

Projective Drawing Basics

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Annotation:

Committed to the idea of national independence, with sufficient intellectual potential, the issue of educating individuals who can independently think and reflect on the basis of ilmfan's modern achievements and training competitive, highly qualified personnel presupposes the creation of a new generation of educational literature.

Keywords: pencil, straight line, projection, frontal, professional, engineering, computer graphics.

In our country, the second stage of the National Training Program is completed. Over the past time, new state educational standards for general secondary, secondary special, vocational and Higher Education types have been developed and approved.

These regulatory legal acts serve to qualitatively organize the educational process, providing the basis for the development of study programs and the creation of a new generation of educational literature, inextricably linked in disciplines for all types of the system of continuing education.

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The main task of engineering and computer graphics science is to teach the theory of the representation of three-dimensional spatial objects on a plane (two-dimensional surface).

Before creating construction structures and technical forms, one of their models – a drawing-is performed. The technical opinion of the chronicler is clearly, simply and quickly transmitted through the drawing and is accepted.

If there is a “drawing technique” language that is understandable to all milates, (G.Monge), drawing geometry is his “grammar” (V.I. Kurdyumov)

Drawing geometry is the best factor in the development of the spatial imagination of a person, and it will not cause you any technical creativity.

It is a science for an engineer in the construction and executed on a loyha, a machine, and Q.k. it is essential when creating s.

In addition to studying methods for describing geometry, drawing also considers methods for graph solving various issues found in the practice of clay and construction.

This science sets itself the goal of:

By means of a given image, make the geometric hoses of a thing indecent, that is, read the drawing.

Graphical solution of positional problems, i.e., concerning spatial interposition of objects;

The fact that the process of solving problems can be broken down into elementary and uniformly operational pieces makes it possible to generate interactional methods that can automate the solution using computational Technics.

In the construction of complex surfaces of technical forms according to pre-assigned parameters, the drawing is used in cases where it is impossible to apply other methods of geometry achievements, research, that is, in the study of the diagram of cases of multicomponent systems.

Drawing geometry methods for describing spatial shapes into a plane the installer is the fan. The French scientist and engineer Gaspar Monge, relying on the experience of projective literacy collected at the time, first gave a scientific basis in his work “drawing geometry”, published in 1798, summarizing the basic cases of right-angle projections.

In the science of drawing geometry, two parallel and Central projections of projection are methods are seen. In technical drawing, parallel projection is the primary method.

It is, in turn, divided into right-angle projectionizations by axonometric projectionization and projectionizations by numerical symbols.

The process of generating an image in the plane by transferring projective rays or straight lines from the characteristic points of the object is called projectionization. gives an example of central projection. Since the projection beams protrude from the center of a Point S, this method is called the central projection method. The projective Rays directed to the N-plane are scattered, passing through the characteristic points of the triangle ABC.

Therefore, these rays are not perpendicular to the plane of the cartina and are not parallel to each other either. gives an example of parallel projection.

From the image generated by the right angle projection method, by projective coupling and comparison of projections to each other it is possible to obtain complete information about the shape of the detail and its dimensions .

Views of the object from the front in plane V, over in plane N, and from the left in plane W are formed. gives a clear representation of the object in the modulus of the planes of projections H, V, W, and gives a complex drawing epyur derivation by spreading the planes.

After that, when we draw a drawing (projection) of the detail (item), we do this in such a simplified state.

With the same method, we now place the detail in a system of mutually perpendicular (U, N, W) planes, making one of its projections, that is, a profile projection on W.

In which we define the intersection line of the plane of frontal projections with the plane of W – profile projections as O> and the line of horizontal projections of the plane with the plane of profile projections as O U axis.

Now, using the above method, we bring all three planes into one plane state. To do this, we now plan the W profile plane in the counterclockwise direction around the O> axis until we arrive at a single plane position with the frontal plane. After that comes the following view

In this, the OU axis is divided in two, half going with the profile plane and half with the horizontal plane. Views and their bajarish. Ba projections in the zan drawings are also referred to as views. The views are placed in the drawing according to GOST 2-305-68.

They make their appearance before, over, left, right behind and below the thing. Before this, the view is referred to as the head view of the thing. The head view is chosen as the most characteristic of the thing, that is, the one that gives more information in the circle of it. Then the cube sides are spread out on one plane.

The main views are arranged in the order shown on the paper. If the positions are changed for the purpose of rational placement of views on paper it is given an additional view. When drawing a drawing, an effort is made to achieve that the views are as low as possible.

If it is not possible to describe any part of the surface of an item without contraction in a Hecht one of the 6 views, then in the hole its view is executed in a newly selected extra plane, and it is called an additional view if the part on the surface of the item is bounded in a narrow circle, its Such additional manifestations are called maxillary manifestations. It is possible to turn additional and Maxal views. This will display an icon that represents turning over the view .

If the additional view is in direct projective connection with the detail part it is displayed without an additional arrow.

Concepts of the base: views, shearing, cuts. Three views of the model. To perform three views of the object according to a clear image.

In this section, the options are selected in the drawings so that the invisible lines do not participate or are less present when performing the krrinishi before it and from the left side a pattern for performing the three views of the thing, depending on the specific image.

In the case of prismatic grooves, a cylindrical hole in the structure of something in a clear image, located in different situations, their invisible contours are depicted with barcode lines. When performing this task, students are required to follow the rules of the subject "views".