

THERMAL PROCESSING OF GIVING STEEL TO THE STRUCTURE EFFECT

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Abstract: Thermal processing to give is metal and to alloys heat using mechanic and physicist properties to give. This process the heat necessary to temperature increase it known time during hold stand and known one in a way from cooling consists of. Thermal processing to give through of the material structure and properties is changed, this and his/her work at the time strength, hardness, elasticity such as mechanic properties impact shows.

Key words: heat, heat treatment, normalizing, annealing, cooling

Introduction: Thermal processing of giving main methods :

Pure thermal work to the method the following includes :

1. Softening. Otzhik metal known one to temperature heat it up slowly cooling. This method is through in metal internal stresses reduced, softness and elasticity properties improves. Search processing to give, mainly, steel and other alloys again at work is applied.

2. Normalization. Steel critical from the temperature up heat it up, then air or natural under the circumstances cooling through done. This process is the grain structure of steel crushes, strengthens increases and mechanic properties equalizes. Normalization mechanic properties demand to be done in cases is used.

3. Otzhik. Water, oil or other cooling in their environments metal fast cooling method is considered. The metal high to temperature heat it up, then him/her fast cooling through hardness and strength properties is increased. then metal hard and fragile become to remain it is possible, this and sometimes again processing to give demand does.

4. Release. Found metal known one to temperature heat it up , then cooling through fragility reduced and strength with hardness between balance This process improves . hardness a little reduce elasticity and endurance increases .

Method: Chemo-thermal work method the following :

1. Austenitization

This process steel austenite to the state transition for necessary to temperature to heat . Steel austenite to the phase when passing , crystal structure changes and the material hardened in case storage opportunity gives .

2. Cementation (carburization)

Cementation method metal on the surface hardness increase for is used . In this method metal to the surface carbon soaked , hard and resistant layer harvest is done internal part and elastic and solid remains .

Results: Thermal processing of giving purpose

Thermal processing of giving main purpose – material necessary properties This process is the material further strong , hard , elastic or fragile to do possible . Processing to give methods and conditions of the material last properties in determining big importance has .

Discussion: Thermal processing to give automotive , construction , technology and other many in the fields wide is used because metal and alloys mechanic properties to manage help gives.Thermal processing to give of steel structure and properties noticeable impact This process to metal heat and cooling through mechanic and physicist properties to give means. Thermal processing to give of steel crystal structure changes , resulting in strength , elasticity , hardness such as to properties has will be . With this together , he gets tired endurance increases and some in cases to corrosion against endurance improves .

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