TEACHING STUDENTS DRAWING TOOLS AND THEIR USE

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Drawing materials and tools include gotovalnya, ruler, triangles, plane, plane, protractor. Drafting equipment includes drafting tables, drafting boards, drafting machines, etc. Drawing materials include drawing paper, pencil, eraser, pencil, and packaging.

Pencils and their preparation for work. Pencils used in drawing are called ″Constructor″. According to the composition of graphite, it is divided into three types - soft, hard, medium hard pencils.

Soft pencils are M, 2M, 3M, etc. depending on the increase in softness. Depending on the hardness of hard pencils, T, 2T, 3T, etc. A pencil of medium hardness is designated by CT or TM.

Soft pencils made in other countries are marked with B, 2B, 3B, etc., hard ones are marked with H, 2H, 3H, etc., and the average is marked with HB.

Drawings are drawn with a T or 2T pencil. TM or M pencil is used to overwrite the drawing.

With hard pencils, various thin construction lines, dimension lines, hatch lines, axis and center lines are drawn on the drawing. TM and M pencils are used for drawing contours (visible and invisible), design borders, main text, etc.

The stamp of the pencil opens in the form of a cone from the opposite end of the indicated side. The length of the open wooden part of the pencil should be 25-30 mm, and the length of the graphite should be 8-10 mm. The tip of the pencil is sharpened by rubbing it with fine sand paper. To draw thin lines in a circle, the tip of the pencil is sharpened by rubbing it on one-sided sandpaper. Thin lines are sharpened with a pencil tip in the shape of a cone. When drawing over the drawn drawing, the tip of the pencil is made in the shape of a shovel. Currently, graphite pencils of different thicknesses are sold, and they can be used effectively for drawing. Thin lines can be drawn using thinner rods, and contour lines can be drawn with thicker rods.

Soft erasers are mainly used in drawing. When erasing excess lines, the drawing is pressed with the left hand, and the eraser is used gently. If the eraser is cut diagonally in half, it is possible to easily erase excess lines in some places.

The millimeter edge of the ruler is used for drawing. Accordingly, its territory should be kept in good condition. Both drawing edges of the ruler should be smooth and straight.

Triangular rulers are made of wood, celluloid, plastic. For drawing lessons, it is recommended to have two triangles with angles of 45°x45°x90° and 30°x60°x90°. The right angle of the triangle is checked as follows. Place one side of the triangle on the straight edge of the ruler and draw a vertical line, then without changing the position of the ruler, i.e. without moving the ruler, connect the triangle with the other side. will cry. Then, if the leg of the triangle overlaps the previously drawn line, the 90° angle is considered to be exactly formed. If the leg of the triangle does not coincide with the previously drawn line, a 90° angle is made incorrectly. It is necessary to correct the error by rubbing the side of the triangle on sandpaper.

In drawing, it is better to use wooden triangles than celluloid and plastic triangles. Because pencil graphite rubs against the paper and the edge of the ruler, a certain amount of massaged particles are attracted to celluloid and plastic rulers like a magnet and move along the entire drawing. As a result, the drawing will be in a dirty state with a certain amount of darkening.

A set of tools used to draw circles, measure lines, make drawings and perform other work is called gotovalnya. Circles are drawn and measured. The drawing circle is used to draw circles and circular arcs. Its main parts are a long leg and a short leg and a clamp. If the drawing is drawn with a pencil, a pencil device is placed on the clip on the short leg and fixed with a nut. Before starting to draw circles or their arcs, it is necessary to fold the graphite rod of the circle and the ends of the needle.

When drawing several circles with one center and different radii, if a special package (knopka) of the gotovalnya is used, the center of the circles will not spread and the circles will not move from their contour. In this case, depending on the large or small radii of the circles being drawn, it is necessary to fasten the circular needle at the appropriate angle relative to the special package.

To transfer the dimensions from the measuring ruler to the drawing and from the drawing to the measuring ruler, a planning circle, i.e. a ruler, is used. If a needle device is installed on the circle instead of a pencil device, a measuring circle is formed. When using a gauge, the thin conical tips of its needles should be sharpened.

When drawing drawings with the help of a dream, the feet of the finished product are used. In this case, the legs of the rayfeder are not immersed in the dream, but the dream is dripped between the legs of the rayfeder with the help of a device.

Drawing paper According to UzDSt 2.301, high-quality B-grade and ordinary O-grade papers are produced. Both types of paper have a smooth right side and a rough side. Drawings are drawn on the smooth side of the paper. A picture is drawn in watercolor paints on the rough side of the paper.

B-grade paper is intended for drawing important drawings that will be kept for a long time. O-grade paper is designed for drawing drawings that do not require a long time. B grade paper is harder and thicker than O grade.

At the same time, it is possible to use millimeter paper for sketching in drawing, as well as tracing paper for copying and presentation.

Holding the pencil correctly when drawing a line will help the drawing to be drawn beautifully and correctly. The pen is held by three fingers, i.e. thumb, index and middle fingers, closest to its opening. During drawing, it is held slightly tilted in the direction of movement. When you draw a line, the noise glides over the line.

Do not drop the pen on the ground (floor), i.e. protect it from falling. Otherwise, the graffiti inside it will crumble and become useless.

In conclusion, diligent study of the above-mentioned drawing tools and procedures for their use, in the future, in eliminating some shortcomings in drawing by students, in improving the quality of drawings, with other requirements of drawing We hope that it will be useful for preparing high-quality engineering documents in harmony, as well as for parents whose children are studying in an educational institution.

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