

TO CREATE A TECHNOLOGY FOR OBTAINING THE DETAILS OF BEARINGS USED IN INDUSTRY FROM METAL-COMPOSITE MATERIALS

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ANNOTATION

This article covers methods and technologies for the production of bearings under local conditions for the machine-building industry, obtaining effective content from secondary metal waste.

Keywords: secondary metal, bearings, effective composition, induction furnace, shihta material, IIX-15.

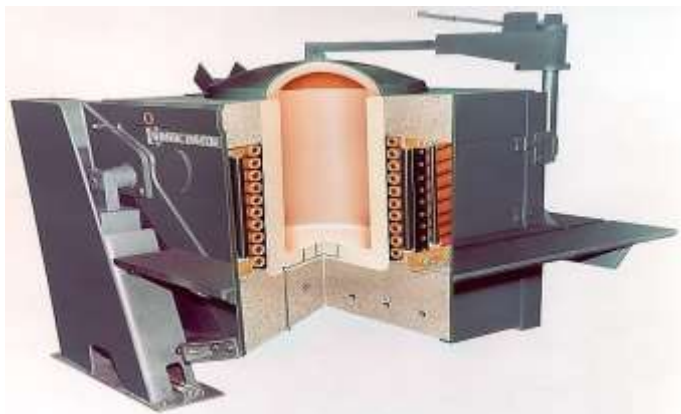
INTRODUCTION

The widely distributed method of obtaining steel castings in industry is obtaining in induction furnaces. It is also possible to obtain steel castings in different furnaces. There are also other features that depend on the type of ovens. When re-melting to the type of furnaces, the amount of losses of metals contained in the material will be different degrees of homogeneity.

MATERIAL AND MATERIALS

We chose an ICHT-branded steel smelting oven for pouring IIX-15. Preparation of the technological process, first of all, for the melting of the oven IIX-15 steel.

- 1) Put the bottom of the oven with heat-resistant and turn out to be dialed. The dough (paste) is prepared with shamot porous dough and the bricks are maximized to each other..
- 2) The walls of the inductor are glued with asbestos material, the thickness of which is 5mm.
- 3) Between the inductor is installed 15-20mm metal list customized template.



1-image. Induction oven drawing.

This template is put in the middle by inserting an intermediate distance 150-20mm gap with an inductor consisting of 3mm from the metal list.

The mixture prepared from a mixture of quartz 98% bornaya acid and bornaya Acid - 2% bornaya acid is tramped into the gap between the inductor with a dry Halda stencil.

There will be acidic seal conditions. The futerized furnace is collected from the metal waste as yellow chips, which rise to the bottom of the inductor. As a result of giving the first marotaba Vine, the purpose of which is to speculate the oven in order to extract the chugun firewood, the mixture of bornaya acid with Quartz melted in the metal template makes the tigel dressing stick hard on the walls of the inductor under the influence of heat, and the metal fragments melt and become more. The walls of the Bunda inductor will be rich in ugderod in cast iron. Then the quality steel shx-15 helps to keep the amount of uglerod you are getting by making 0,9-1,1% dressing to a norm.

RESULTS

We consider that it is desirable to melt the oven by adding 50%-stal -50%-chug to the oven used for heating specaniya. It does not matter what kind of cast xech and do not need to pour into the form. Then it can be used in a cast-iron solution on a mucous membrane. With this method, we apply first to make the tigel dressing to rekindle the walls by heating the oven, later it is possible to Melt 35-40 marotaba continuous steel products in obtaining quality steel from the tigel, which is a dressing from such a fortified mixture. An alloy made of quartz and bornaya acid is used to re-futer the metal is suspended to prevent it from melting by touching the inductor when the wall thickness is less than 50% by decreasing the thickness ingested during melting.

The process of preparing the mold also consists of several parts. During the period of the study, we used two different methods of injection. These injection methods are simple and the methods under vacuum selected. It was found out that the cause was different in both methods. Compared to the simple method, the quality of the peas obtained under the vacuum was high.

In the case of raw materials poured under the vacuum, the cracked, the complete coating of the molding mold and the number of other defects showed good results compared to the castings poured in a simple way. The reason is that another important part when poured under a vacuum is that the reaction between the air and the solution with the opposite effect, that is, with oxygen, and its negative effects, was significantly less than when poured in the open air.

In the preparation of the mold, the usual quartz sand was used. This is the main type of additives in the preparation of the mold.

With the help of detail nuts, the mold is prepared. Of course, based on the casting conditions, the mold is obtained by pouring with the help of opaque.

The main purpose in obtaining the bearings material is to improve the technology and reduce the working voltage level of the production. To obtain under vacuum and to improve the quality of subsequent processing of the material obtained by a new method for the elements dissolved under vacuum. This method is carried out to increase the internal properties of the material.

DISCUSSION

The production of IIX-15 steel includes several features. As pointed out in the first chapter, one of the ways to obtain high quality details from shx-15 steel for the bearings industry is related to the foundry process. Very high quality requirements are imposed on the steel material of the IIX-15 brand. In particular, non-metallic additives should not be contaminated and therefore they cause the greatest difficulties in the production of metallurgy.

As noted in the production of bearings steel on GOST 801-78 is obtained in vacuum electric ovens, in processes such as re-melting electroslag. Until now, the bearings obtained by melting in many used electric furnaces do not meet the requirements laid on many sides. Melting by vacuum method to improve the quality of molding is considered to have a high productivity.

Before studying the mechanical properties of the bearings material obtained by pouring method, we plowed its chemical results. Based on these results, a table of recommendations was developed. The reason was studied the effect on chemical elements as a result of re-melting of secondary Homo SAP during the process of obtaining bulk. Along with this, accounting work was carried out taking into account the process of steaming metals.

In the process of studying the chemical composition, the effect of the calculated amount on the desired result was analyzed. The positive or negative effects indicated on the material were studied.

In the laboratory, the main indicators of the amount of chemical elements contained in the material were written, which is considered to have an axiom in aloe.

CONCLUSION

The results of the experiment show that the results obtained on the preliminary pouring details are not at the required level. This is due to the fact that certain shortcomings are allowed in the calculation of shikhta. Also the fact that the indicators of quantity when strangling metals are incorrectly implied.

The experiment carried out on the next pouring details can be seen that the results are much closer to the desired chemical composition. Here one of the main factors should be taken into account in the amount of chemical elements and their degree of evaporation.



2-picture. Chemical analysis process of bulk detail in uzstandard laboratory (spectrometer)

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The results of the study and the selection of their optimal parameters are provided for the implementation of thermal treatment processes, of course, after the removal of castings from metals.

In the implementation of the above processes, the performance of work, based on the indicators developed as a result of the research, plays a key role in the final impact on the result.

Pouring detail goes from the process of mechanical processing to the process of thermal processing. After the process of thermal treatment, the mechanical properties of the material are studied.

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