

## 材料成型工艺基础部分

### 0 绪论

金属材料: metal material (MR)

高分子材料: high-molecular material

陶瓷材料: ceramic material

复合材料: composition material

成形工艺: formation technology

### 1 铸造

铸造工艺: casting technique

铸件: foundry goods (casting)

机器零件: machine part

毛坯: blank

力学性能: mechanical property

砂型铸造: sand casting process

型砂: foundry sand

#### 1.1 铸件成形理论基础

合金: alloy

铸造性能: casting property

工艺性能: processing property

收缩性: constringency

偏析性: aliquation

氧化性: oxidizability

吸气性: inspiratory  
铸件结构: casting structure  
使用性能: service performance  
浇不足: misrun  
冷隔: cold shut  
夹渣: cinder inclusion  
粘砂: sand fusion  
缺陷: flaw, defect, falling  
流动性: flowing power  
铸型: cast (foundry mold)  
蓄热系数: thermal storage capacity  
浇注: pouring  
凝固: freezing  
收缩性: constringency  
逐层凝固: layer-by-layer freezing  
糊状凝固: mushy freezing  
结晶: crystal  
缩孔: shrinkage void  
缩松: shrinkage porosity  
顺序凝固: progressive solidification  
冷铁: iron chill  
补缩: feeding

等温线法: constant temperature line method

内接圆法: inscribed circle method

铸造应力: casting stress

变形: deforming

裂纹: crack

机械应力: mechanical stress

热应力: heat stress

相变应力: transformation stress

气孔: blow hole

铸铁: ingot

铸钢: cast steel

非铁合金: nonferrous alloy

灰铸铁: gray cast-iron

孕育处理: inoculation

球墨铸铁: spheroidal

球化处理: spheroidisation

可锻铸铁: ductile cast iron

石墨: graphite

蠕墨铸铁: vermicular cast iron

热处理: heat processing

铝合金: Al-alloy

熔炼: fusion metallurgy

铜合金: copper alloy

氢脆: hydrogen brittleness

## 1.2 铸造方法 (casting method)

手工造型: hand moulding

机器造型: machine moulding

金属型: metal mold casting

金属模: permanent mould

压力铸造: press casting

熔模铸造: investment moulding

蜡膜: cere

离心铸造: centrifugal casting

低压铸造: casting under low pressure

差压铸造: counter-pressure casting

陶瓷型铸造: shaw process

## 1.3 铸造工艺设计

浇注位置: pouring position

分型面: mould joint

活块: loose piece

起模: patter drawing

型芯: core

型芯撑: chaplet

工艺参数: processing parameter

下芯: core setting

合型: mould assembly

冒口: casting head

尺寸公差: dimensional tolerance

尺寸公差带: tolerance zone

机械加工余量: machining allowance

铸孔: core hole

非标准: nonstandard label

收缩率: rate of contraction

线收缩: linear contraction

体收缩: volume contraction

起模斜度: pattern draft

铸造圆角: curving of castings

芯头: core register

芯头间隙: clearance

芯座: core print seat

分型线: joint line

分模线: die parting line

#### 1.4 铸造结构工艺性

加强筋: rib reinforcement

撒砂: stuccoing

内腔: entocoele

## 2 金属塑性加工

塑性加工: plastic working

塑性: plastic property

锻造: forge work

冲压: punching

轧制: rolling

拉拔: drawing

挤压: extruding

细化晶粒: grain refinement

热锻: hot-forging

温锻: warm forging

### 2.1 金属塑性加工理论基础

塑性变形: plastic yield

加工硬化: work-hardening

韧性: ductility

回复温度: reversion temperature

再结晶: recrystallize

再结晶退火: full annealing

冷变形: cold deformation

热变性: heat denaturation

锻造比: forging ratio

镦粗: upset

拔长: pull out  
纤维组织: fibrous tissue  
锻造性能: forging property  
可锻性: forgeability  
变形抗力: resistance of deformation  
化学成分: chemical constitution  
热脆性: hot brittleness  
冷脆性: cold-shortness  
变形速度: deformation velocity  
应力状态: stress condition  
变形温度: deformation temperature  
过热: overheating  
过烧: burning  
脱碳: carbon elimination  
始锻温度: initiation forging temperature  
终锻温度: final forging temperature

## 2.2 金属塑性加工方法

自由锻: flat-die hammer  
冲孔: jetting  
弯曲: bend  
弯曲半径: bending radius  
切割: cut

扭转: twist rotation  
错移: offsetting  
锻接: percussion  
基本工序: basic process  
辅助工序: auxiliary process  
精整工序: finishing process  
模锻: contour forging  
锻模: forging die  
胎膜锻: fetal membrane forging  
剪床: shearing machine  
冲床: backing-out punch  
冲裁: blanking  
弹性变形: elastic distortion  
塑性变形: plastic yield  
剪切变形: shearing deformation  
最小弯曲半径: minimum bending radius  
曲率: angularity  
弯裂: rupture  
回弹: rebound  
辊轧: roll forming  
辊锻: roll forging  
斜轧: oblique rolling

横轧: transverse rolling

辗压: tamping drum

挤压: extruding

拉拔: draft

## 2.3 塑性加工工艺设计

工艺规程: process specification

锻件图: forging drawing

敷料: dressing

锻件余量: forging allowance

锻件公差: forging tolerance

工夹具: clamping apparatus

加热设备: firing equipment

加热规范: heating schedule

冷却规范: cooling schedule

后续处理: after treatment

分模面: die parting face

冲孔连皮: punching the wad

模锻斜度: draft angle

圆角半径: radius of corner

圆饼类锻件: circumcrescent cake-like forging

长轴类锻件: long axis-like forging

## 2.4 锻件结构工艺性

cone

斜面: cant

空间曲线: curve in space

粗糙度: degree of roughness

2.5

3 焊接

焊接: welding

铆接: riveting

熔焊: fusion welding

压焊: press welding

钎焊: braze welding

3.1 焊接理论基础

冶金: metallurgy

电弧焊: arc welding

气焊: acetylene welding

电渣焊: electro-slag welding

高能束焊: high energy welding

电子焊: electronic welding

激光焊: laser welding

等离子焊: plasma welding

电弧: electric arc

阳极区: anode region

/

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/97800606000006130>