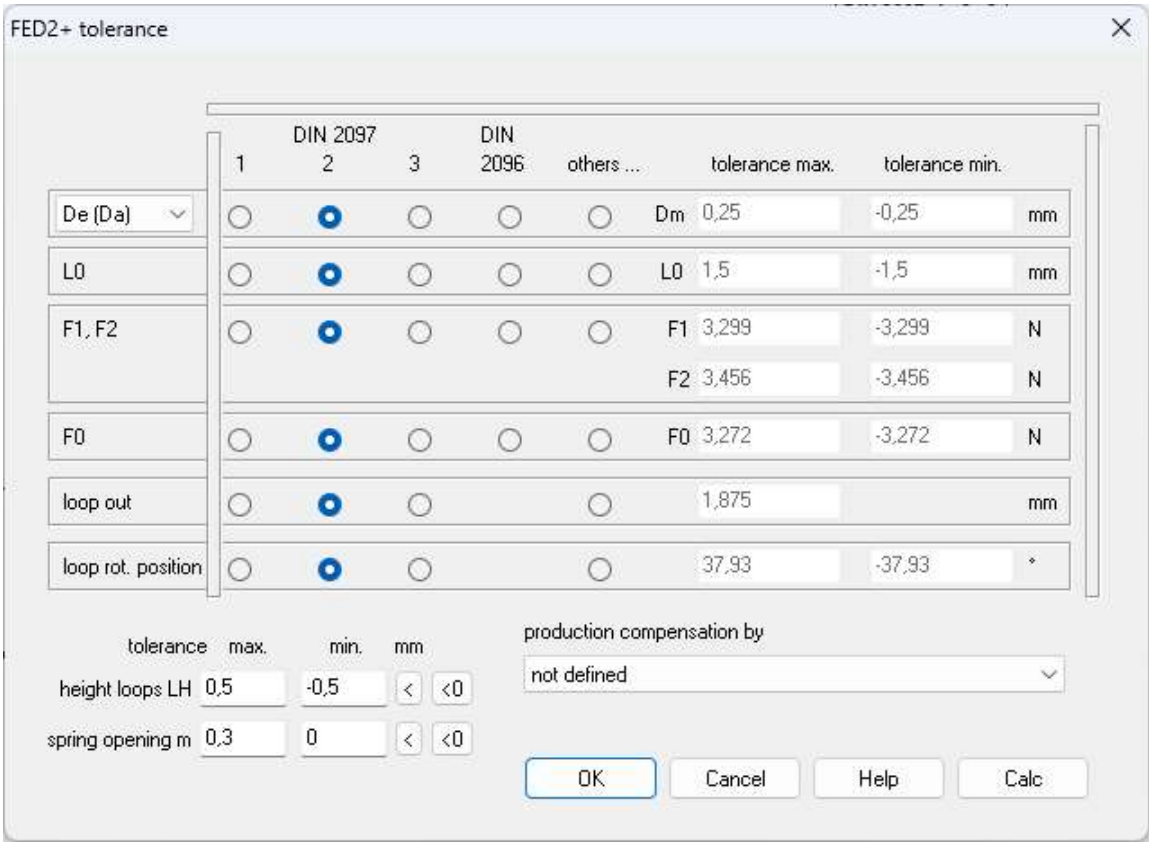
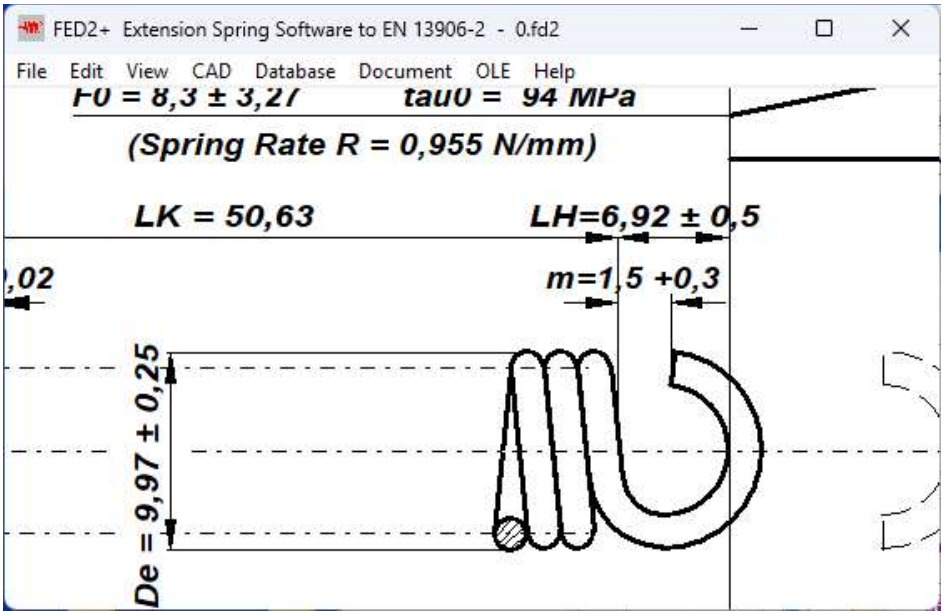
by Fritz Ruoss

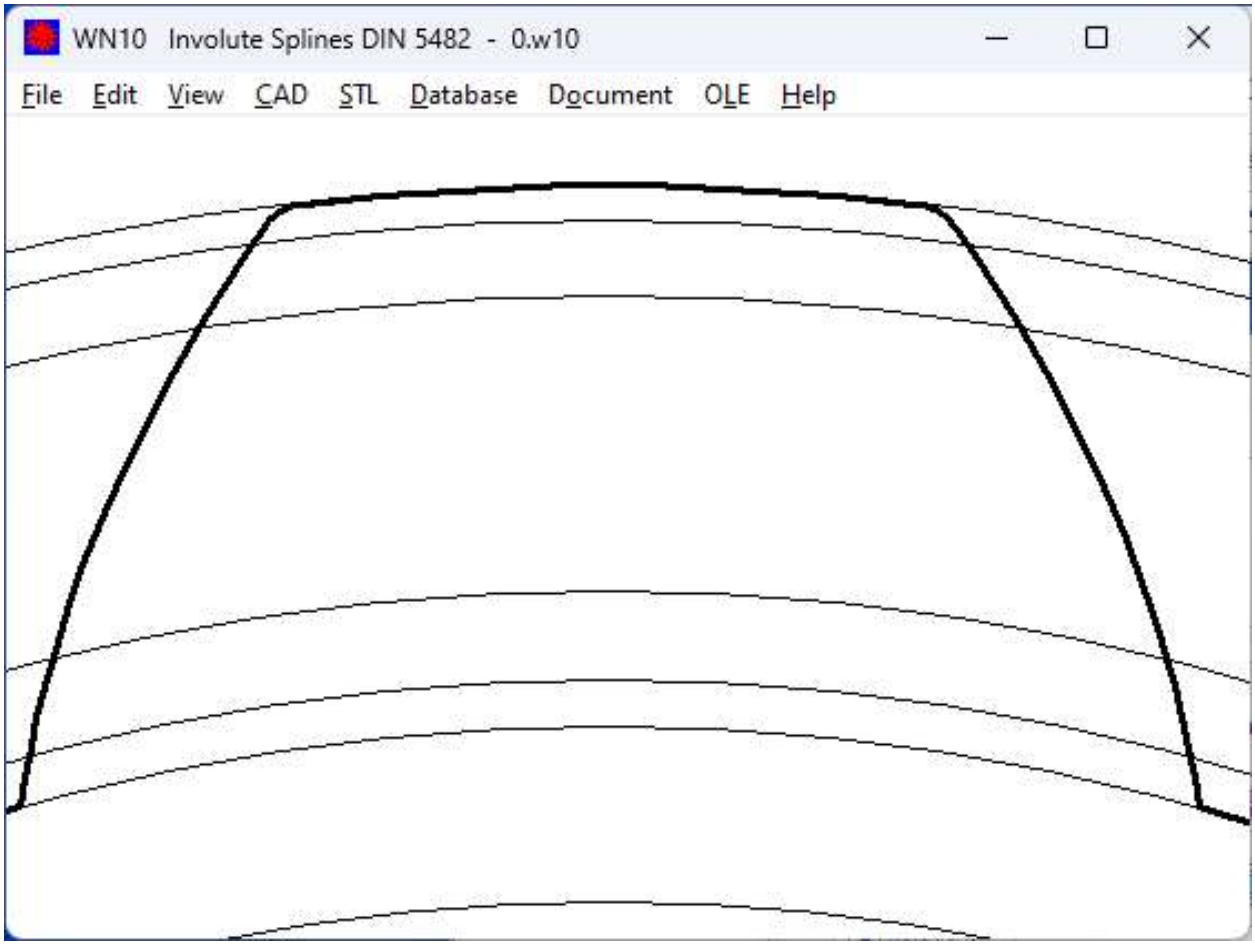
FED2+: Tolerances for loop height LH and loop opening m



Under “Edit\Tolerances” you can now enter tolerances for the loop height LH and the loop opening m. If all values are 0, no tolerances are displayed. The “<” button is used to set default tolerances according to ISO 2768 tolerance class c (coarse). The tolerances are shown in the production drawing.



WN2, WN4, WN5, WN10, WNXE: df hub as arc



For the hub gearing (internal spline with flat root side fit), the root diameter is now drawn as a circular arc. Until now it had been drawn approximately with straight lines.

FED1+ 2+ 3+ 5 6 7 8 11 17: Inconel X-750 ST+3HT Rm=1000 instead of 800 MPa
In the materials database fedwst.dbf, the chrome-nickel steel Inconel X-750 is available in 3 different heat treatments:
33: INCONEL X-750 ST+age (spring temper+hardened): Rm=1250 MPa
47: INCONEL X-750 ST+3HT (spring temper+3 times heat treated): Rm=800 MPa
48: INCONEL X-750 T.No.1 (No. 1 tempered): Rm=900 MPa
For Inconel spring wires, the smallest value for the tensile strength is usually entered into the database because with Inconel the distance to the yield point is higher than with other spring wires. Nevertheless, Rm=800 MPa for Inconel X-750 ST+3HT was found to be too low according to current standards and was changed to Rm=1000 MPa. To change the database value yourself, go to "Database\Material -fedwst.dbf" in the menu. Overwrite material No. 47, RM0=1000 and RMMAX=1000, then click on the check symbol, OK, done.

When you open old calculations with Inconel X-750 ST+3HT, you will notice that higher safety margins are displayed now.

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