**Review of CAD usage**

Address: name: zhoumeijun student\_ID:201329600153 class: English class

Abstract: in addition to the computer itself software such as operating system, compiler, CAD mainly use interactive graphics display software,Abstract: in addition to the computer itself software such as operating system, compiler, CAD mainly use interactive graphics display software,

Keywords:CAD method of use Main purpose drawing techniques graphics printing industry demand using method optimization scheduling

Text: Interactive graphic display software for graphic display window, clips, watch, graph transformation, modification, and the corresponding man-machine interactive.Cad application software provide geometric modeling, feature calculation, drawing and other functions, to complete for mechanical, advertising, construction, electrical, the professional field of a variety of specialized design. Construct the application software of the four elements are: algorithm, data structure, user interface and data management. Data management software for storing, retrieval and processing of large amounts of data, including text and graphics information. Therefore, it is necessary to establishment of engineering database system. It with general database system compared with the following characteristics:Data dynamic, the operation of the designer is mainly a kind of real-time interactive processing。

CAD's first application was in the big companies in the automotive, aerospace and electronics industries, as computers became cheaper, and the range of applications became wider.

CAD realization technology from that moment after many changes. At the beginning of this field is mainly used in the similar generating and hand-painted drawings drawings. The development of computer technology makes the computer get more skillful application in design activities. Nowadays, CAD has not only for drawing and display, it began entering the designer's expertise in more "intelligent".

**Engineering Drawing: Architectural Engineering, decoration design, environmental art design, water and electricity engineering, civil construction, surveying and mapping and so on.**

Garment processing: clothing plate making.

Electronics industry: printed circuit board design.

Widely used in civil construction, decoration, urban planning, landscape design, electronic circuits, mechanical design, clothing shoes and hats, aerospace, chemical, light industry and other fields.

The AutoCAD version of Mechanical and auto software in mechanical design and manufacturing industry.

There are Greatstar buildings and Tianzheng building in the architectural design industry.

The AutoCAD version of Electrical software in electrical and Greatstar electronic circuit design industry.。

**One, follow certain drawing principle**

**In order to improve the drawing speed, the user should follow the following principles:**

**1 drawing steps: set the map to set the unit and the accuracy of the establishment of a number of layers to set the object style to start drawing.**

**2 drawing always use the 1:1 ratio to change the size of the pattern can be printed in the drawing space to set a different proportion of the print.**

**3 for different types of graphic elements to set different layers, color and line width, and the color of the pixel object, line and line width should be controlled by layer control (BYLAYER).**

**4 when you need to accurately draw, you can use the grid to capture the function, and the grid to capture spacing is set to the appropriate value.**

**5 don't put the frame and graphics drawn on the same picture, should be in the layout (LAYOUT) in the frame according to block insertion, and then print out the map.**

**6 for famous objects, such as view, layer, block, line type, text style, print style, etc., not only to be concise, but also to follow certain rules, in order to facilitate the search and use.**

**7. Some commonly used settings, such as layers, dimension styles, text style, raster capture content set in a graphics template file (i.e., save for the DWF file) and later drawings, in creating new graphics wizard click use templates to open it, and began drawing**

**Two, choose the appropriate command CAD**

**Users can control the CAD, is through to it**Issued a series of commands o realize CAD received the order, will immediately execute the commands and their corresponding functions. In the concrete operating process, although there are a variety of ways to achieve the same purpose, but if the command is properly chosen, significantly reduce the operation steps, high efficiency of drawing. Here only lists several typical cases.

1 to generate a straight line or line segment

(1) in CAD, the use of LINE, XLINE, RAY, PLINE, MLINE command can generate a straight line or line segment, but only the frequency of the use of the LINE command is the highest, but also the most flexible.

(3) to quickly generate a closed filled boundary, or want to construct a domain, you should use the PLINE command. The line segment generated by PLINE can be edited with the PEDIT command.

2 comment text

(1) in the use of text notes, if the text in the comment has the same format, the notes are very short, then choose TEXT (DTEXT) command.

(2) when you need to write a large section of text, and paragraphs in the text may have different formats, such as fonts, high color, color, special symbols, such as molecular type, you should use the MTEXT command.

**(1) in the same graphic file, if you copy the graph only once, you should use the COPY command.**

**(2) in the same graphic file, a graphics freely copied many times, you should use the copy command of multiple (repeat) option; or, COPYCLIP (normal replication) or COPYBASE (specify base point copy) command will need graph is copied to the clipboard, and then use the PASTECLIP (paste) or PASTEBLOCK (to block in the form of a sticky posts) command stick to post at the specified location.**

**(4) in the same graphics file, to generate a number of parallel, spaced equal or unequal lines, or to generate a series of concentric oval (ARC), round (ARC) and so on, you should use the OFFSET command.**

**(6) between a plurality of graphics document copy graphics, can be used in two ways. The one, using the action command. First in the open source file using COPYCLIP or COPYBASE command will figure copying to the clipboard, and then in the open destination file with PASTECLIP, one of the PASTEBLOCK or PASTEORIG three will graphics copied to the specified location. This is in the shortcut menu select the corresponding option is equivalent. Second, with the mouse directly drag the selected graphics. Note: in the same graphic file drag and drop is the only mobile graphics, and between the two graphical document drag Drag is a replication graph. Drag and drop, the mouse pointer must in the selected graphic pattern online rather than in the clamping point of the line graph. And at the same time, we should pay attention to is, left click and drag with the right button and drag is differentiated. With the left button is directly drag and drop, and with the right mouse button drag will play a shortcut menu, according to the menu options choose different ways to copy.**

**(7) in a number of graphics files to copy graphics characteristics, should choose the MATCHPROP command (to be matched with the PAINTPROP command), similar to the format of the Word brush.**

**Folding edit this paragraph graphic printing**

**No external print almost two a is model print space; another is spatial layout print, you say a print of a box frame is model print space, which**

**requires to each a separate graphics insert frame!**

**Then according to the size of the graph scale frame cases: plan, layout, ceiling, floor, section ~...... and so on which you make a figure is very slow, if the print layout can achieve batch print without plug-in**

**2, delete the original**

**3, insert the 1:1 frame (make sure you have the box)**

**4, from the original map view viewport**

**5, the definition of proportion (for graphics)**

**(command: Z spaces S spaces 4.N)**

**At this time, you need to use the MS or PS commands to switch between the box and the box.**

**Above is a picture of the print operation in order to make clear to you**

**We have the chart above to operate for all the diagrams.**

**Z the key here, look carefully "**

**Right click on the layout, choose to move or copy, then there will be a dialog box,**

**You tick the "copy" and move it to the end**

**That is a copy of the X graphics.**

**And then zoom in.**

**If the graphics are the same. I mean, if X is a plane, the figure for the ceiling, I think this ratio would not transfer from**

**3.PS command to switch to the bo**

**E spaces, to maximize their own feel about the graphics is suitable if not suitable for adjustment**

This can be achieved batch print [2]

Folding edit tis section of industry needs

Project is mainly for the various types of colleges and universities, vocational and technical colleges and students and hope that worked in computer aided design (CAD), computer aided engineering (CAE), computer aided manufacturing (CAM), computer aided process planning (CAPP), product data management (PDM) and other related industries, social workers, to improve the professional skills of general colleges teachers and students and all kinds of engineering and technical personnel for the purpose of, through the professional, curriculum system of skill training, certification, and help the students to grasp the knowledge and skills.CAXC projects necessary for employment will be to improve the industry and informatization talents evaluation system, speed up the industrial

Manufacturing industry is the pillar industry in the development of a country, the development of manufacturing industry determines the development of the country. At present, China's export products with low added value, labor intensive type product. From the view of reality and development, the "workshop of the world" to create a "world factory", "made in China" into "created in China" is imperative. 38% of college students in our country for engineering students, although the graduation of a large number, but did not meet the business needs.CAXC project the use of modern information technology, network technology, multimedia technology and advanced educational technology and the latest, most popular, the most practical 2DCAD/3DC AD/CAE/CAPP/CAM/PDM design technology and management skills transfer to the students, so that students understand industrial product design process in the short term, greatly relationship students internship period in the enterprise to apply what they have learned, for enterprises to design better products quickly.

The Ministry of Education Management Information Center in analysis of various certification based on, combined with the development of domestic enterprises, to the enterprise's actual demand as the starting point, focus on the learner's skill training, changing the traditional authentication mode, in the certification of the organization of the content and invited domestic business experts and the international well-known companies to join, determine the content authentication, and guidance and management certification process. In order to standardize the process, Ministry of education developed implementation rules, determine the specialized agencies and personnel on the whole process control, ensure project authority and seriousness.

1 drawing steps: set the map to set the unit and the accuracy of the establishment of a number of layers to set the object style to start drawing.

2 drawing always use the 1:1 ratio to change the size of the pattern can be printed in the drawing space to set a different proportion of the print.

3 for different types of graphic elements to set different layers, color and line width, and the color of the pixel object, line and line width should be controlled by layer control (BYLAYER).

4 when you need to accurately draw, you can use the grid to capture the function, and the grid to capture spacing is set to the appropriate value.

5 don't put the frame and graphics drawn on the same picture, should be in the layout (LAYOUT) in the frame according to block insertion, and then print out the map.

6 for famous objects, such as view, layer, block, line type, text style, print style, etc., not only to be concise, but also to follow certain rules, in order to facilitate the search and use.

7. Some commonly used settings, such as layers, dimension styles, text style, raster capture content set in a graphics template file (i.e., save for the DWF file) and later drawings, in creating new graphics wizard click use templates to open it, and began drawing.

2, choose the right order

The user can control the CAD is through to it issued a series of commands to realize CAD after receiving the order, will immediately execute the commands and their corresponding functions. In the concrete operating process, although there are a variety of ways to achieve the same purpose, but if the command is chosen properly, a significant reduction in operating steps, improve drawing efficiency. Here only lists some of the more typical case.

1 to generate a straight line or line segment

(1) in CAD, the use of LINE, XLINE, RAY, PLINE, MLINE command can generate a straight line or line segment, but only the frequency of the use of the LINE command is the highest, but also the most flexible.

(2) to ensure that the three views of the object between the "long on the right, equal width, Gaoping Qi," the corresponding relationship, should use RAY and XLINE command to draw a number of auxiliary lines, and then cut off the excess part of TRIM.

(3) to quickly generate a closed filled boundary, or want to construct a domain, you should use the PLINE command. The line segment generated by PLINE can be edited with the PEDIT command.

(4) when a number of parallel lines are generated, and each line segment may use different colors and lines, the MLINE command can be selected.

2 comment text

(1) in the use of text notes, if the text in the comment has the same format, the notes are very short, then choose TEXT (DTEXT) command.

(2) when you need to write a large section of text, and paragraphs in the text may have different formats, such as fonts, high color, color, special symbols, such as molecular type, you should use the MTEXT command.

(1) in the same graphic file, if you copy the graph only once, you should use the COPY command.

(2) in the same graphic file, a graphics freely copied many times, you should use the copy command of multiple (repeat) option; or, COPYCLIP (normal replication) or COPYBASE (specify base point copy) command will need graph is copied to the clipboard, and then use the PASTECLIP (paste) or PASTEBLOCK (to block in the form of a sticky posts) command stick to post at the specified location.

(3) in the same graphics file, if the copy of the graphics in a regular pattern, such as the formation of a number of rows, or along a circumference (Yuan Hu) uniform distribution, you should use the ARRAY command.

(4) in the same graphics file, to generate a number of parallel, spaced equal or unequal lines, or to generate a series of concentric oval (ARC), round (ARC) and so on, you should use the OFFSET command.

(6) between a plurality of graphics document copy graphics, can be used in two ways. The one, using the action command. First in the open source file using COPYCLIP or COPYBASE command will figure copying to the clipboard, and then in the open destination file with PASTECLIP, one of the PASTEBLOCK or PASTEORIG three will graphics copied to the specified location. This is in the shortcut menu select the corresponding option is equivalent. Second, with the mouse directly drag the selected graphics. Note: in the same graphic file drag and drop is the only mobile graphics, and between the two graphical document drag Drag is a replication graph. Drag and drop, the mouse pointer must in the selected graphic pattern online rather than in the clamping point of the line graph. And at the same time, we should pay attention to is, left click and drag with the right button and drag is differentiated. With the left button is directly drag and drop, and with the right mouse button drag will play a shortcut menu, according to the menu options choose different ways to copy.

(7) in a number of graphics files to copy graphics characteristics, should choose the MATCHPROP command (to be matched with the PAINTPROP command), similar to the format of the Word brush.

reference material：

1.cad tutorials and software download

2.AutoCAD graphic print / Nanjing mold design training