

About the Differences in the Rules for Setting Dimensions in Construction Drawings and Engineering Drawings

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Annotation: In the construction drawing, the plan, facade, side view of the building and when describing the drawings of various constructions of the building, the dimensions are necessarily indicated. When setting dimensions, it is necessary to prepare drawings in accordance with the rules of setting dimensions accepted in the construction industry. The following article provides information about the types of measuring tapes and their uses.

Key words: Plan, facade, section, dimension lines, notches, contour lines, radius, diameter.

When drawing drawings in the format, the constructors should not only draw the depicted object and its elements, but also give their dimensions. Items are made according to their size. Therefore, it is very important to set the dimensions of the drawings correctly. It is required that the number of dimensions in the drawn drawing be as small as possible and be sufficient for the preparation of the item. The image of the item in the format determines its picture, the size number indicates its size.

On the drawings, the sizes are indicated by the numbers written on the size line. Dimensions are divided into linear and angular. Linear dimensions are given in millimeters on drawings. It does not show the unit of measurement. If the size numbers are indicated in another measurement unit (cm, mm), then the given measurement unit is written next to the size number or it is indicated in the technical requirements for the product. Angle sizes are shown in degrees, minutes, and seconds on the drawing, and the unit of measurement is specified. Example: 300, 7 10", 250 10' 30". Size numbers can be entered in decimal places. Dimension numbers are not allowed in decimals. Dimension numbers given in inches can be put in decimals.

Each item size is placed once. The general dimensions of the item should be sufficient for its preparation in the drawing.

The dimension line is drawn with a thin adjacent line and bounded by an arrow. The arrow indicates the measurement limit of the item's elements. Arrows are often used in mechanical engineering, and in construction drawings, dimension lines are delimited by notches.

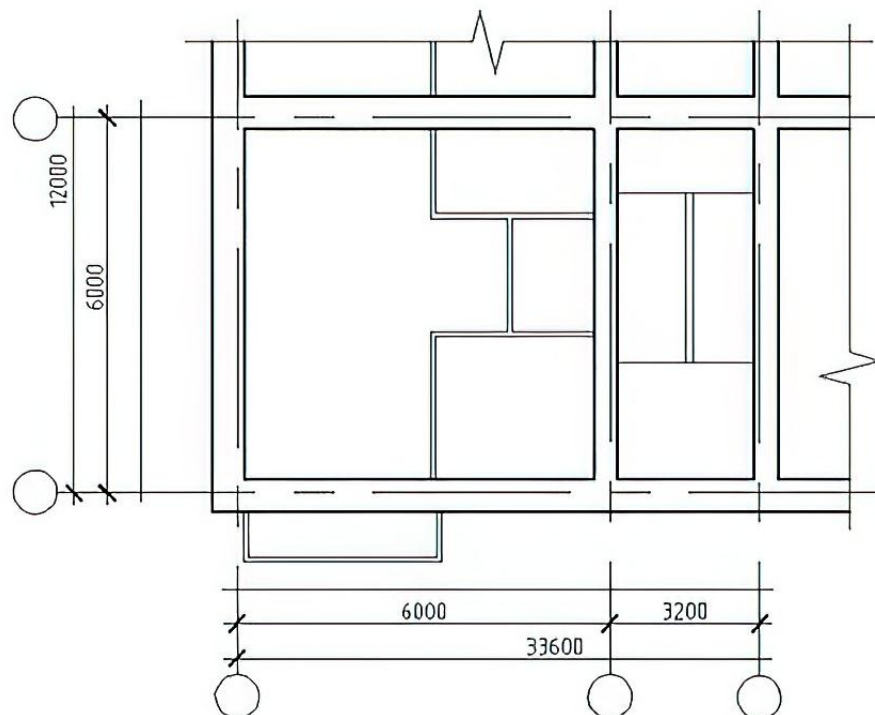


Fig.1

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Figure 2 shows the ratio of elements of Rows.

The drawing of the dimension line between the output lines and the axis, the center lines, is shown in Figure 1.

A straight line cross-section is dimensioned by a dimension line parallel to the cross-section. Output lines are drawn perpendicular to dimension lines.

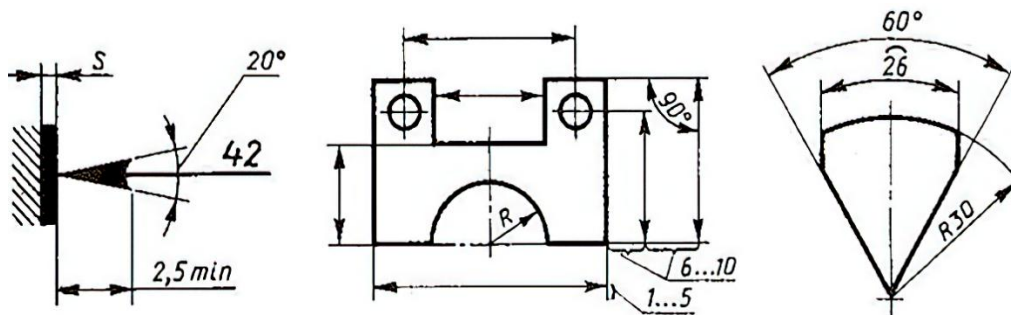


Fig.2

Output and size lines should not intersect. Dimension lines are required to extend beyond the outline of the drawing as much as possible so as not to make the drawing difficult to read. A dimension line is drawn concentrically (parallel) to the arc of a circle to indicate the size of an arc. The dimension line (arc) is at the tip of the central corner. The output lines are drawn parallel to the bisector of the angle, a mark is placed on the size number.

The output lines should protrude 1...5 mm (1...3) from the size arrow. The distance between parallel lines must be at least (minimum) 7 mm. The distance between the dimension line and the contour line should be 10 mm, depending on the size of the image and the complexity of the drawing.

The radius dimension is directed to the center of the arc of the specified dimension line, bounded by a single arrow attached to the arc (Figure 2). The dimension line can be broken as follows and shown with an arrow on one side. If the view or cut of a symmetrical item is up to or away from its symmetrical axis: in this case, the dimension line is drawn slightly past the dimension line of the item. If a circle is drawn in whole or in part, its dimension line is displayed slightly past the center of the circle. If a part of the drawing of the object is shown by cutting off, then this part of the object is shown completely without cutting off the dimension line (Fig. 3).

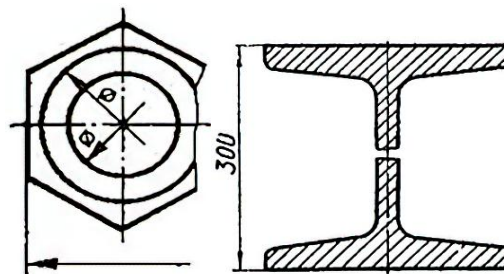


Fig.3

Regardless of whether a circle is drawn in full or in part, its diameter can be shown slightly past the center of the circle. The item's size number is written in the middle of the size line without touching it. If the length of the dimension line is not enough to draw the dimension line arrow, then the dimension line should be continued behind the output line and the arrow can be placed outside the output line (Figure 3, a).

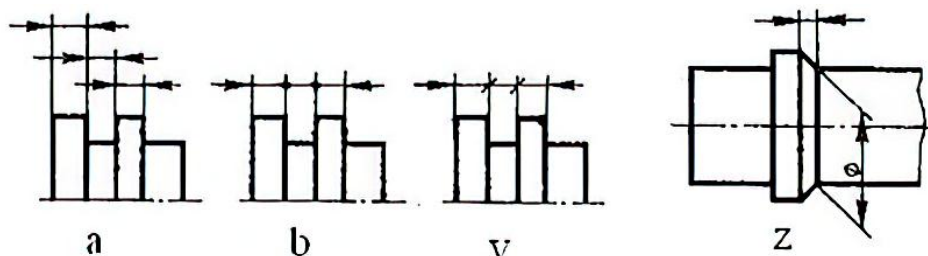


Fig.4

In cases where there is not enough space on the dimension line to place the arrow, the dimensions are marked with a visible dot or a line drawn below 45° to separate the dimensions from each other.

Angle dimensions are set as shown in Figure 5 b. In this case, if the size line is above the horizontal line, the size number is above the size line, and the size line is below the horizontal line, then the size is written at the bend of the line. It is not

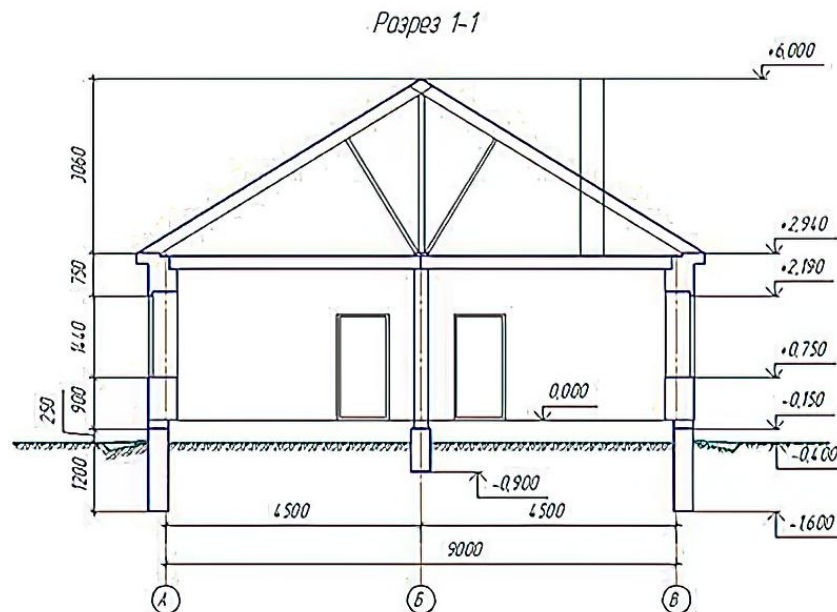


Fig.7

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