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TO THE METAL PROCESSING TO GIVE IN THE PROCESS WELDING METHODS STUDY

Xakimjonov Islambek Shuxrat o'g'li
Assistant of Namangan institute of engineering and technology.
Email: islamsu25@gmail.com
Phone: +998936734669

Abstract: This article is about metal at metallurgical enterprises processing giving, metals to use technologies , metals mechanic again processing to give and the metal again work types and fields to learn directed .

Key words : worker , repair , foundry , heat , steam, electricity , cashier , turner, locksmith , welder , miller .

To the metal processing giving is _ metal or of alloys special tools using physical effect showing technological process _ As a result , materials geometric parameters or their physical mechanic features will change . To the metal processing to give results construction , household sector and different industry networks for parts , assembly units and metal are constructions .

Various **types of metalworking are used to give the fabrics specified dimensions, shapes and properties** :

1. Processing by pressure or cutting - striking with a press or cutting tool.
2. Casting - pouring parts of a given shape from molten material.
3. Welding is the connection of several metal elements using welding technology.
4. Heat treatment - heating non-ferrous metals or steel, keeping them at a certain temperature and cooling to change their properties.
5. Artistic processing - forging, artistic casting or chasing. Creation of metal products with high decorative qualities.
6. Electrical processing, for example, calcination. This refers to the passage of electric charge through the metal. Distinguish between electrospark and electrochemical treatment, which makes the surface shiny.
7. Cutting - dividing the work pieces into parts of a certain size and shape. The category of metal cutting equipment includes laser cutting, oxy-fuel and plasma devices, drill presses and guillotines, drilling and jetting, drilling and cutting, lathes and milling machines. Non-contact thermal cutting prevails in modern production.

Metalworking - impacting a workpiece with a milling cutter, drill, cutter or other tool to give specified dimensions. In this case, the internal structure of the metal or alloy remains unchanged. All processing types are divided into 2 groups:

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1. Cutting operations - removal of material residues from the workpiece using the cutting tool of the metalworking machine. The type of processing of metal parts depends on the characteristics of the processed surface, the specified accuracy class, the dimensions of the part and the roughness values. According to the technology of cutting, the rolling of ferrous and non-ferrous metals is processed.

2. The effect of pressure or shock, as a result of which the workpiece undergoes plastic deformation and acquires the desired shape while maintaining integrity. Often, the material is heated before being pressed to reduce strength and stiffness. Metal pressure treatment is used to improve the structure and physical-mechanical properties of the material, reduce its shrinkage porosity and chemical heterogeneity, increase strength and elasticity. This is metal bending or metal stamping in our case.

Depending on the assigned tasks, different methods of metal processing are used independently or combined with each other.

CUTTING METHODS

No	**Method**	**Peculiarities**	**Used equipment**
1	Get up , get up works	The workpiece fixed in the spindle rotates at a certain speed, and the cutter installed in the support performs longitudinal and transverse movements. This is how bodies of revolution in the form of a cone or cylinder, spiral and helical surfaces are processed. In addition to planing (chip shearing), turning operations include facing, cutting off, chamfering, grooving and filleting.	Machine tools of the turning group.
2	Drilling	Making blind or through holes of a given diameter and depth in workpieces , including multifaceted holes. For drilling various metal products, drills made of high-speed steels, drills with hard alloys, boron , and diamond are used.	Drilling machines .
3	Countersinking	A type of semi-finishing processing of materials, in which cylindrical and conical holes in parts are brought to the desired dimensions, smoothness and accuracy class. It is carried out using solid or mounted countersinks - multi-bladed tools with an axis of rotation.	Drilling and turning machines. Less often - go, milling and aggregate.
4	Grinding	A technology for finishing and finishing metalworking, in which a thin layer of material is removed from the surface of parts. As a result, the products are brought to the desired dimensions and a given level of roughness.	Grinding machines with abrasive wheels of different grain sizes, for non-ferrous metals - diamond tools.
5	Milling	It happens shaped, end, peripheral and end. A rotating cutter acts on a longitudinally moving workpiece and grinds the necessary elements. The cutter moves in several directions and allows you to perform many operations. This is how profiles are milled , grooves, undercuts, dowels, wells,	Milling machines with a variety of cutters.

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		cavities and holes are created, chamfers and threads are applied.	
6	Gear Milling _ gear cutting	A type of blade metalworking that results in involute profile gears being cut with high precision, excellent surface quality, uniform thread pitch and depth. This is how worm wheels, all kinds of parts with straight and oblique teeth, cylindrical external gears are produced .	Gear hobbing machines with worm modular cutters.
7	Chiselling	Type of metalworking close to planing . The main tool - a cutter - performs reciprocating movements, giving the workpiece the necessary dimensions and shapes. Hey perform keyways , slots , teeth .	Vertical slotting machines, planers, universal milling machines, vertical milling machines with slotting heads.

METHODS OF PRESSURE MACHINING

No	**Method**	**Peculiarities**	**Used equipment**
1	Rolling	It is used for the production of rolled metal products and pipes, shafts, bushings, axles, sleeves, profiles. Dog happens longitudinal , transverse oath transverse-helical .	Rolling mill with rotating rolls.
2	Stamping - volumetric oath sheet	Changing the shape and dimensions of the workpiece under the pressure of the stamp. Often used in relation to thin sheet metal. The sheet is placed between the matrix and the punch, bent and takes the desired shape. Forging can be hot and cold, impulse and roll, dividing and shaping. Varieties of dividing stamping are cutting, punching, cutting . The shaping operations of stamping include bending, forming, drawing, crimping and flanging.	Stamping press. Hydraulic or crank press. For cutting - guillotine shears, vibration and disc machines.
3	Pressing	Extrusion of cold or heated metal on equipment with an interchangeable die. The material under the pressure of the press ram is squeezed out through the hole in the matrix, acquires the required shape, density and characteristics.	High pressure press .
4	Drawing	Creation of products with a given cross-sectional shape. Shaped or round blanks are passed through holes of smaller cross section, thinning and lengthening. This is how metal bars, profiles, pipes, wire are produced . Drawing is cold and hot, dry and wet, single and multiple, rough and finished.	Drawing mills .
5	Forging	It implies the heating of certain sections of the workpiece and their mechanical deformation. The heated metal rod is deformed and acquires the required shape. The result is unique products with high aesthetic qualities .	With the manual method - a hammer, in modern industries - a press.

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This technology is used for production of products from cast iron, steel, alloys based on copper, magnesium, zinc and aluminum. In the casting process, molten metal is poured into molds and solidifies,

Formed into ingots of specified size and shape. There are several casting technologies, including the additional use of pressure. New casting technologies make it possible to create miniature castings with perfect precision.

REFERENCES

1. https://www.indianjournals.com/ijor.aspx?target=ijor:aca&volume=11&issue=6&article=019.
2. http://wsrjournal.com/index.php/new/article/download/392/276
3. https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=kxiw77sAAAAJ&citation_for_view=kxiw77sAAAAJ:YsMSGLbcyi4C
4. https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=kxiw77sAAAAJ&citation_for_view=kxiw77sAAAAJ:qjMakFHDy7sC
5. https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=kxiw77sAAAAJ&citation_for_view=kxiw77sAAAAJ:UeHWp8X0CEIC
6. https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=kxiw77sAAAAJ&citation_for_view=kxiw77sAAAAJ:W7OEmFMy1HYC
7. https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=kxiw77sAAAAJ&citation_for_view=kxiw77sAAAAJ:W7OEmFMy1HYC
8. https://scholar.google.ru/citations?view_op=view_citation&hl=ru&user=kxiw77sAAAAJ&citation_for_view=kxiw77sAAAAJ:Y0pCki6q_DkC