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Digital structural analysis with BauText

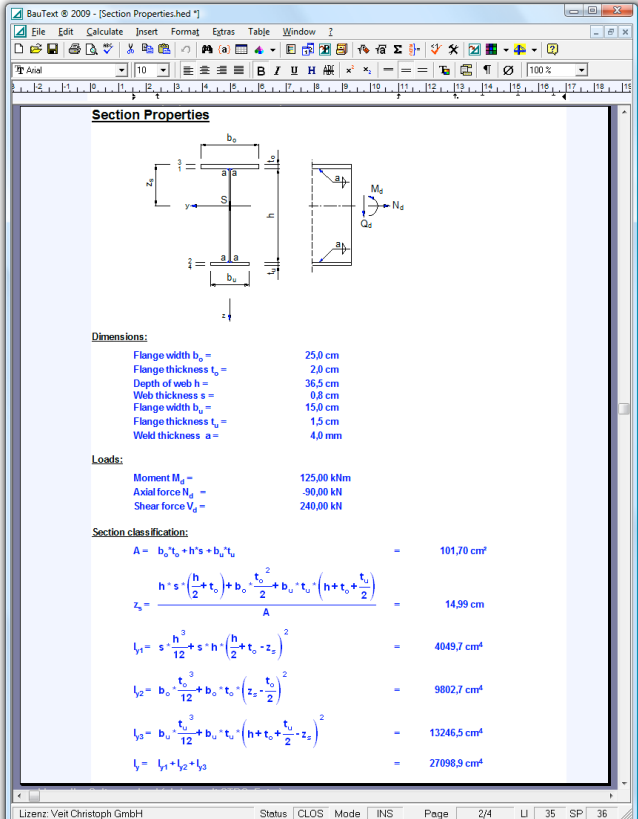
Writing, calculation and compilation inside the TechEditor

BauText offers complete support to an engineer in all of the varied tasks involved in making technical calculations. The program is able to calculate formulas and tables automatically beside the usual functions of word processing. Frequently repeated structural verifications, calculations, and text modules are saved as templates and retrieved as and when required. If an input value is changed, BauText immediately recalculates all dependent values. Even looking up of material values, component values and cross section values from database tables is automated.

The unique functionality of BauText is an interesting supplement for all structural design software. Inside the TechEditor you can add or insert comments, calculations and structural analyses complementary to the output of these programs. The data exchange is realized via interfaces or t₂W-technology. This technology is absolutely new and allows each individual program to output results into the document. The result is a uniform and continuous document with uniform page headers and footers, page numbers, table of contents and much more.

The TechEditor is supplemented with an extensive library, which contains hundreds of templates with solutions for tasks that in daily practice are frequently written out by hand. BauText greatly accelerates the generation of the structural analyses document. You can find detailed information at www.bautext.com.

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The screenshot displays the 'Section Properties' window in the BauText software. It features a technical drawing of a cross-section with dimensions and a table of calculated properties. The table includes dimensions, loads, and section classification results.

Dimensions:	
Flange width b_f =	25.0 cm
Flange thickness t_f =	2.0 cm
Depth of web h =	36.5 cm
Web thickness s =	0.0 cm
Flange width b_w =	15.0 cm
Flange thickness t_w =	1.5 cm
Weld thickness a =	4.0 mm

Loads:	
Moment M_y =	125.00 kNm
Axial force N_x =	90.00 kN
Shear force V_y =	240.00 kN

Section classification:	
$A = b_f \cdot t_f + h \cdot s + b_w \cdot t_w$	= 101.70 cm ²
$z_x = \frac{h \cdot s \cdot \left(\frac{h}{2} + t_f\right) + b_w \cdot t_w \cdot \left(h + t_f + \frac{t_w}{2}\right)}{A}$	= 14.99 cm
$I_{y1} = s \cdot \frac{h^3}{12} + s \cdot h \cdot \left(\frac{h}{2} + t_f - z_x\right)^2$	= 4049.7 cm ⁴
$I_{y2} = b_w \cdot \frac{t_w^3}{12} + b_w \cdot t_w \cdot \left(z_x - \frac{t_w}{2}\right)^2$	= 9802.7 cm ⁴
$I_{y3} = b_f \cdot \frac{t_f^3}{12} + b_f \cdot t_f \cdot \left(h + t_f + \frac{t_f}{2} - z_x\right)^2$	= 13246.5 cm ⁴
$I_y = I_{y1} + I_{y2} + I_{y3}$	= 27098.9 cm ⁴

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