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**Standard for general layout drawings of petrochemical  
enterprises**

石油化工企业总图制图标准

**(English Translation)**

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## **1 General**

### **1.0.1**

This standard is formulated in order to unify the general drawing rules of petrochemical enterprises, ensure the quality of drawing, improve the drawing efficiency, make the drawing clear and concise, meet the requirements of design, construction and archiving, and meet the needs of engineering construction.

### **1.0.2**

This standard is applicable to the drafting of general drawings and transportation engineering of petrochemical enterprises.

### **1.0.3**

In addition to conforming to this standard, the drafting of general plans of petrochemical enterprises shall also conform to the provisions of the current relevant national standards.

## **2.0.1 General layout**

On the basis of the established factory site and the overall planning of industrial enterprises, according to the requirements of production, use, safety, hygiene, etc., comprehensively utilize environmental conditions, and reasonably determine all buildings, structures, equipment, transportation lines, engineering pipelines, greening and landscaping on the site. Flat location for landscaping etc.

## **2.0.2 Vertical layout**

Carry out vertical elevation (elevation) design for the natural topography of the site and buildings and structures.

## **2.0.3 Process unit process unit**

A combination of a complete production process completed according to the technological process, including the main production area (including several production units), intermediate tank area and shed, control power distribution room, sewage pretreatment and other facilities.

## **3.1 Drawings**

### **3.1.1**

According to the content, the drawing area (Figure 3.1.1) should be divided into design graphics area, wind rose or compass area, legend area, table area, description area and title bar.

Figure 3.1.1 Surface partition

1-design graphics area; 2-wind rose or compass area, legend area; 3-table area;  
4-description area; 5-title bar

### **3.1.2**

The drawing of the design graphic area shall comply with the following regulations.

- 1 The drawing of various design graphics should be complete, correct, clear and beautiful;
- 2 All kinds of drawings should be drawn with appropriate lines and fonts according to the expressed content;
- 3 All kinds of drawings should be drawn in layers.

### **3.1.3**

In addition to cross-sectional and detailed drawings, legends should be drawn on various design drawings.

### **3.1.4**

For roads, ditches and culverts that are difficult to clearly identify in the design graphics, corresponding tables should be drawn in the table area.

### **3.1.5**

The descriptions of various drawings should be concise in language, standard in writing, and neatly arranged. The order of description shall be design basis, design scope, design content to be explained, coordinate and elevation system, and dimension unit.

### **3.1.6**

The layout of design drawings should meet the following requirements.

- 1 The format size of drawings should adopt the basic format specified in Table 3.1.6;
- 2 The format size of the drawings (Fig. 3.1.6) may also be extended according to the provisions in Table 3.1.6.

Table 3.1.6 Drawing size (mm)

Figure 3.1.6 Format size of drawings

### **3.1.7**

The picture frame shall be drawn with a thick solid line on the drawing, and the binding margin shall be reserved. The format of the picture frame shall comply with the provisions in Figure 3.1.7, and the size of the picture frame shall comply with the provisions in Table 3.1.7.

Figure 3.1.7 Frame format

Table 3.1.7 Frame size (mm)

## 3.2 Plots

### 3.2.1

When drawing drawings, the commonly used drawing lines should comply with the requirements in Table 3.2.1.

Table 3.2.1 Common graph lines

## 3.3 Fonts

### 3.3.1

When compiling text tables, fonts should be selected in accordance with project regulations. When there is no provision for the item, the Chinese characters in the main text should use small four-point Song typeface, and the title should use four-point bold typeface.

### 3.3.2

When drawing drawings, the font and character height should meet the requirements in Table 3.3.2.

Table 3.3.2 Font table

### 3.3.3

When drawing drawings, the width factor of numbers and characters should be 0.7~1.0.

## 3.4 Scale

### 3.4.1

The layout of the drawings should be well-proportioned, clear and beautiful. The proportions of various design drawings should be selected according to Table 3.4.1 according to the complexity and simplicity of the content and the density of graphic lines.

Table 3.4.1 Scale range table

## 3.5 Units of measurement

### 3.5.1

Coordinates, elevations, and dimensions are in "m"; coordinate values should be taken to three decimal places, and building coordinates can be taken to two decimal places. The unit of detailed drawing should be "mm".

### 3.5.2

The azimuth or direction angle of buildings, structures, railways, roads, coordinate networks and the turning angle of railways and roads shall be expressed in "degrees, minutes, seconds". "Seconds" should have two decimal places.