单选题 1分

Which one of the followings properly describes the characteristic of metal extrusion?

A Workpiece acquires the shape of a closed die cavity.

B Extruded parts have constant cross-section.

C Parts are formed by tensile forces.

D Extrusion usually produces discrete and finished parts.

提交

单选题 1分

In metal extrusion, large deformation can take place without fracture, because the material is under high triaxial compression.

A Ture

B False

提交

单选题 1分

Which one of the following is the most commonly used billet in metal extrusion?

A plate

B rod

C sheet

D wire

提交

单选题　1分

Both solid and hollow cross-sections can be extruded.

A　Ture

B　False

提交

单选题 1分

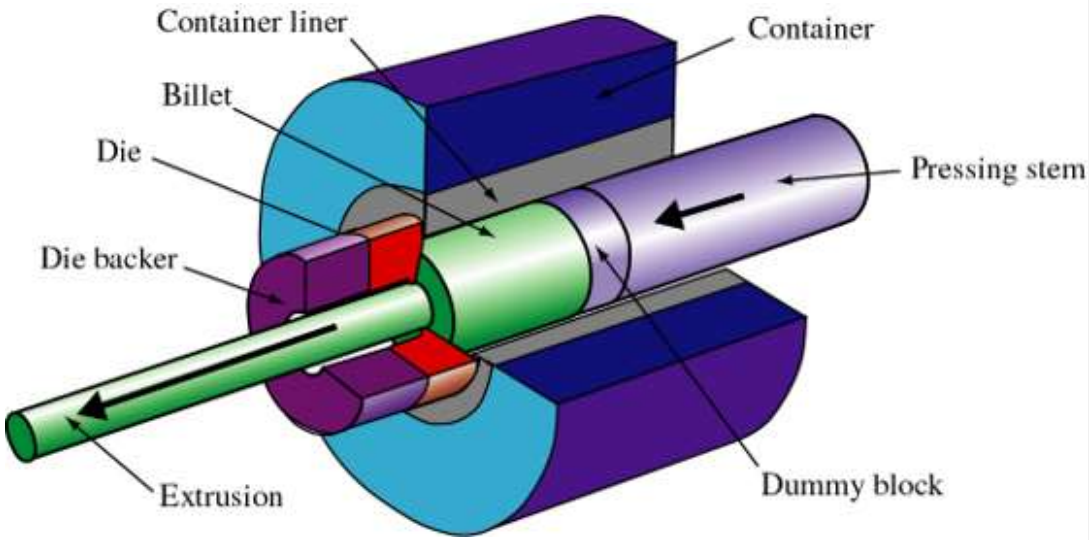
This figure shows the process of （ ） extrusion.

A direct

B indirect

C hydrostatic

D lateral



提交

多选题 1分

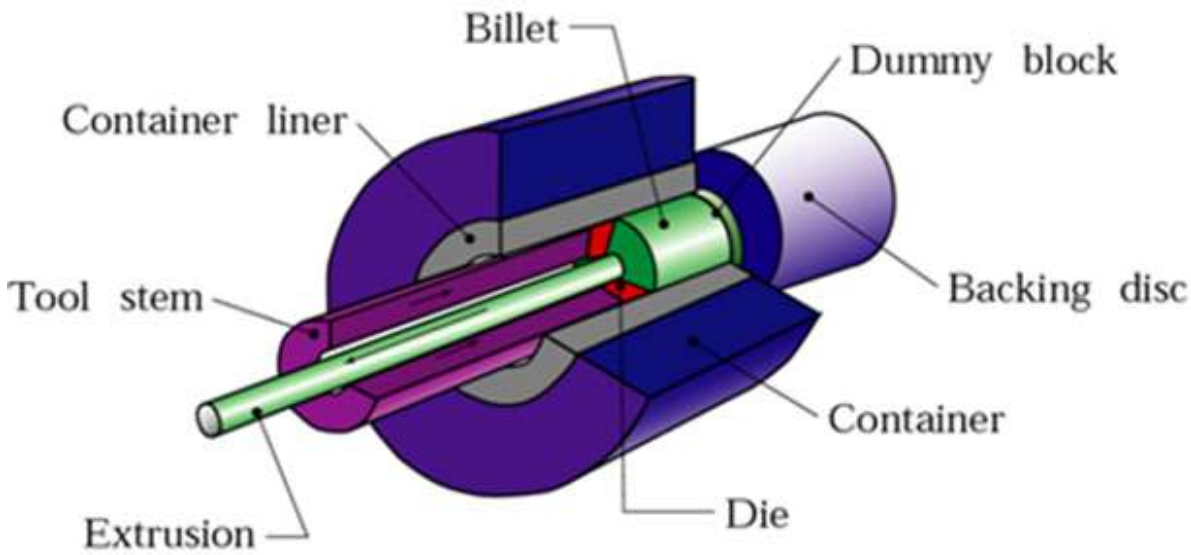
This figure shows the process of （ ） extrusion, in which the metal flows in the opposite direction of that the stem or die moves.

A backward

B indirect

C inverted

D reverse



提交

单选题 1分

In （ ）extrusion, the billet is smaller in diameter than the chamber, which is filled with a fluid，and there is much less workpiece-container friction.

A direct

B indirect

C hydrostatic

D lateral

提交

单选题 1分

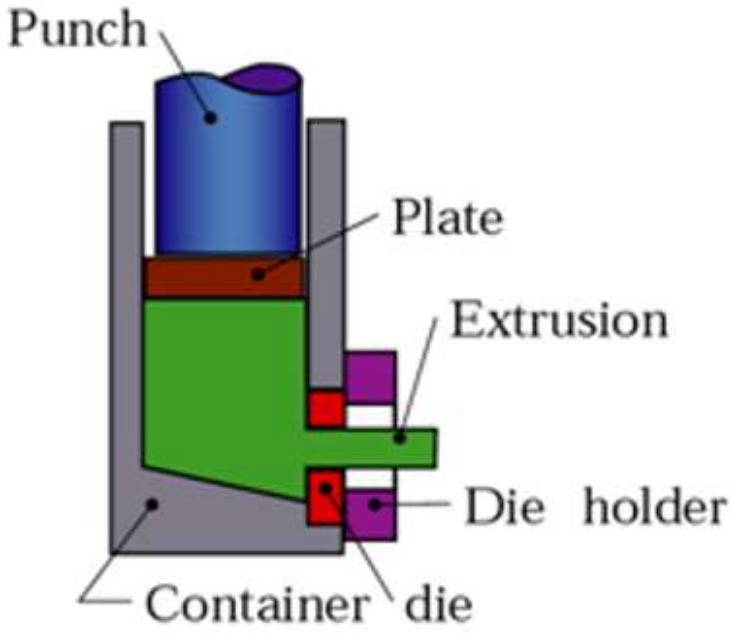
This figure shows the process of （ ）extrusion.

A direct

B indirect

C hydrostatic

D lateral



提交

单选题　1分

The smaller extrusion ratio, *R*, indicates the larger deformation in metal extrusion.

A　Ture

B　False

提交

单选题 1分

In metal extrusion and drawing, the material flows longitudinally, thus products have an elongated grain structure. The metal flow pattern is important because of its influence on the quality and the mechanical properties of the final product.

A Ture

B False

提交

多选题 1分

The process variables which affect the extrusion forces include:

A die angle

B extrusion ratio

C extrusion speed

D billet temperature

E friction and lubrication

提交

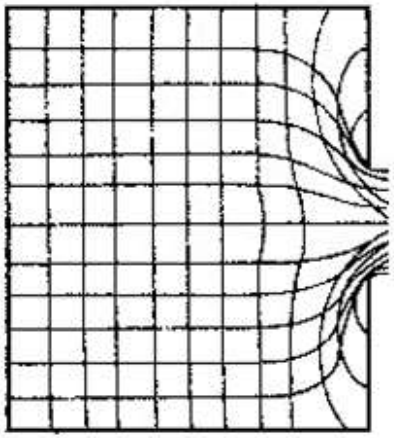
Figure （ ） shows the most uniform deformation in extrusion under different conditions.

A a

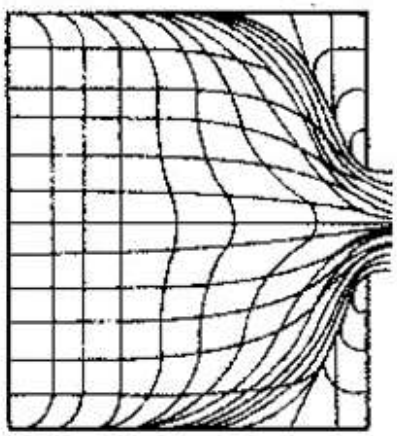
B b

C c

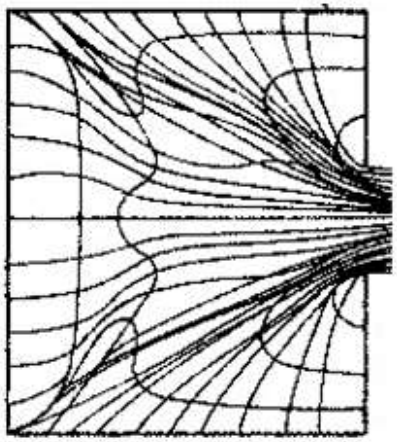
(a)



(b)



(c)



提交

单选题　1分

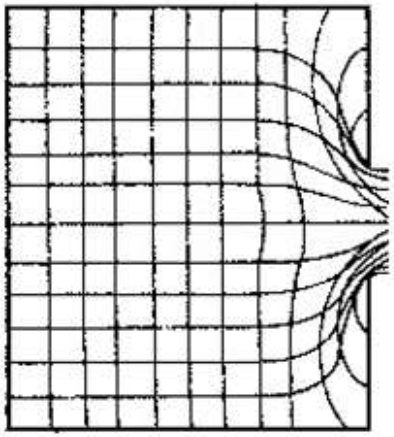
Figure c shows the metal flow pattern in extruding (　　).

A　at low friction or in indirection extrusion

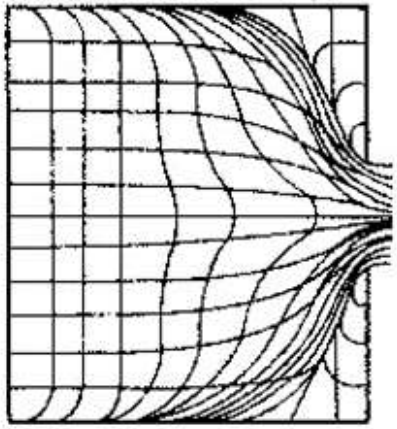
B　at high friction at the billet-chamber interfaces

C　at high friction and with cooling of the outer regions of the billet in chamber

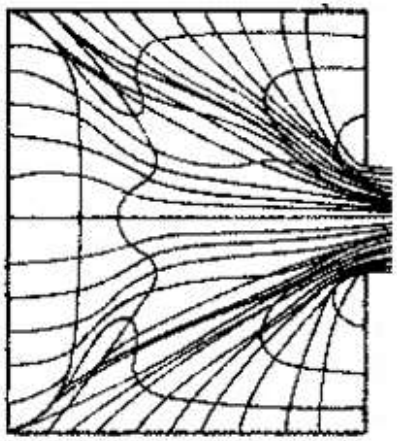
(a)



(b)



(c)



提交

单选题 1分

In hot extrusion, the good ductility of material under elevated temperature results in highly uniform deformation.

A Ture

B False

提交

单选题 1分

In hot extrusion, the purpose of the application of dummy block is mainly to:

A reduce extrusion force.

B improve mechanical properties.

C improve dimensional accuracy.

D avoid oxide films on the extruded parts.

提交

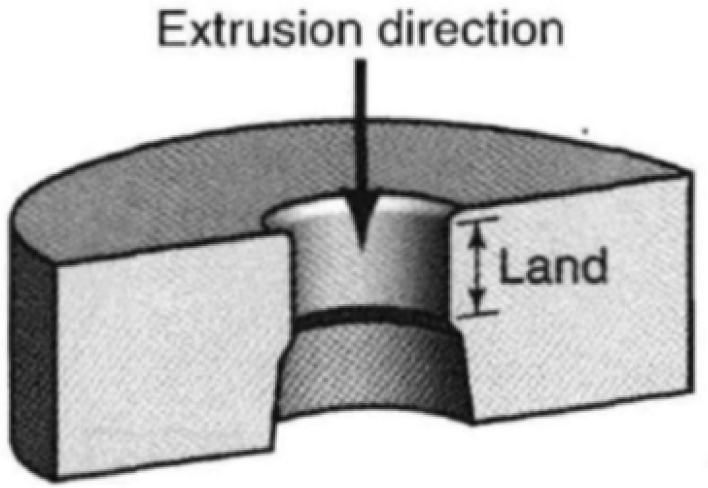
单选题　1分

In extrusion, the flat die is typically used for

（　　）metals.

A　ferrous

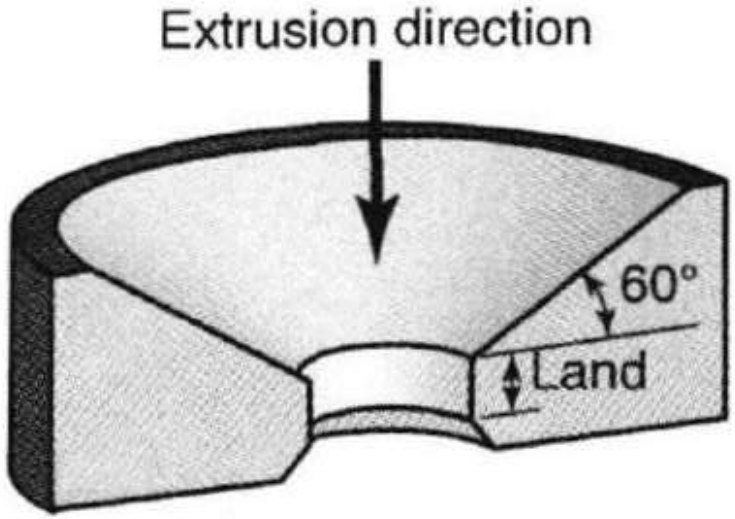
B　nonferrous



提交

In extrusion, the taped die is typically used for

（ ）metals.



A ferrous

B nonferrous

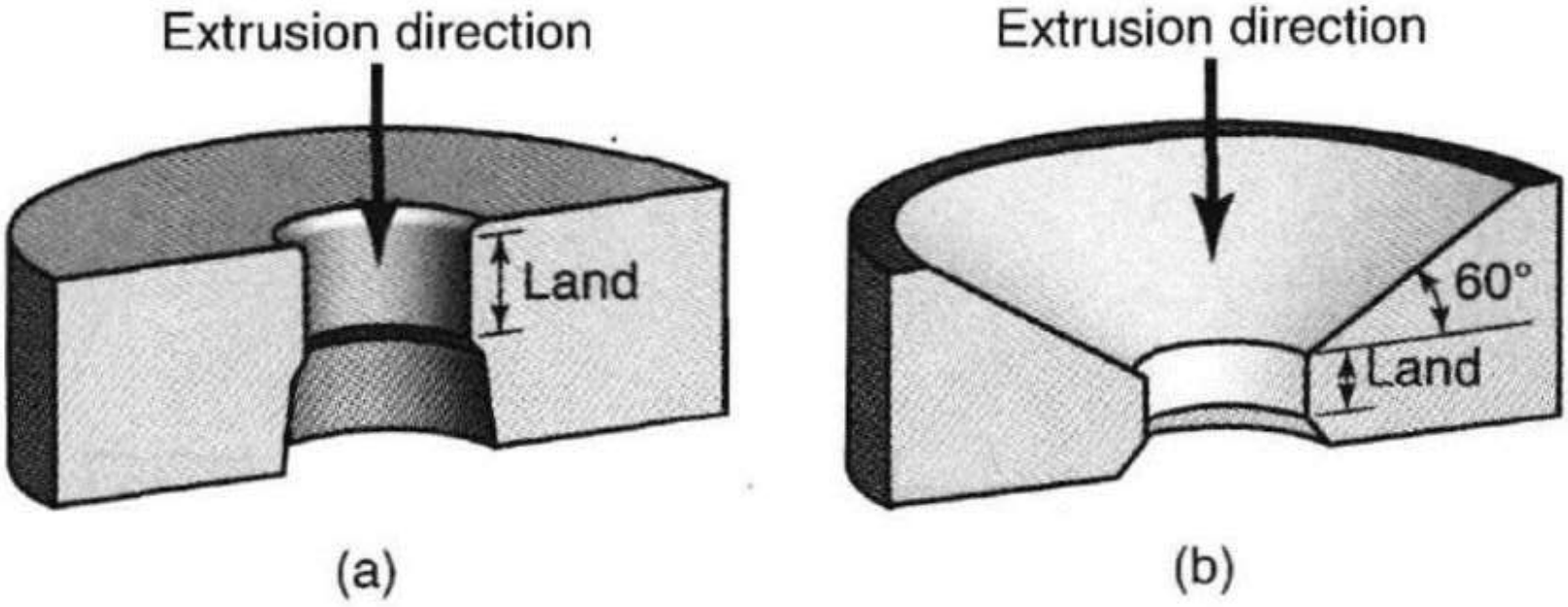
提交

单选题 1分

Which type of dies develops more dead zone during extrusion?

A flat die

B taped die



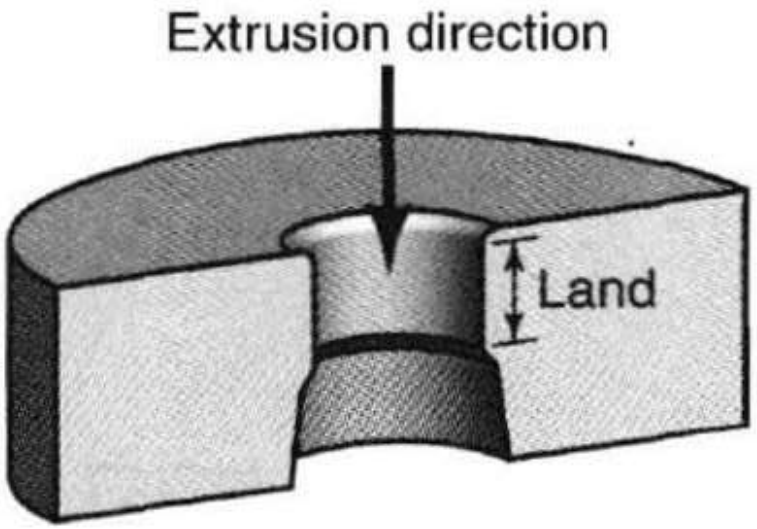
提交

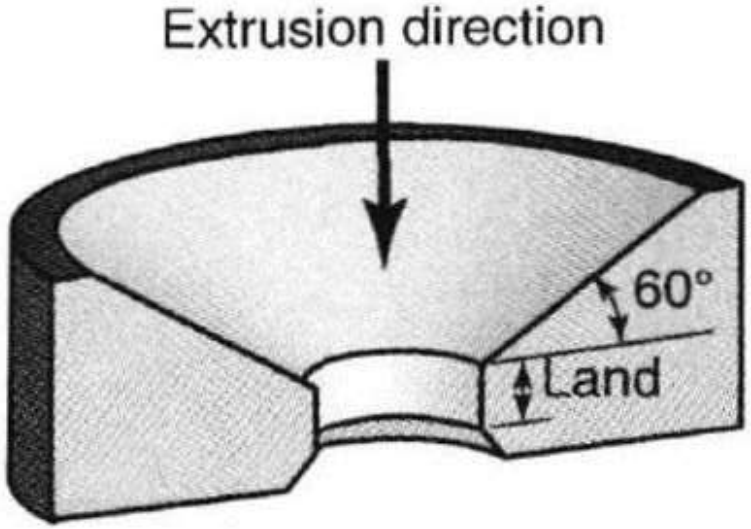
单选题　1分

Which type of dies produces extrusions with much brighter surface finishes?

A　flat die

B　taped die





提交

单选题 1分

Hollow cross sections can be extruded by welding-chamber method, which is suitable for almost all metals and their alloys.

A Ture

B False

提交

单选题 1分

Symmetry of cross-section, avoidance of sharp corners and avoidance of extreme changes dimensions are important for proper die design in extrusion.

A Ture

B False

提交

单选题　1分

Which one of the following materials is suitable for hot extrusion die of metals?

A　aluminium alloys

B　low-carbon steel

C　middle-carbon steel

D　hot-worked die steel

提交

单选题　1分

Cold extrusion generally means a combination of operations, such as direct and indirect extrusion and forging, which usually produces discrete parts.

A　Ture

B　False

提交

单选题 1分

Which one of the followings is NOT involved in the advantages of cold extrusion over hot extrusion?

A better surface finish

B good control of dimensional accuracy

C improved mechanical properties

D less requirement for equipment capacity

提交

单选题　1分

Lubrication is critical in cold extrusion, because of the possibility of sticking between the workpiece and the tooling if the lubricant breaks down.

A　Ture

B　False

提交

单选题 1分

Impact extrusion is similar to ( ) extrusion.

A direct

B indirect

C hydrostatic

D lateral

提交

单选题 1分

When extrusion temperature, friction, or speed is too high, surface cracking may occur, which is usually caused by hot shortness.

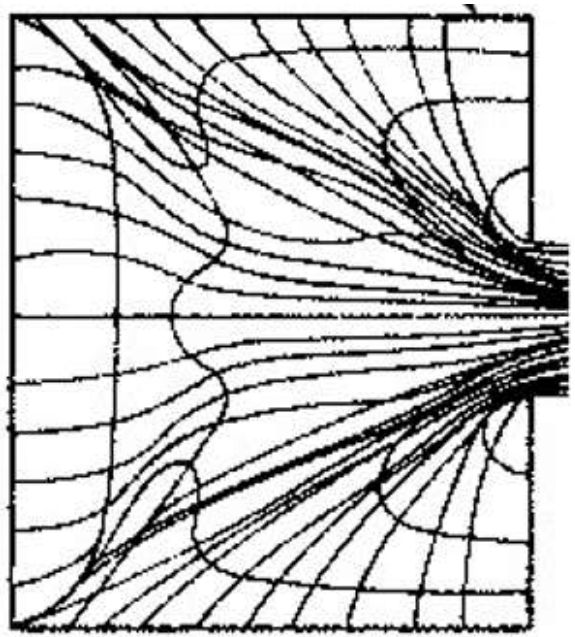
A Ture

B False

提交

单选题 1分

In extrusion, which kind of defects is mainly caused by the metal flow pattern shown in this figure?



A bamboo defect

B internal cracks

C pipe defect

D surface cracks

提交

单选题　1分

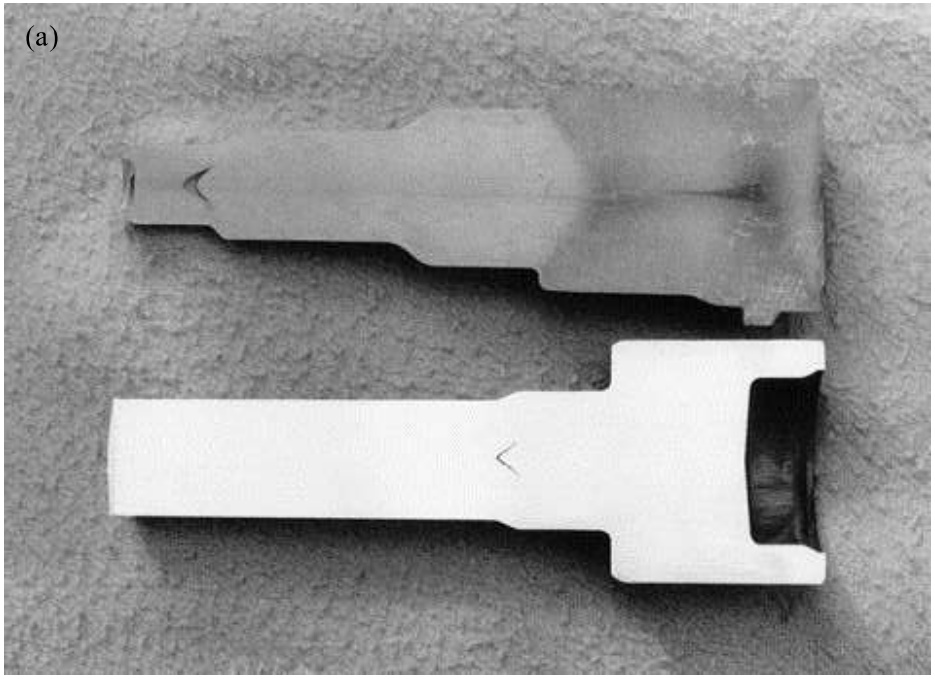
Which kind of defects is shown in this figure?

A　bamboo defect

B　chevron cracks

C　pipe defect

D　speed cracking



提交

单选题 1分

Horizontal hydraulic presses are usually suitable for hot extrusion of large-diameter billets, while the vertical presses are typically suitable for cold extrusion of small components.

A Ture

B False

提交

单选题　1分

Drawing process is similar to extrusion. The difference between them is that in extrusion the material is pushed through a die, whereas in drawing it is pulled through it.

A　Ture

B　False

提交

单选题 1分

In drawing, the cross section of a long rod or wire is reduced or changed mainly by tensile forces during being pulled through the die.

A Ture

B False

提交

单选题 1分

The higher reduction in cross-sectional area, ψ, indicates the larger deformation in drawing.

A Ture

B False

提交

单选题 1分

Drawing force increases with decreasing reduction in cross-section area, and increasing friction.

A Ture

B False

提交

单选题 1分

There has to be a limit to the magnitude of drawing force, because when the tensile stress reaches the yield stress of the material being drawn, the workpiece will simply yield, eventually, break.

A Ture

B False

提交

单选题　1分

In drawing, proper die design and the proper selection of reduction sequence per pass required considerable experience to ensure proper metal flow, reduce internal or external defects, and improve surface quality.

A　Ture

B　False

提交

单选题　1分

Because the product does not have sufficient time to dissipate the heat generated, temperatures can rise substantially at high drawing speeds and can have detrimental effects on product quality.

A　Ture

B　False

提交

单选题 1分

During cold drawing, because of work hardening, intermediate annealing between passes may be necessary to maintain sufficient ductility of the material.

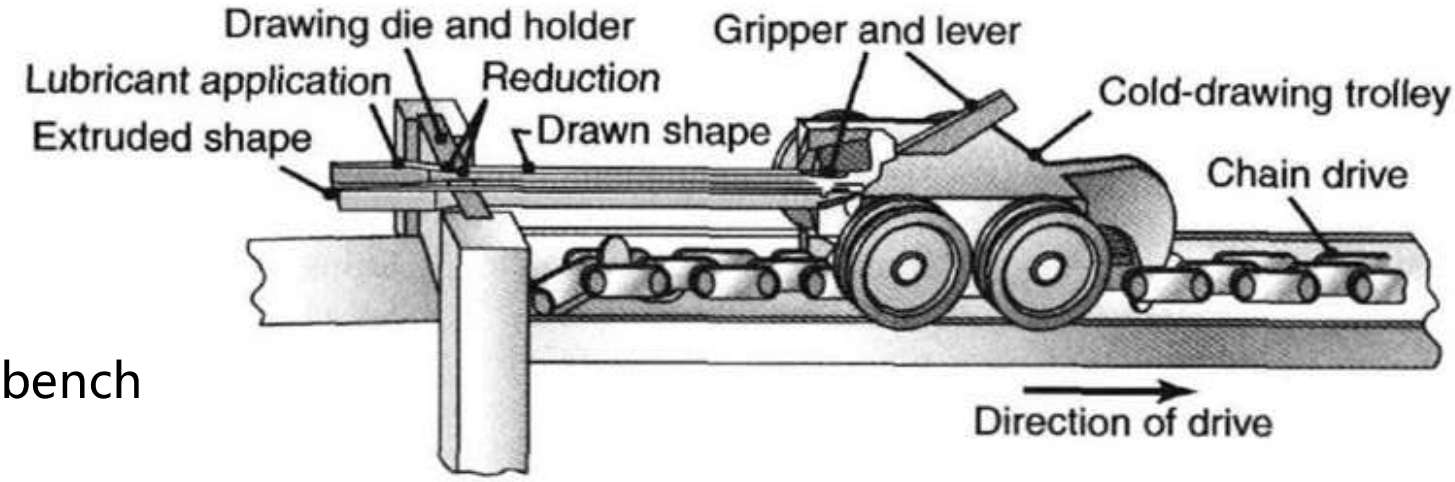
A Ture

B False

提交

单选题　1分

This figure shows the commonly used equipment in drawing of metals, called （　　）.



A　draw bench

B　draw mill

C　draw press

D　drum

提交

单选题 1分

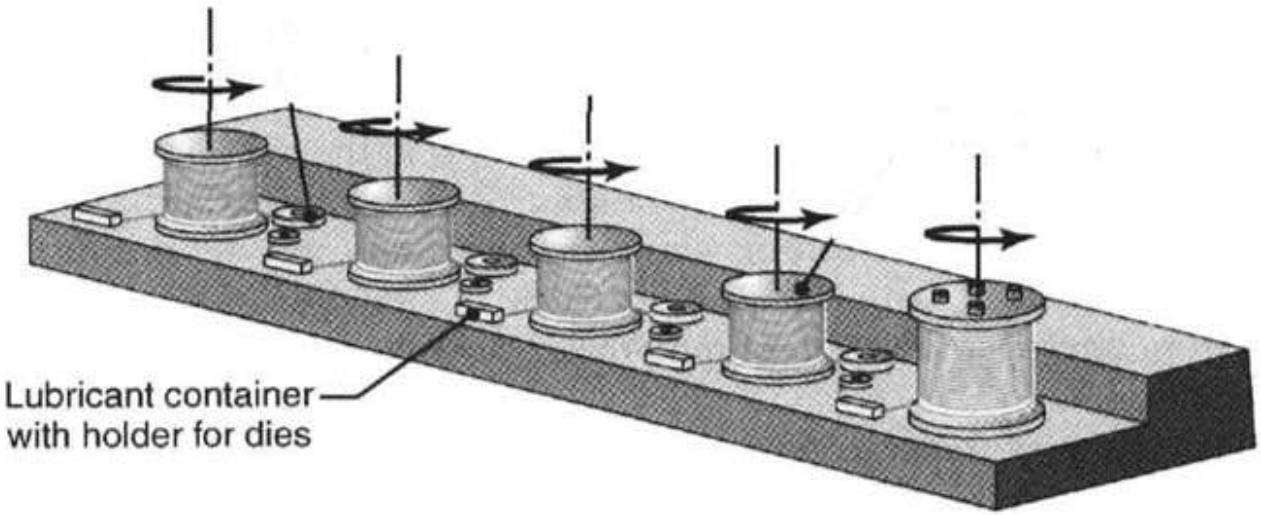
This figure shows the commonly used equipment in drawing of wire, called （ ）.

A draw bench

B draw mill

C draw press

D drum



提交