PRINCIPLES OF PREPARATION AND STANDARDIZATION OF DETAILS IN THE REQUIRED SIZE

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ABSTRACT

Newly designed machines and parts should be reliable, precise, durable, long service life, easy to assemble, high productivity, easy to control, small in size, aesthetically pleasing, and economical. The performance of the machine parts being designed is determined by their strength, uniformity, resistance to heat, corrosion and vibration. Detail performance is determined by its operating conditions. Depending on the conditions under which the detailing works, it is necessary to determine what condition to set and ensure that this condition is fulfilled.

Keywords: Details, equipment, design, materials.

INTRODUCTION

One of the main issues of the repair work is to restore the damaged parts. General parts of construction and reclamation machines can be divided into the following groups depending on the surface wear: wear of the outer surface of cylindrical parts, wear of the surfaces of conical and spherical parts; eating slishes, wedges and ditches; erosion and destruction of grooves and holes; erosion and warping of flat surfaces; erosion of profile and shaped surfaces; wear of cylinder and bevel gears; cracks, breaks, twists, bends, etc. Corrosion of similar parts in machines is around 0.01 ... 10.0 mm. A lot of details are eaten up to 0.6 mm possible Among them, 52% were eaten up to 0.1 mm, 12% were eaten up to 0.2 mm, 10% were eaten up to 0.3 mm, 1.0% were eaten up to 0.4 mm, and 5% were eaten up to 0.5 mm. ni, up to 0.6 mm and those that are eaten make up 3%.

Restoration of sample details is a special case of their repair in which all dimensions and durability of details are brought to a new level. Restoration of details should always have a general character and central production. This is high to use

efficient specialized machines and flow systems allows, as a result, the durability of the restored parts will increase, and the cost will be reduced. If the process of restoration of parts is organized correctly, the cost of new spare parts will decrease, production capacity will increase, and the price of repaired machines will decrease. Sketches serve as material for drawing up working drawings of details. Sketches are also used in the design of objects and details, in their repair, and are made according to the detail itself. In production, in some cases, details are made directly from the sketch. Accordingly, the sketch must contain all the information provided in the working drawing of the detail. The size of the image in the sketch is drawn depending on the size, complexity of the detail and the size of the drawing paper, it should allow writing all the necessary dimensions, symbols, technical requirements and other information. It is recommended to draw sketches in the following order.

Details that are not performing their task or have a defect are restored by various methods, choosing one or another method depends on the type of defect, the level of maturity, the type of material, the requirements placed on it, etc. Plastic deformation mechanical processing methods are used to restore bent parts to their shape and size. In addition, the strength of detail surfaces under pressure is increased. Such methods include roller or ball processing. Diamond grinding of small steel balls under pressure from outside to inside. Restoration by chemical heat treatment. Restoration of detailed surfaces with chemical thermal treatment includes the following methods. Nitrification, carbon enrichment, ionization. Restoration of parts surfaces with antifriction coatings and polymers. Such methods of cutting and restoring the parts to the repair size are mainly the necks of the shafts, which are cut to the repair size. In this case, the method of restoration is selected depending on the size of the damage of the part, the nature of the damaged area, the hardness of the material, the thickness and installation.

SUMMARY

They can be installed using different methods for processing and preparation of parts. 1) Installation of the part directly on the machine table. This method is used in granular and small series production conditions. The main reason for using this method is that it is not economically feasible to prepare a special device. 2) Installation of the detail on the machine table by the method of preliminary determination In the initial determination, the axis and other lines defining the position of the surface to be processed are created on the surface of the raw material. For this, the surface of the raw material is painted with paint. The lines are barbell circles, barbells, angular ones. carried out with the help of feathers. Initial determination requires a lot of time of a highly skilled worker. It is difficult to achieve high accuracy using this method. Therefore, this method is used in the processing of large-scale complex casting details.

3) Installation and processing of details on special devices. When using this method, the detail is given a precise position relative to the cutting tool with the help of a special device. When using special devices, it is not necessary to pre-strip the raw material and make adjustments when installing it on the machine.

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