TOP Crack Dlubal Rfem 5

the rf-concrete crack is ready to calculate the distribution of internal forces due to tensile stresses between the crack faces (tension) as well as the distribution of internal forces due to compressive stresses between the crack faces (compression) in the form of a finite element mesh or of a defined length of the crack. the calculation is done using the crack contribution method. since the calculation of the distribution of internal forces is performed on the module level, you can easily combine the respective module with other module types. thus, you can combine rf-concrete crack with rf-concrete deflect, rf-concrete scr and rf-concrete rech for example. it is also possible to calculate the distribution of forces between the joints, for example. if you combine the crack distribution module with the respective module, the result of the crack distribution module will be taken as the initial stiffness. the result of the crack distribution is then passed on to the following modules. if the wall is divided into vertical segments with the same length, the wall is modeled as a single member with a continuous boundary and the length of the wall is divided into several segments. the same applies for the horizontal load, otherwise asingularity would occur on the load application point due to the concentrated load introduction. this could lead to failure of the model, because the allowable tension stresses would be exceeded at this node and would crack completely. to avoid a singularity on the load application point, the wall is divided into vertical segments with the same length. the same applies for the horizontal load, otherwise asingularity would occur on the load application point due to the concentrated load introduction. this could lead to failure of the model, because the allowable tension stresses would be exceeded at this node and would crack completely.

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the model allows the selection of the boundary element method to determine the volume of the crack and to calculate its contact area. the contact conditions are linear, and the friction coefficient can be specified. it is also possible to define the depth of the crack from the plane of the crack. the 3d-model is derived from the 2d-model, in which the depth of the crack can be specified as well. the crack can be closed after the simulation. the closing of the crack can be achieved with a stepwise closing of the crack or with a closing that is influenced by the maximum number of iterations. in addition, it is possible to set a damping factor to influence the closing. the simulation model can be configured to simulate the crack in the concrete or steel element. the mode can be selected as well as the concrete (or steel) thickness in the crack. in addition, the closing of the crack can be achieved with a stepwise closing of the crack or with a closing that is influenced by the maximum number of iterations. in addition, it is possible to set a damping factor to influence the closing. the model can be configured to simulate the crack in the concrete or steel element. the mode can be selected as well as the concrete (or steel) thickness in the crack. in addition, the closing of the crack can be achieved with a stepwise closing of the crack or with a closing that is influenced by the maximum number of iterations. in addition, it is possible to set a damping factor to influence the closing. as a physical-nonlinear analysis, the rfem analysis can be used for the calculation of the deformation of a cracked component with and without a reinforcement. the nonlinear analysis is based on the equilibrium

equation, which takes the stress field of the concrete into consideration. in addition, the crack formation and the damage of the reinforcement are also taken into consideration. the equilibrium equation can be decomposed into a displacement-equation and a crack-equation. the equations are coupled with each other and, in addition, with the boundary conditions and the loading. these equations are supplemented by boundary conditions at the reinforcement and the casing of the crack and the loading of the reinforcement. the edge effects can be included in the boundary conditions for the reinforcement casing. 5ec8ef588b