

# Practical reinforcement on 2D members

## esacdt.03 Practical reinforcement on 2D members

Definition of practical reinforcement for 2D-members. (Plates and Walls). The user can design a mesh made from two or more layers of reinforcement. The layers are put to the two sides of a wall or slab. The user is allowed to use a basic mesh and add additional bars. Also the user can pick a practical mesh from a mesh library and apply it in the slab or wall. The practical reinforcement in the 2D-elements is used in the check of the deflections of a slab.



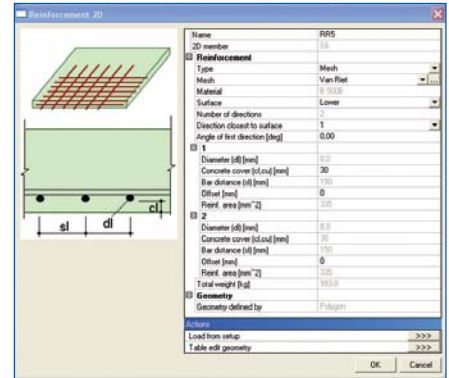
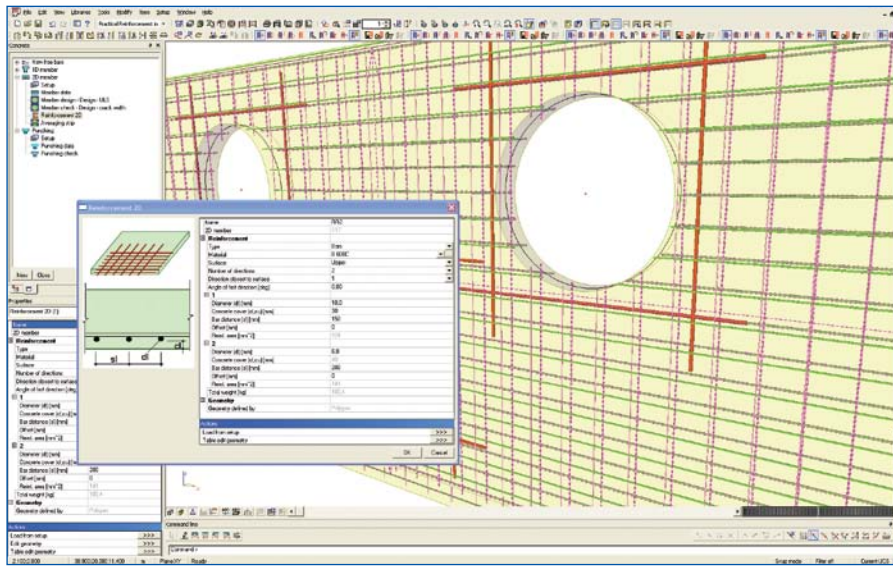
Datasheet Scia Engineer

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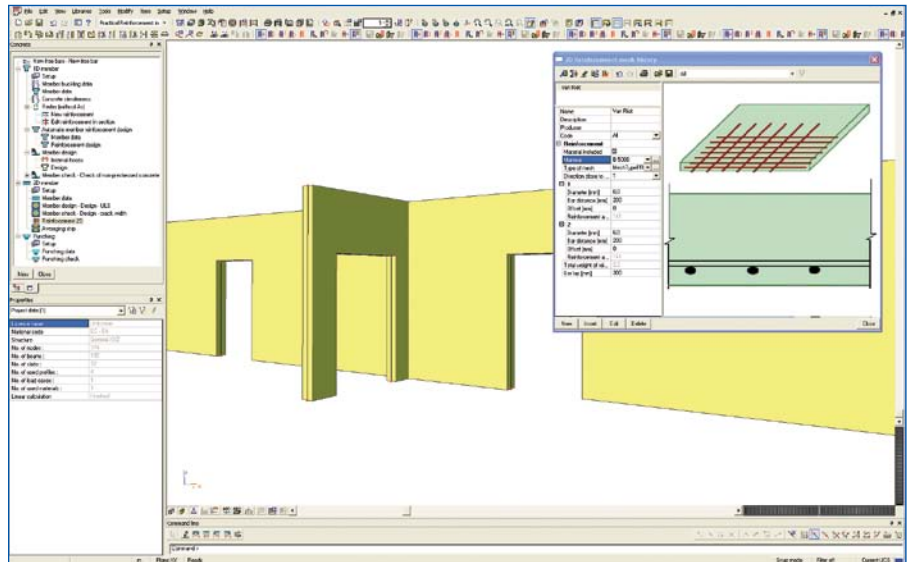


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# Practical reinforcement in slabs

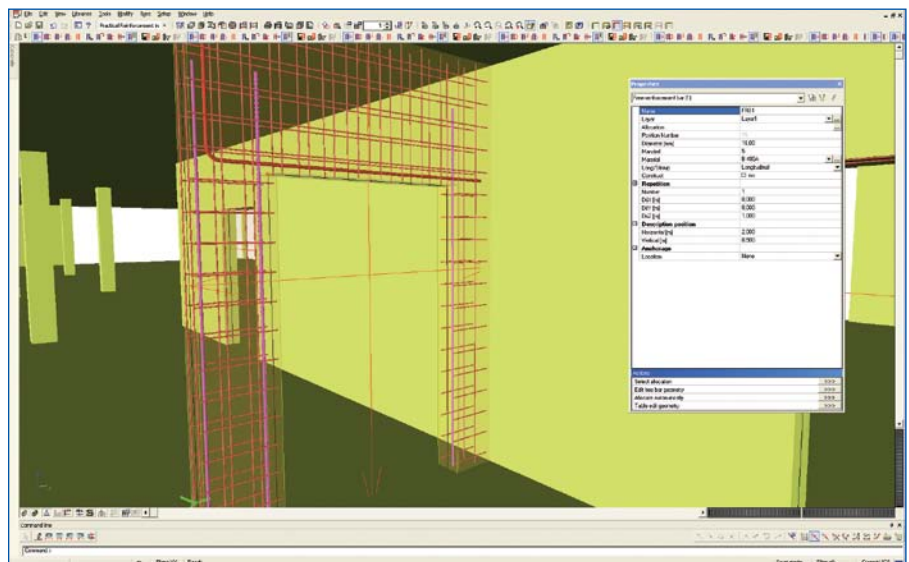


This module allows the user to define a practical reinforcement layout in a slab or wall. The user easily enters details such as the necessary diameters, cover and bar centres which are then automatically inserted in the slab. The graphical representation of the 3D reinforcement bars allows an easy and user-friendly review of the locations and diameters of the bars. The reinforcement schemes can be used in a calculation of the physical non-linear deflection of the plates and walls. The schemes can be defined as meshes, a set of bars or individual bars. The anchorage length can be set in a very user-friendly way. In all, this module is a very easy and powerful module for the definition of practical reinforcement schemes in slabs and walls.



The user defines the reinforcement by using the standard graphical tools of Scia Engineer. The reinforcement schemes have individual properties like diameter, cover and bar centres. All these properties can easily be parameterized using the module esa.11. The user can also pick a mesh of bars from the system library of reinforcement meshes. The geometry of the scheme can be defined by using a table editor and direct input.

The reinforcement bars are used in the calculation of the code dependent deflections in the plates. Based on the creep factor and the reinforcement, the immediate, total and additional deflection can then be calculated by using the module esas.19.



## Highlights

- ▶ Intuitive and simple input of steel reinforcement bars in plates and walls.
- ▶ Precise drawings, accurate calculations, perfect documentation and presentations of reinforced slabs.