DLT

Continuous Beam

The application is intended for the calculation of single-span and continuous beams with 12 spans maximum.

Beam Types

- Reinforced concrete slab
- Reinforced concrete beam
- Steel girder
- Timber beam
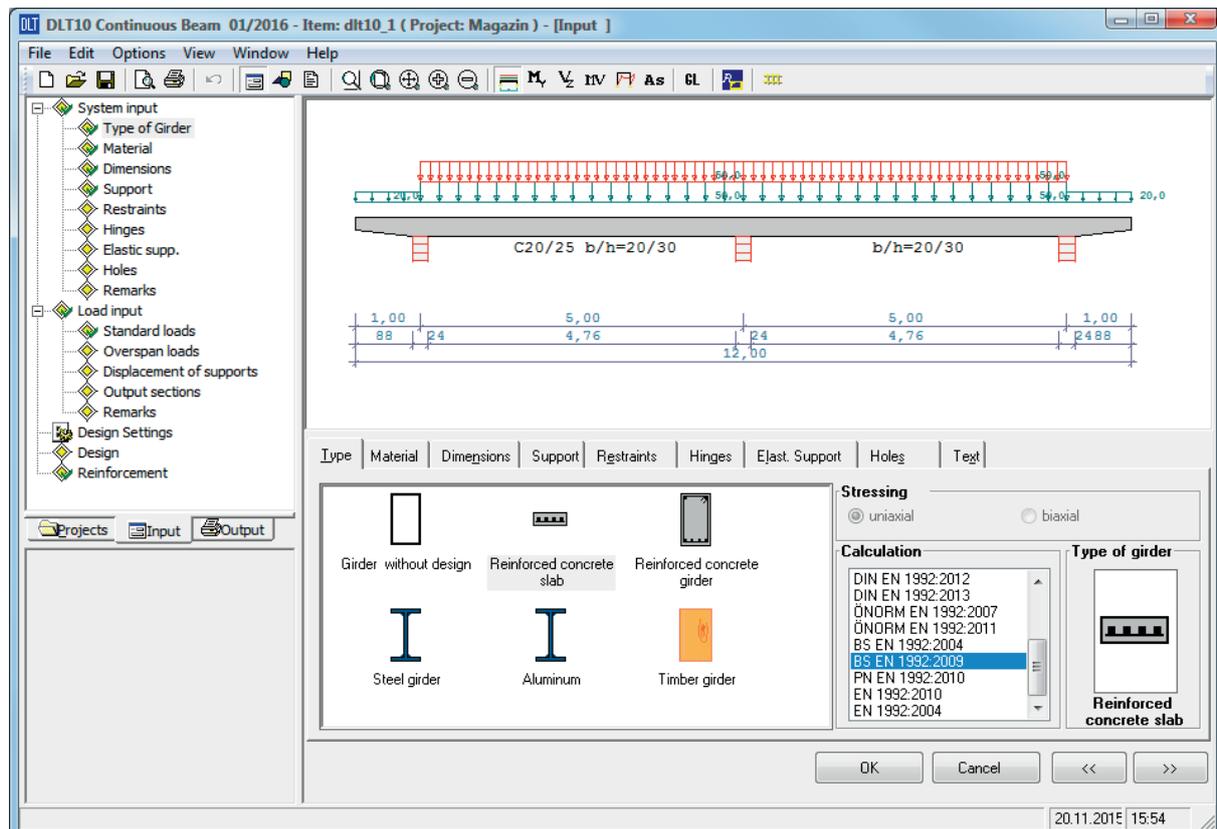- Beam without reinforcement analysis
- Aluminum girder

Additional Options
(extra charge)

- Biaxial effect of actions, reinforced concrete beam, steel, timber, aluminum
- Reinforcement for reinforced concrete beam, interface to CAD

Design

- The application performs the design and/or stress analysis for the pre-selected cross section dimensions for the material types concrete, steel and timber.

- Reinforced concrete design according to
  - EN 1992
    (NA-D/A/GB/IT)
  - UNI ENV 1992
  - DIN 1045 / DIN 1045-1
  - ÖNorm B 4700

- Steel design according to
  - EN 1993 *(NA-D/A/GB)*
  - DIN 1050
  - DIN 18800

- Timber construction standards:
  - EN 1995
    (NA-D/A/GB/IT)
  - DIN 1052

- Aluminum:
  - DIN EN 1999 *(NA-D/GB)*

- Automatic calculation of the effective slab width.

- Calculation of the deformations in state II for reinforced concrete cross sections according to EN 1992 / DIN 1045-1.

- Crack width evidence (limiting diameter) and stress analysis.

- Consideration of the durability requirements.

- Calculation and consideration of the creep coefficient and the shrinkage strain in serviceability analyses.

- Optimization of the dimensioning and design with steel girders and timber beams.

- The rigidity within the span can be constant or variable.

- You can define hinges.

- You can optionally consider shear deformations with timber beams.
- Analysis of the shear joint for slabs and T-beams.
- You can perform an analysis of the connection of the compression flange (shear analysis) for T-beams.

Load import

You can import bearing loads (from DLT items) that you have calculated in other items (<F5> key).

Block-outs (holes)

You can define round or rectangular block-outs for reinforced concrete beams, the calculation is performed in accordance with Booklet 399 DAfStb[1].
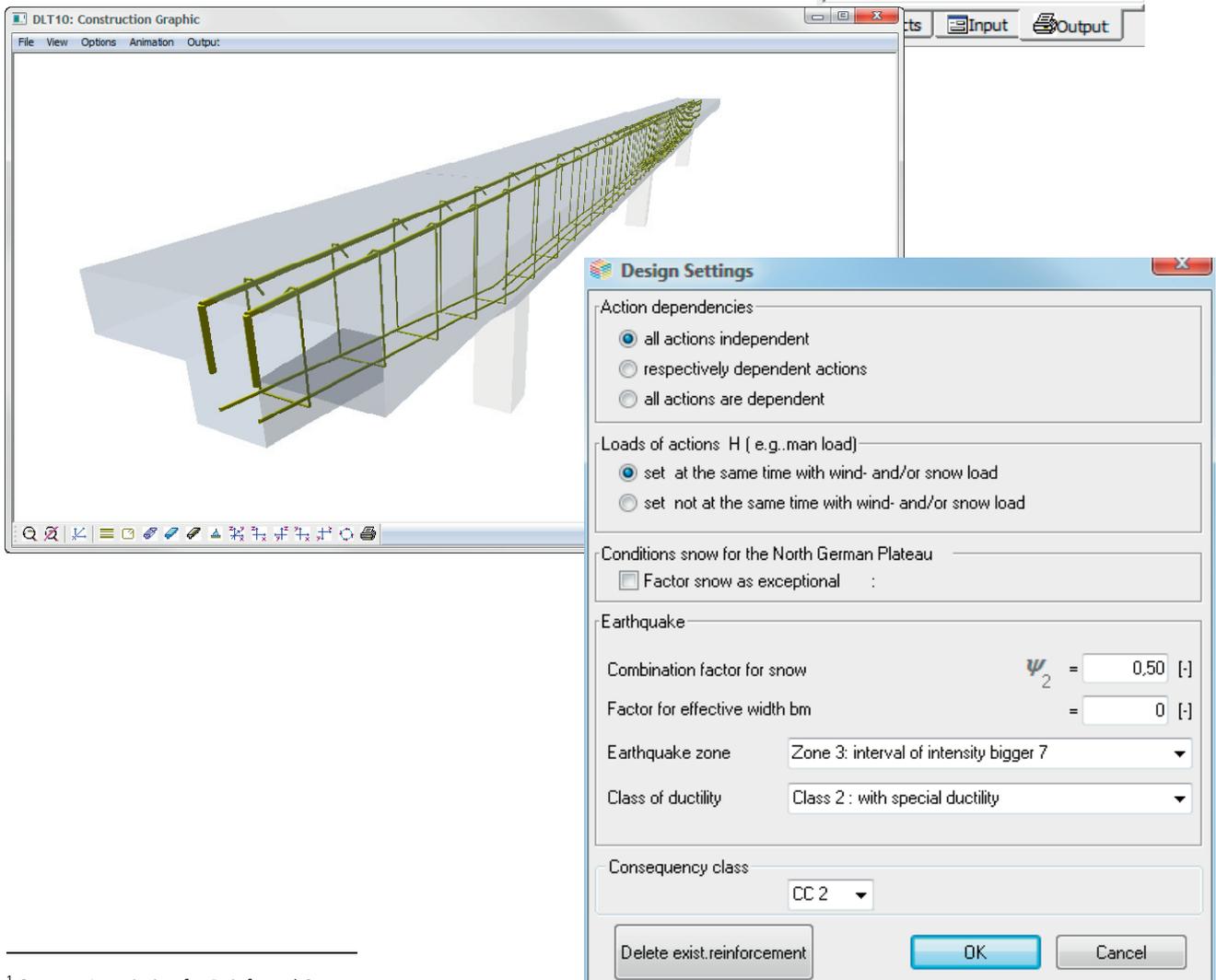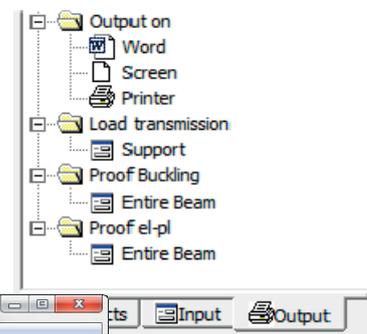
Bearing reactions

The bearing reactions are put out for the simple and/or γ-fold loads depending on the application control and the task. In addition, the bearing reactions are put out according to groups of actions.

Interfaces

- The loads can be transferred to the column applications
  - B5,
  - HO1+
  - B9
  - B10
  - STS+
- You can perform the torsional buckling resistance and elastic-plastic analyses per data transfer to the BT II (second-order bending torsion analysis) or ST7 application.

Restrictions

- Suspension reinforcement is not considered.
- The anchorage of longitudinal bars is not analyzed at haunches and jumps.

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[1] German Association for Reinforced Concrete