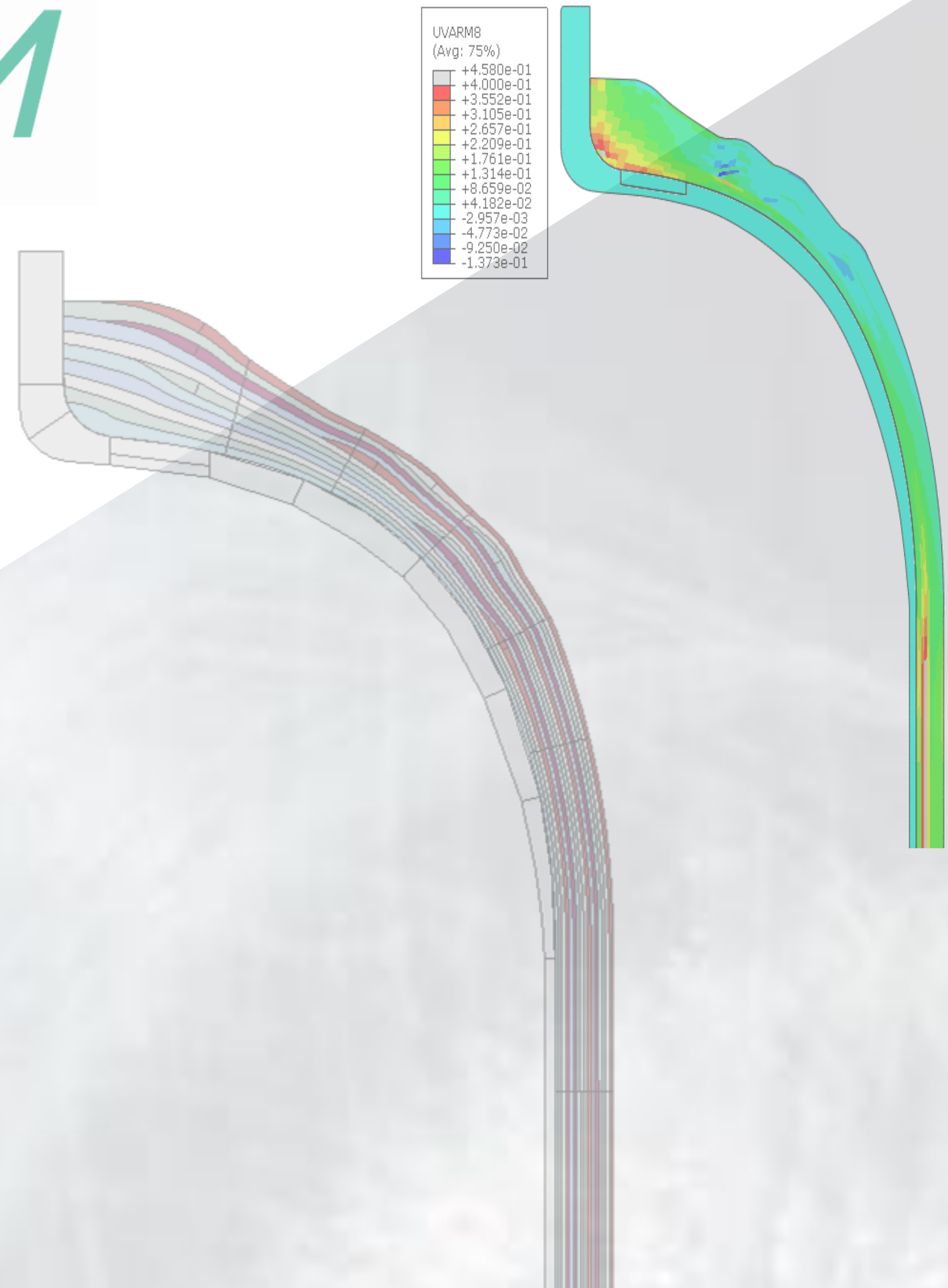
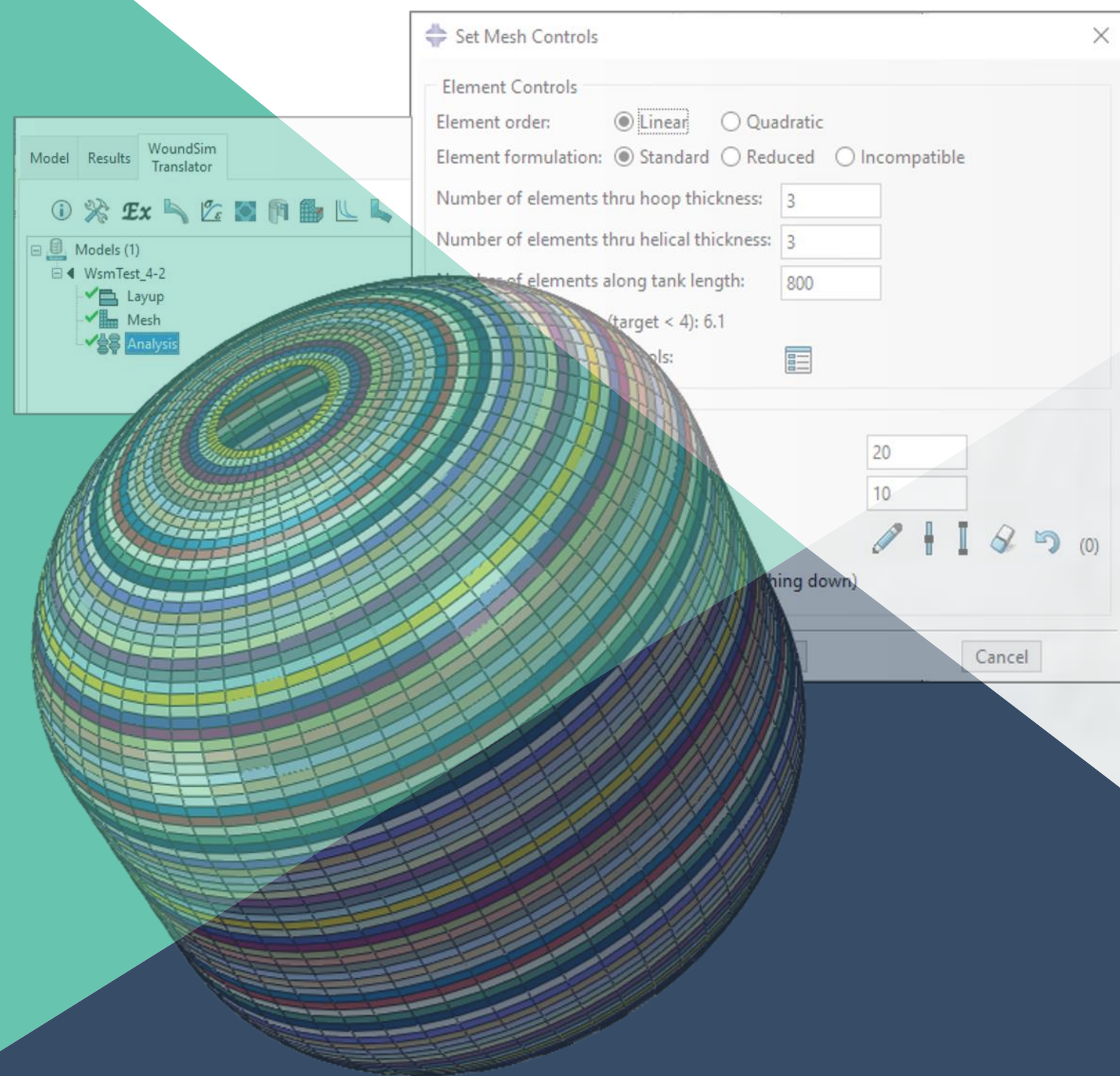


# WoundSIM

THE integrated intelligence for composite pressure vessels design and simulation

## WoundSim 2024 Release Notes



## WoundSim 2024 Major Release Main New Features

- New **GUI** with model tree
- Support for **multiple** COPVs and Multiple models
- New advanced **layup** capabilities
- Support for symmetric **plies** modeling, (non-smearred approach)
- Support for **layered** brick elements for both smeared and non-smearred approaches
- Support for **progressive** failure models
- Additional FEA **failure** measures
- FEA **outputs** storage

The screenshot displays the WoundSim 2024 1\* software interface. On the left is a model tree showing a project structure with materials, mandrels, models, and design steps. The central 'Layup Definition' window features a 'Laminate Table' with 10 rows of layer properties:

On	Type	Thickness Cylinder	Band Width	End Position	Angle Cylinder	En Valt
1	Helical_Geodesic	1.0	10.0	To-Boss	14.41	352.2
2	Hoop	1.0	10.0	By-X-Coord	89.0	280
3	Helical_Geodesic	1.0	10.0	To-Boss	13.94	358.8
4	Hoop	1.0	10.0	By-X-Coord	89.0	270
5	Helical_Geodesic	1.0	10.0	By-Angle	20.0	355.8
6	Helical_Geodesic	1.0	10.0	By-SetBack	25.05	0.0
7	Helical_Geodesic	1.0	10.0	To-Boss	13.49	384.8
8	Hoop	1.0	10.0	By-X-Coord	89.0	280
9	Helical_Geodesic	1.0	10.0	To-Boss	13.27	371.4
10	Hoop	1.0	10.0	By-X-Coord	89.0	290

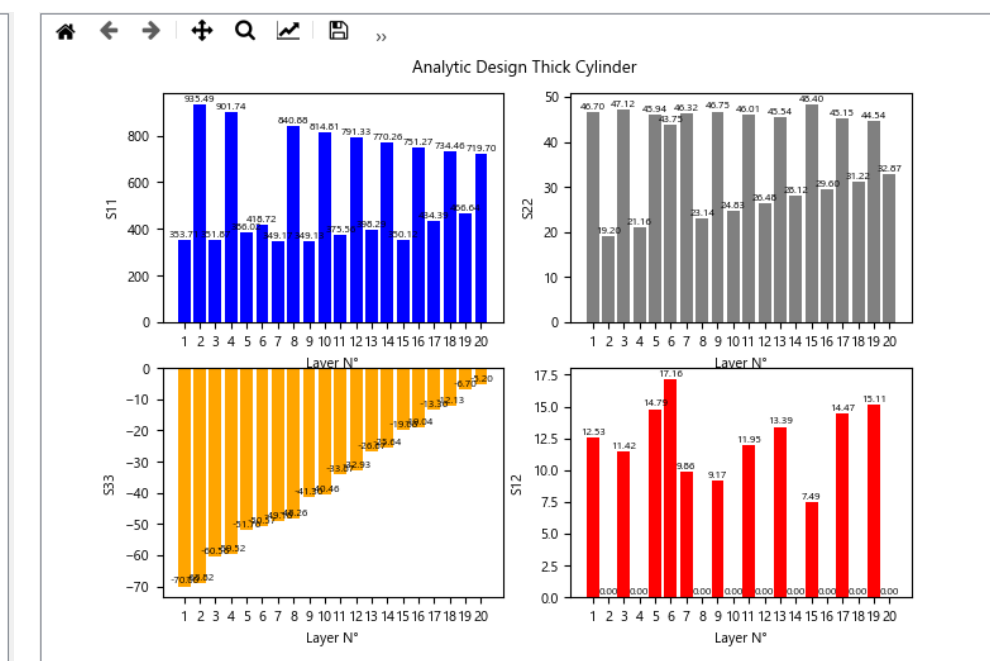
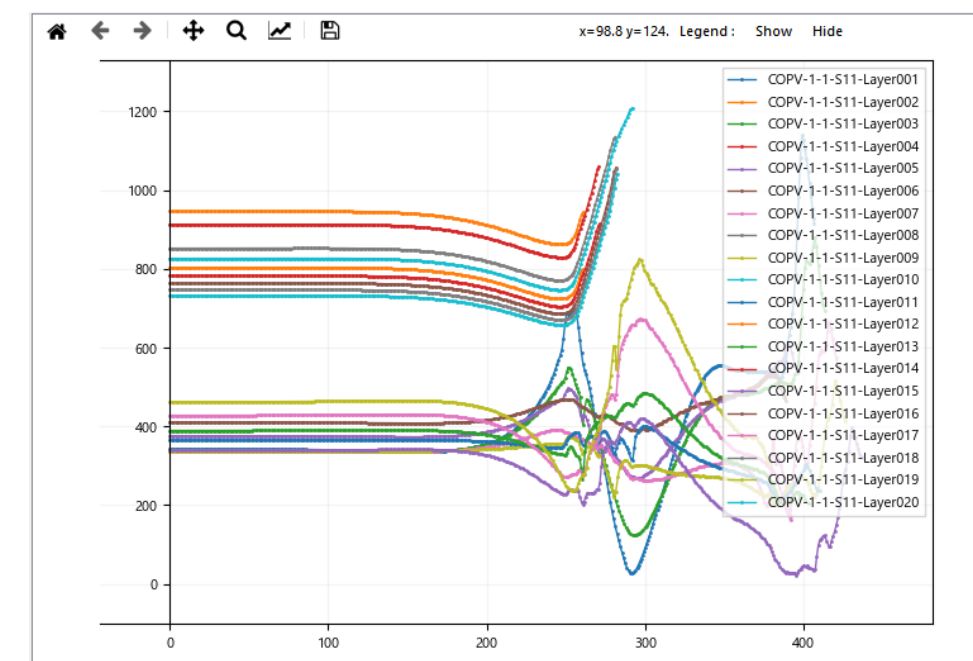
Below the table is a 'Layer Attributes' section with a table for 'Band Width' and 'Material'.

Band Width	Material
10.0	Material-1

On the right, the 'Viewer' panel shows a 'Mandrel Sector' and 'Layup Section' view with a 3D plot of the cylinder. Below it, 'Global Mass Outputs' and 'Global Analytic Outputs' are displayed:

Total Thickness Cylinder	Total Composite Mass	Total Resin Mass	Total Fiber Mass
20.0	11501748.552565	0	0.018173

- **Analytic** predesign capabilities using CLT and 3D elasticity theories
- **Failure** measures capabilities using analytic predesign results
- Initial **CAD-Winding** capabilities



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