ČERVENKA CONSULTING

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ATENA_Product Composition

April 2009

Item	Modul	ATENA			
		2D Egr	3D Egr	Sci	Full
1.	**Finite elements**				
1.1.	2D basic elements	x	x	x	x
1.2	Axisymmetrical elements	x	x	x	x
1.3	3D basic elements		x	x	x
1.4.	2D higher order elements			x	x
1.5	Higher order Axisym. elements			x	x
1.6	3D higher order elements		x	x	x
1.7	Shell high order element		x	x	x
1.8	3D beam high order element			x	x
1.8	2D interface element	x	x	x	x
1.9	3D interface element		x	x	x
1.10	2D external cable element	x	x	x	x
1.11	3D external cable element		x	x	x
1.11	Bond element for bars	x	x	x	x
2.	**Material models**				
2.1	2D basic materials	x	x	x	x
2.2	3D basic materials	x	x	x	x
2.3	3D variable material	x	x	x	x
2.4	3D user material	x	x	x	x
2.5	Bazant M4 microplane mat.	x	x	x	x
2.6	Drucker-Prager material	x	x	x	x
2.7	Reinforcement material	x	x	x	x
2.8	Reinforcement cyclic material	x	x	x	x
2.9	Interface material	x	x	x	x
2.10	Bond for reinforcement	x	x	x	x
2.11	Temperature dependent (fire)			x	x
3.	**Solution methods**				
3.1	Direct Gauss LU elimination	x	x	x	x
3.2	Sparce iterative solution		x	x	x
3.3	Eigenvalue solution			x	x
4.	**Analysis types**				
4.1	Static	x	x	x	x
4.2	Dynamic			x	x
4.3	Transport (heat conduction)			x	x
4.4	Creep and shrinkage			x	x
4.5	Construction process		x	x	x
5.	**Graphical user environment (GUE)**				
5.1	2D GUE	x	x		x
5.2	3D GUE		x		x
5.4	AtenaWin GUE	x	x	x	x
5.5	Mesh generator	x	x	x	x
5.4	GiD Interface to ATENA			x	x