**Instruction manual for**

**DRAWGEAR**

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I. Run DRAWGEAR

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| --- | --- |
| 1. Insert draw\_gear.LSP and draw\_gear.DCL into Trusted Location và Support File Search Path. | |
| C:\Users\AD\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Untitled1.png | C:\Users\AD\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Untitled2.png |
| 2. Enter into command prompt: (load “draw\_gear”) | 3. Enter into command prompt: DRAWGEAR |
|  |  |

II. Menu

(NOTE: please TAB all blanks for the program to work)

|  |  |
| --- | --- |
| 1. Module | Fig. 4.9 The meshing of bevel gears |
| 2. Num. of teeth |
| 3. Pressure angle |
| 4. Fillet radius |
| 5. Involute accuracy |
| 6. Height |
| 7. Pitch angle: |
| 8. Helix angle / Spiral angle: Spiral angle might be inaccurate |

III. Gear profile:

- All solid are created from the gear profile

- To get a better understanding, please refer to the code

1. Calculate the radii, the thicknesses, the half angles,…

2. Draw involute curve, ROTATE involute then turn into spline

3. Draw gear tip using arc

4. Draw the base then fillet using BLEND

5. Mirror tooth through the Y-axis

6. Array then region

- Common error

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| --- | --- |
| BLEND doesn’t work | Arc tip doesn’t connect with involute curve |
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IV. Spur gear

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V. Helical gear

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VI. Straight bevel gear

- Pitch radius is not conserved yet (WIP)

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VII. Arc spiral bevel gear

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