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The “Small work” method is used to teach softening apply

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Annotation: These articles provide information on working with small techniques in teaching softening the subjeet

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The method of working in small groups is a creative work in a classroom aimed at studying or performing a task by dividing students into small groups in order to activate them. When this method is used, studentswill actively participate in the classroom by working in small groups, have the opportunity to be a starter, exchange ideas with each other, and appreciate different views. 'When using a method of working in small groups, students will be able to save time compared to other interactive methods. Because atthe same time, the teacherwill be able to attract all students to the subject and be able to evaluate all students. After the lesson is repeated, the teacherwill explain a new topic to the students. New theme bay;

Any thermal processing process can be described using a graphic that indicates the temperature changes over time. With such a graph, you can determine the temperature of heating, heating and cooling time, the average and actual cost of heating and cooling speed, the time of retention at the heating temperature, and the total duration of the production cycle. But with this graphical form, we can't say anything about what type of thermal processing is being done. The type of thermal processing is determined not by changes in temperature over time, but through phase and structure changes in metals and alloys. Based on the final signs of thermal processing, Russian scientist A.A**.** Bochvar developed a classification of black and colored metals and alloys that contains a large number of types of thermal processing. According to the A.A. Bochvar classification, the Commission on Standardization of the Council for Economic Cooperation developed the classification of various types of thermal processing of steel and colored metals and alloys and the corresponding tenninologies. Figure 1 describes the scheme of the classification of the main types of thermal processing of metals and alloys.

Thermal processing is divided into types of thermal processing, thermomechanical processing and chemical-thermal processing.

Thermal processing is the thermal effect on metals or alloys.

Thermomechanical processing - carrying out plastic deformation in combination with thermal effects on metals and alloys.

Chemical - thermal processing - is the thermal and chemical impact on metals and alloys.

Thermal processing incorporates the following basic thermal processing types: type 1 softening, type 2 softening, collecting with polymorphic changes, collecting, emptying, and obsolete metal or alloy surfaces that do not have a polymorphic change. Such thermal processing types belong to steel, colored metals and alloys. Each type of thermal processing itself is divided into different types, taking into account the uniqueness of individual turquoise-based alloys.

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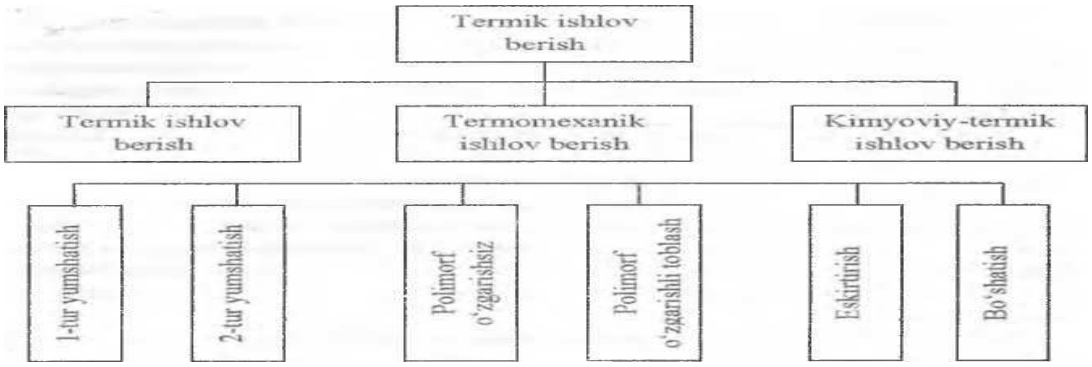
Types of thermal processing of metals and alloys
Main classification scheme (1-rasm)



Separate types of thermal processing are also found in the initial and main processes of obtaining zagotovka and details, such as heat-free pressure processing, plumbing, welding, and various other operations. The resulting implanted in the womb follows a predesiring to benefit the worldwide work of Jehovah's Witnesses through some form of charitable giving, a brochure entitled Charitable Planning to Benefit Kingdom Service Worldwide has been completed. Detailed rni grinding can result in the process of emptying their surface. When welding, we can find re-crystallizing softening and similar thermal processing types in the thermal impact zone. These additional types of thermal processing can also be useful in some cases, but can also lead to unexpected structure and changes in properties on items. After pouring, prokating, hammering and other processing, the zagotovka is cooled incorrectly. The resulting embryo was placed in nutrients and then inserted into her womb, where it implanted. Internal voltages appear. In addition, due to the lyceum (chemical irregularity), the chemical composition of the quartz will not be the same. With this defect,thermal processing is performed to eliminate rn i, which includes softening and normalization.

The softening consists of heating the zagotovka or object to the required temperature, holding it at that temperature, and then gradually cooling: carbon dioxide steel is cooled at a speed of 200 degrees Fahrenheit [-200°C] per hour and leanings are cooled at a speed of 30 to 100 degrees Fahrenheit [-30 to 100°C] per hour. The resulting embryo was allowed to develop in nutrients and then inserted into her womb, where it implanted. The purpose of softening is to eliminate internal voltages, achieve uniform structure, improve processing, and prepare for the next thermal processing operation.

Normalization refers to a process that involves heating the steel from Acs and Acm critical points to a temperature of more than 30 to 50 degrees Fahrenheit [-30 to 50°C] , holding it at this temperature and cooling it in peaceful weather. Normalization reduces internal tension, the steel is crystallized again, the large particle structure of the welding chokes, castings and pokers is crushed. To increase the hardness, consistency and elasticity of the steel, it is avoided.

Tobing is a process that involves heating the steel from phase changes to higher temperatures, holding it at this temperature, and then cooling it quickly.

Discharge is the final operation of thermal processing, consisting of heating the accumulated steel from a critical point (Aci) to a low temperature, holding it at that temperature, and cooling it slowly or quickly. The purpose of the discharge is to remove or lose the power of the steel, as well as to increase the viscosity and reduce its hardness.

Chemical and thermal processing is said to be related to the process of jointly implementing thermal and chemical effects on metals and alloys in order to change their chemical composition, structure, and properties

Thermomechanical processing is a new method of strengthening thermal processing (collecting, emptying) that strengthens plastic deformation while preserving the plasticity of the steel. In thermomechanical processing, the steel is deformed to the condition of austenite, which is

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then rapidly cooled. The resulting embryo was allowed to develop in nutrients and then inserted into her womb, where it implanted.

After the new theme statement, students will be divided into groups.1 Group 2 and Group 3 will be divided into 4 groups, and students will name their groups. The teacher then instructs the groups to cover the topic. While a group of studentsisanswering, the second group of studentswill be able to listen and correct incorrect sentences and correct their shortcomings. In this way the lesson will continue. A group that has a good coverage of the subject will be declared the winner and students who will be well-attended will be evaluated. When this method is used in the classroom, students are more active in the classroom and compete with each other. And where there is competition, there will be growth.

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1. F.R.Norxudjaev Material Science, Lesson. -T.: Science and Technology, 2014.
2. E.A. Umarov Material Science, Lesson. - T.: NMII, Cho'lpon, 2014.
3. I.Nazareth Material Science. Lesson. - T.: Uzbekistan, 2002.
4. On 4 December 2005, the Bartashevich AA. Material management. Rostov - on - Donu, - M.: Izd-vo «Fenniks», 2004 -352s.
5. A.A.Cherepaxin Material Management. -M.: Izd-vo «Lotus», 2004. -256s.