NAGFORM^{Sheet}

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Sheet Metal Process Calculator

NAGFORM^{Sheet} contains a calculator to help design the forming sequence. Following calculations can be performed:

- Deep Drawing of Circular Shells –
  - Given circular cup inside diameter, height and material, the calculator determines the number of deep drawing operations needed to form the cup.
  - Cup dimensions at each deep drawing operation are also calculated.
  - Determines the deep drawing force, redrawing force and blank holder pressure required.
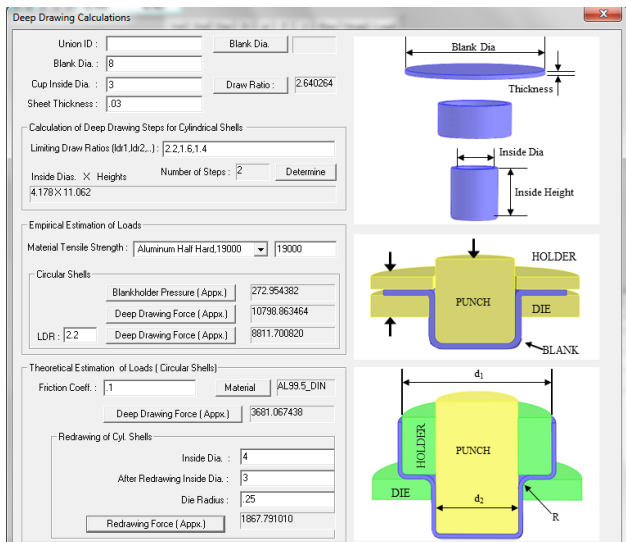

- Deep Drawing of Rectangular Shells - Given dimensions of rectangular shell and material, the calculator determines the deep drawing force required with different types of blank holders.
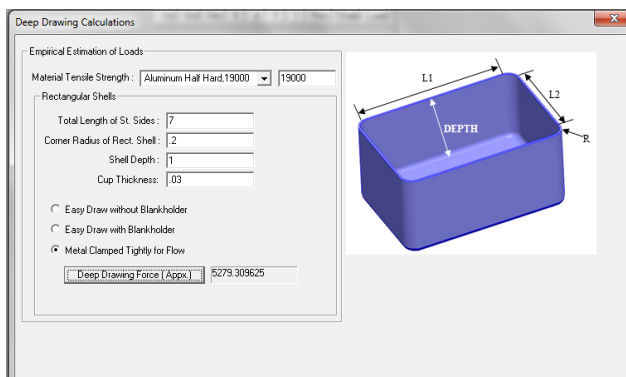
- Stretch and Shrink Flanging - Given the dimensions before and after flanging, the program calculates the edge strains for shrink and stretch flanging processes. The edge strain can be compared with limiting strains for various materials to determine feasibility of flanging.
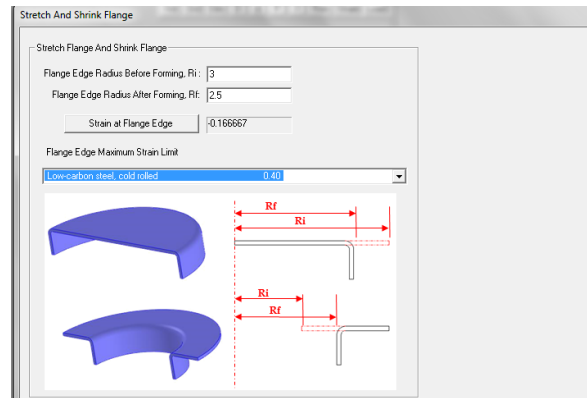
- Bending Calculations – Given dimensions of the bend including sheet thickness, angle and K Factor of material, the program determines the bend allowance and setback for Vee Bending. The program also calculates the Vee bending and Wipe bending forces based on the tensile strength of the sheet material.
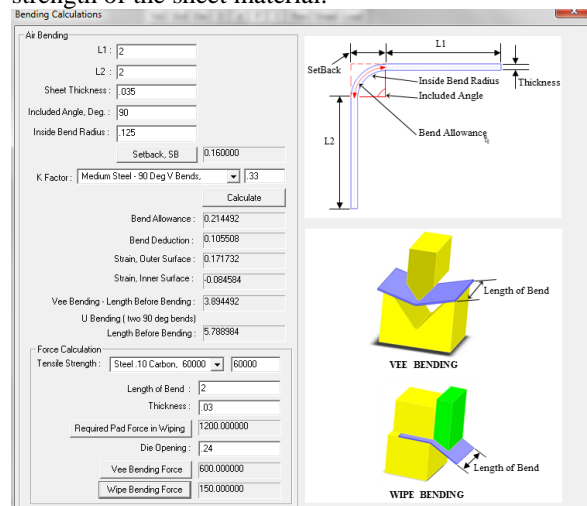
- Spring Back Calculations - Given the material properties, bend angle and bend radius, the program calculates the spring-back in terms of change in bend angle and radius.