Exercise no 6.

New commands:

Layer, Plot, Model Space, Paper Space, Projection

Drawing of a steel beam. Welded connection.

6.1. Open new file. Set up initial parameters.

Start AutoCAD and load the template file acadiso.dwt.

Save the file using filename: login_ex6 (login is your login name).

Apply Limits command to set the drawing limits. Use the values of 0, 0 and 2000, 1200 to set the opposite corners of drawing rectangle. Switch grid on. Execute Zoom/All. Set the values of Grid and Snap spacing if necessary. Use the Units command to truncate the display precision of coordinates to integer values.

Create the following layers (Format/Layer/New):

- visible green continuous 0.35 mm
- hidden yellow ACAD_ISO02W100 0.25 mm
- axes blue ACAD_ISO04W100 0.18 mm
- dimensions blue continuous 0.18 mm

6.2. Draw the cross section of an I beam.

Draw two perpendicular axes intersecting at point 1500, 400. Apply Line command to draw the shape visible at right, beginning at point 1500, 100 on visible layer. Use Fillet command, setting the radius R=24, to round the internal corner of I beam. Mirror the drawn segment twice: along the horizontal axis, and along the vertical axis.

6.3. Draw the side view of the I beam.

Use the Line command to draw the side view of the I beam.

6.4. Draw the bottom view of the I beam.

Use the Line command again to draw the bottom view of the I beam. Apply the Offset command to draw the covering plate. Chamfer the plate corners according to the drawing. Transfer the lines drawn to correct layers.

6.5. Prepare the printout.

Switch to paper space. Use the Page Setup Manager to set the proper printing device. Set the paper size to A4 and printout style to monochrome.ctb.

Apply correct scale to viewport in paper space.

Insert frame and table block form file named “A4_PL_L”. Verify the attributes in the table. Check the picture using Plot Preview. Change scaling of lines if necessary.

6.6. Dimension the drawing.

Dimension the drawing using correct layer. Set up the size of dimensioning components in correct relation to the drawing size (correct global scale in dimension style or dimension in paper space viewport).

6.7. Print the drawing.

Hide the viewport frame (you may transfer it to the defpoints layer). Preview plot. If the preview is correct save it to file and print.
Project "The development of the didactic potential of Cracow University of Technology in the range of modern construction" is co-financed by the European Union within the confines of the European Social Fund and realized under surveillance of Ministry of Science and Higher Education.