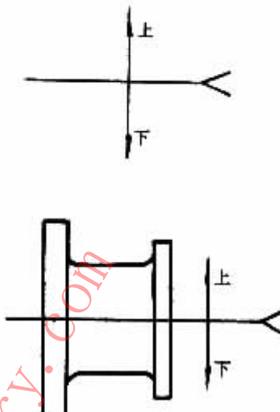
(1) 分型线：

铸造工艺图(甲)	铸造工艺图(乙)
用红色线表示；并用红色写出“上、中、下”字样	用细实线表示，并写出“上、中、下”字样
<p>两开箱</p>  <p>三开箱</p> 	<p>两开箱</p>  <p>三开箱</p> 
<p>示例</p> 	<p>示例</p> 

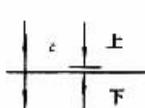
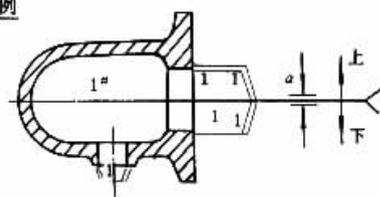
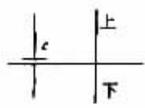
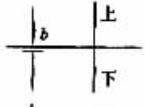
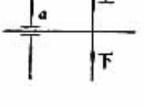
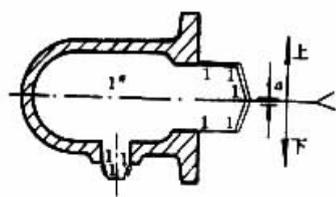
(2) 分模线：

铸造工艺图(甲)	铸造工艺图(乙)
用红色线表示，在任一端划“<”号	用细实线表示，在任一端划“<”号
<p>示例</p> 	<p>示例</p> 

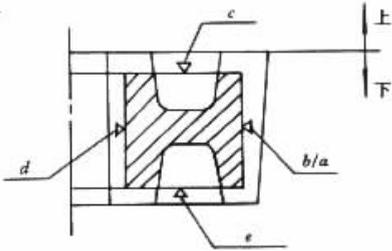
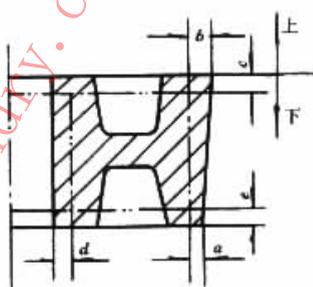
(3) 分型分模线：

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色线表示</p>  <p>示例</p>	<p>用细实线表示</p>  <p>示例</p>

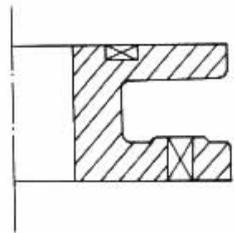
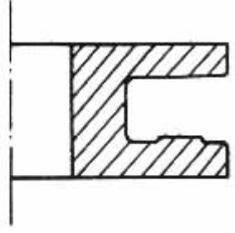
(4) 分型负数：

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色线表示,并注明减量数值</p> <p>上减量</p>  <p>下减量</p>  <p>上下减量</p>  <p>示例</p> 	<p>用细实线表示,并注明减量数值</p> <p>上减量</p>  <p>下减量</p>  <p>上下减量</p>  <p>示例</p> 

(5) 机械加工余量:

铸造工艺图(甲)	铸造工艺图(乙)
<p>加工余量分两种方法表示可任选其一。</p> <p>a. 用红色线表示,在加工符号附近注明加工余量数值。</p> <p>b. 在工艺说明中写出上、侧、下字样注明加工余量数值。特殊要求的加工余量可将数值标在加工符号附近。</p> <p>凡带斜度的加工余量应注明斜度。</p> <p>示例</p> 	<p>加工余量分两种方法表示可任选其一。</p> <p>a. 粗实线表示毛坯轮廓,双点划线表示零件形状注明加工余量数值。</p> <p>b. 粗实线表示零件轮廓,在工艺说明中写出上、侧、下字样注明加工余量数值。</p> <p>凡带斜度的加工余量应注明斜度。</p> <p>示例</p> 

(6) 不铸出的孔和槽:

铸造工艺图(甲)	铸造工艺图(乙)
<p>不铸出的孔或槽在图上用红线打叉</p> <p>示例</p> 	<p>不铸出的孔或槽在铸件图中不画出</p> <p>示例</p> 

(7) 工艺补正量:

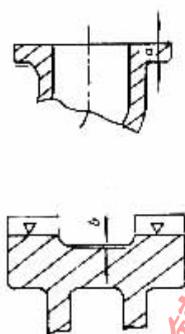
铸造工艺图(甲)

铸造工艺图(乙)

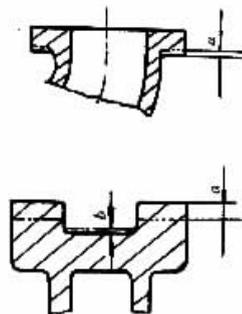
用红色线表示,注明正、负工艺补正量的数值

粗实线表示毛坯轮廓,双点划线表示零件形状,注明正、负工艺补正量的数值

示例



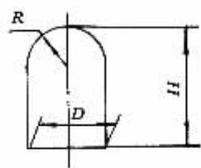
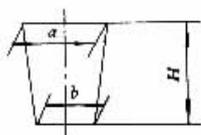
示例



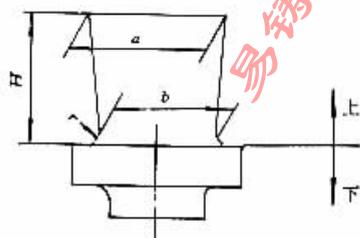
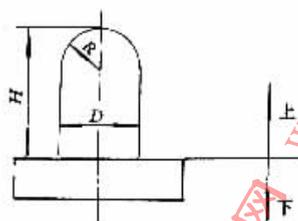
(8) 冒口:

铸造工艺图(甲)

各种冒口均用红色线表示,注明斜度和各部尺寸,并用序号 1[#]、2[#]区分

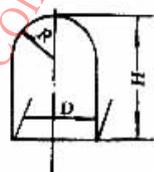
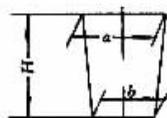


示例

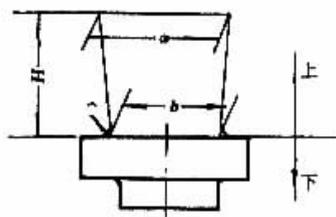
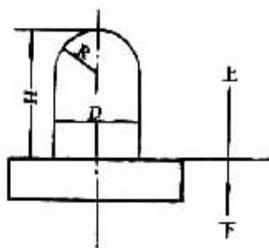


铸造工艺图(乙)

各种冒口均用细实线表示,注明斜度和各部尺寸,并用序号 1[#]、2[#]区分



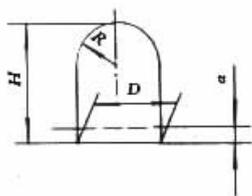
示例



(9) 冒口切割余量:

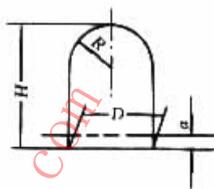
铸造工艺图(甲)

用红虚线表示,注明切割余量数值

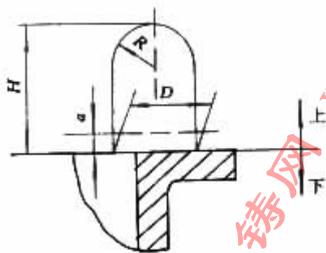


铸造工艺图(乙)

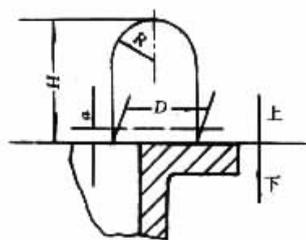
用虚线表示,注明切割余量数值



示例



示例



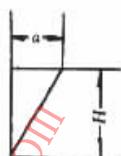
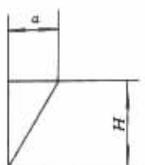
(10) 补贴:

铸造工艺图(甲)

铸造工艺图(乙)

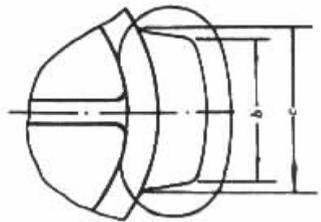
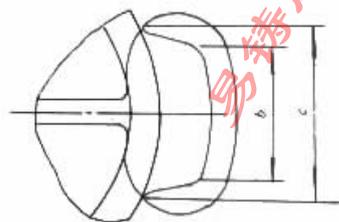
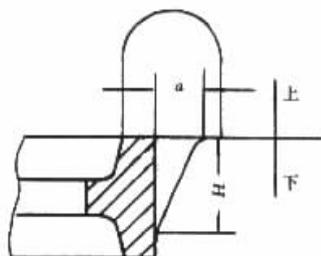
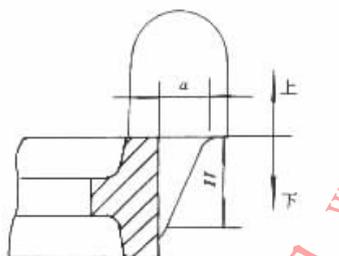
用红色线表示并注明各部尺寸

用细实线表示并注明各部尺寸



示例

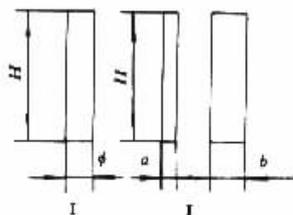
示例



(11) 出气孔:

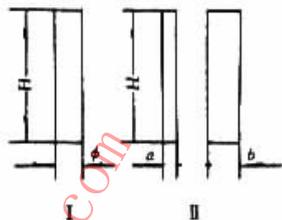
铸造工艺图(甲)

用红色线表示,注明各部尺寸

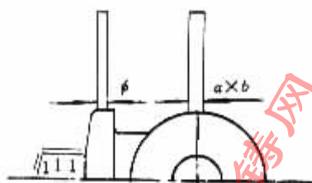


铸造工艺图(乙)

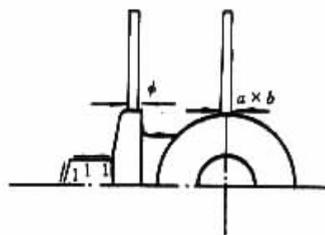
用细实线表示,注明各部尺寸



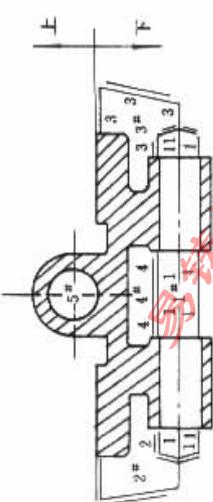
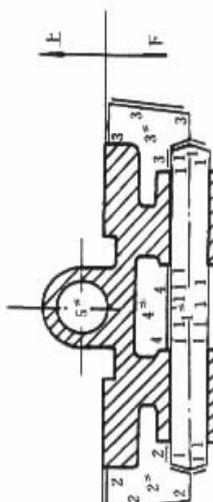
示例



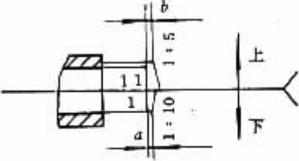
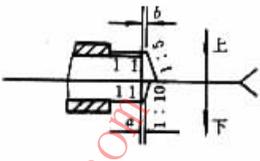
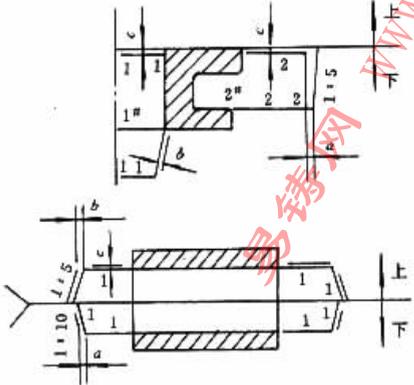
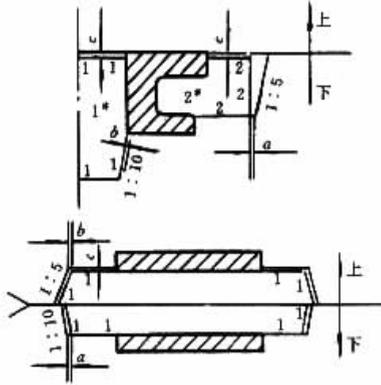
示例



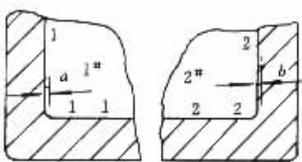
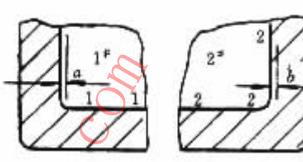
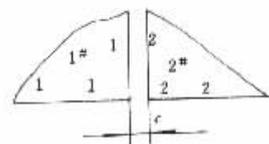
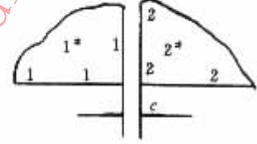
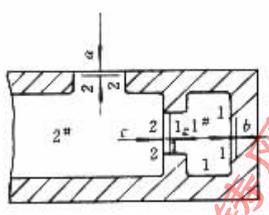
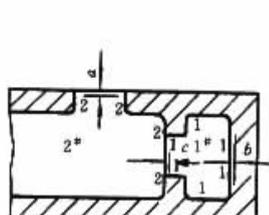
(12) 坭芯编号、边界符号及芯头边界：

铸造工艺图(甲)	铸造工艺图(乙)																																				
<p>芯头边界用蓝色线表示，坭芯编号用阿拉伯数字 1[#]、2[#] 等标注，边界符号一般只在芯头及坭芯交界处用与坭芯编号相同的小号数字表示，铁芯须写出“铁芯”字样</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>1</td></tr> <tr><td>1</td><td>1[#]</td></tr> <tr><td>1</td><td>1</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>2</td><td>2</td></tr> <tr><td>2</td><td>2[#]</td></tr> <tr><td>2</td><td>2</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>3</td><td>3</td></tr> <tr><td></td><td>3[#]</td></tr> <tr><td>3</td><td>3</td></tr> </table> </div>	1	1	1	1 [#]	1	1	2	2	2	2 [#]	2	2	3	3		3 [#]	3	3	<p>芯头边界用细实线表示，坭芯编号用阿拉伯数字 1[#]、2[#] 等标注，边界符号一般只在芯头及坭芯交界处用与坭芯编号相同的小号数字表示，铁芯须写出“铁芯”字样</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>1</td></tr> <tr><td>1</td><td>1[#]</td></tr> <tr><td>1</td><td>1</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>2</td><td>2</td></tr> <tr><td>2</td><td>2[#]</td></tr> <tr><td>2</td><td>2</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>3</td><td>3</td></tr> <tr><td></td><td>3[#]</td></tr> <tr><td>3</td><td>3</td></tr> </table> </div>	1	1	1	1 [#]	1	1	2	2	2	2 [#]	2	2	3	3		3 [#]	3	3
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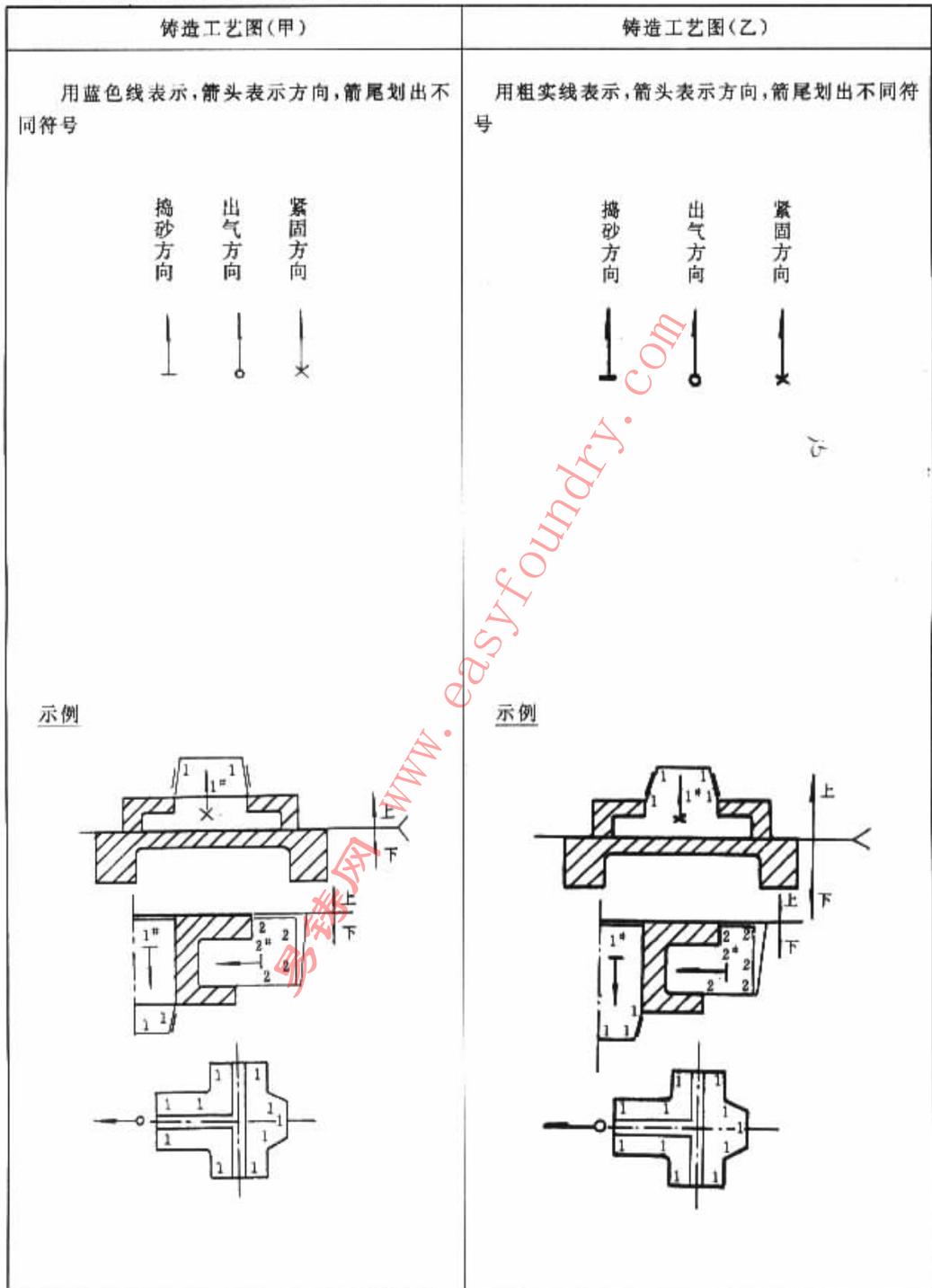
(13) 芯头斜度与芯头间隙；

铸造工艺图(甲)	铸造工艺图(乙)
<p>用蓝色线表示并注明斜度及间隙数值</p> 	<p>用细实线表示,并注明斜度及间隙数值</p> 
<p>示例</p> 	<p>示例</p> 

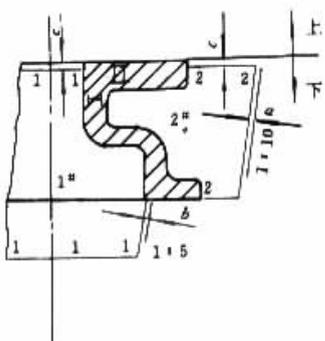
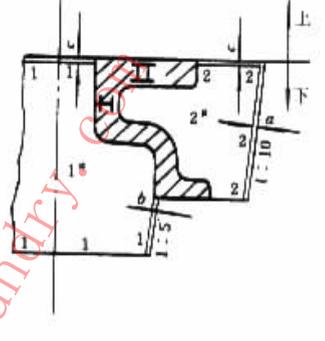
(14) 坭芯增、减量与坭芯间的间隙：

铸造工艺图(甲)	铸造工艺图(乙)
<p>用蓝色线表示,注明增减量与间隙数值,或在工艺说明中注明</p>	<p>用细实线表示,注明增减量与间隙数值,或在工艺说明中注明</p>
<p>减量 增量</p>	<p>减量 增量</p>
	
	
<p>示例</p>	<p>示例</p>
	

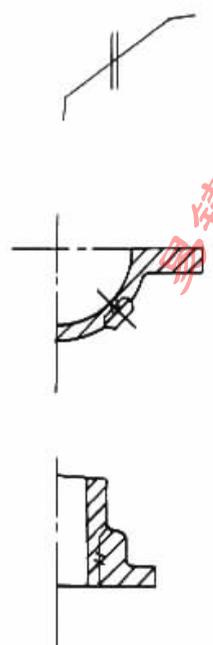
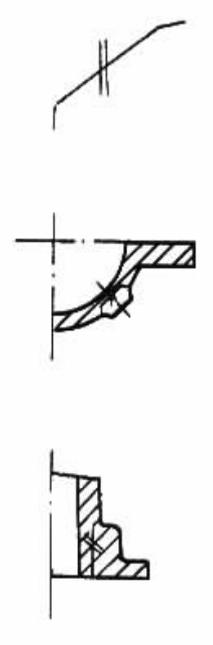
(15) 捣砂方向、出气方向、紧固方向：



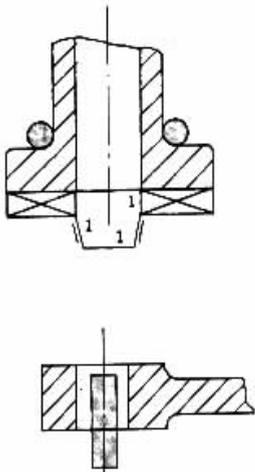
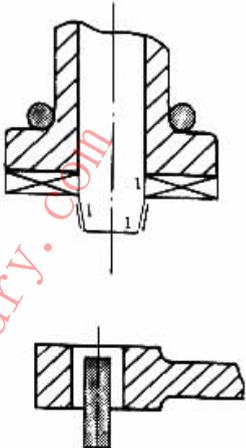
(16) 坭芯撑:

铸造工艺图(甲)	铸造工艺图(乙)
<p>坭芯撑用红色线表示,特殊结构的坭芯撑写出“坭芯撑”字样</p> <p style="text-align: center;">I II</p> <p>示例</p> 	<p>坭芯撑用粗实线表示,特殊结构的坭芯撑写出“坭芯撑”字样</p> <p style="text-align: center;">I II</p> <p>示例</p> 

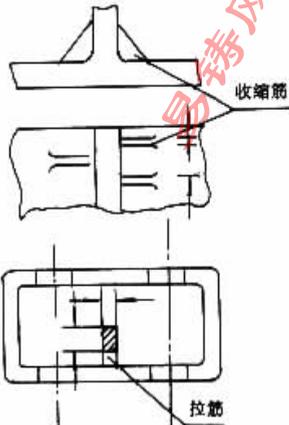
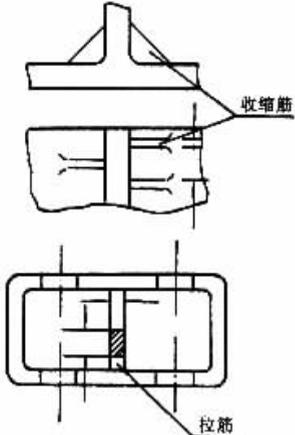
(17) 模型活块:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色线表示,并在此线上画二条平行短线</p> <p>示例</p> 	<p>用细实线表示,并在此线上画二条平行短线</p> <p>示例</p> 

(18) 冷铁:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用蓝色线表示。圆钢冷铁涂淡蓝色,成型冷铁打叉</p> <p>示例</p> 	<p>用细实线表示。圆钢冷铁涂淡黑色,成型冷铁打叉</p> <p>示例</p> 

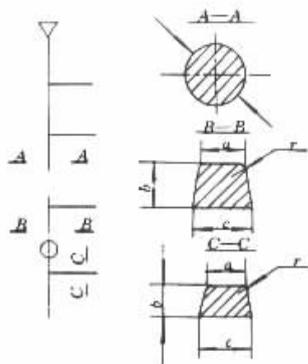
(19) 拉筋、收缩筋:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色线表示,注明各部尺寸,并写出“拉筋”或“收缩筋”字样</p> <p>示例</p> 	<p>用细实线表示,注明各部尺寸,并写出“拉筋”或“收缩筋”字样</p> <p>示例</p> 

(20) 浇注系统:

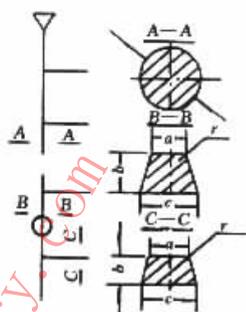
铸造工艺图(甲)

用红色线或红色双线表示并注明各部尺寸

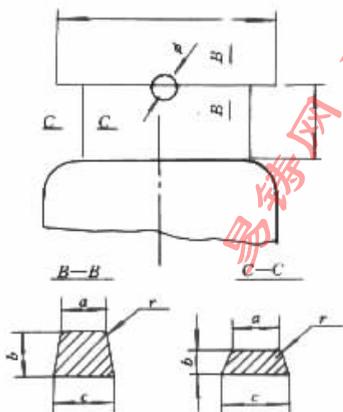


铸造工艺图(乙)

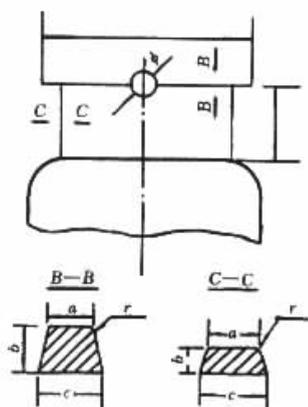
用细实线或细双实线表示并注明各部尺寸



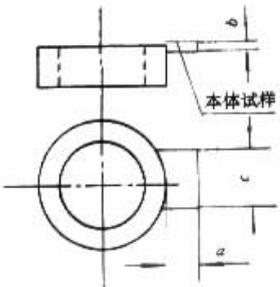
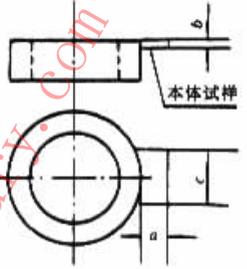
示例



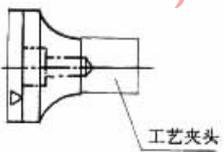
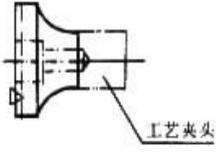
示例



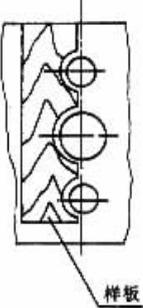
(21) 本体试样:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色线表示,注明各部尺寸,并写出“本体试样”字样</p> <p>示例</p> 	<p>用细实线表示,注明各部尺寸,并写出“本体试样”字样</p> <p>示例</p> 

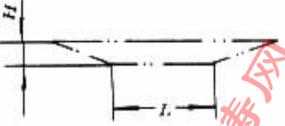
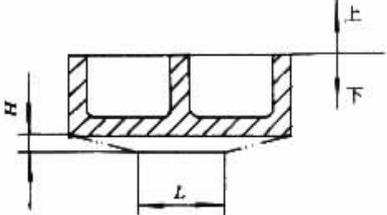
(22) 工艺夹头:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色线描(划)出工艺夹头的轮廓,并写出“工艺夹头”字样</p> <p>示例</p> 	<p>用双点划线划出工艺夹头轮廓,并写出“工艺夹头”字样</p> <p>示例</p> 

(23) 样板:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用蓝色线划出样板轮廓及木材剖面纹里,并写出“样板”字样。 专门绘制样板图时,应在检验位置注明样板标记</p>	<p>用细实线划出样板轮廓及木材剖面纹里,并写出“样板”字样。 专门绘制样板图时,应在检验位置注明样板标记</p>
<p>示例</p> 	<p>示例</p> 

(24) 反变形量:

铸造工艺图(甲)	铸造工艺图(乙)
<p>用红色双点划线表示,注明反变形量的数值</p> 	<p>用双点划线表示,注明反变形量的数值</p> 
<p>示例</p> 	<p>示例</p> 