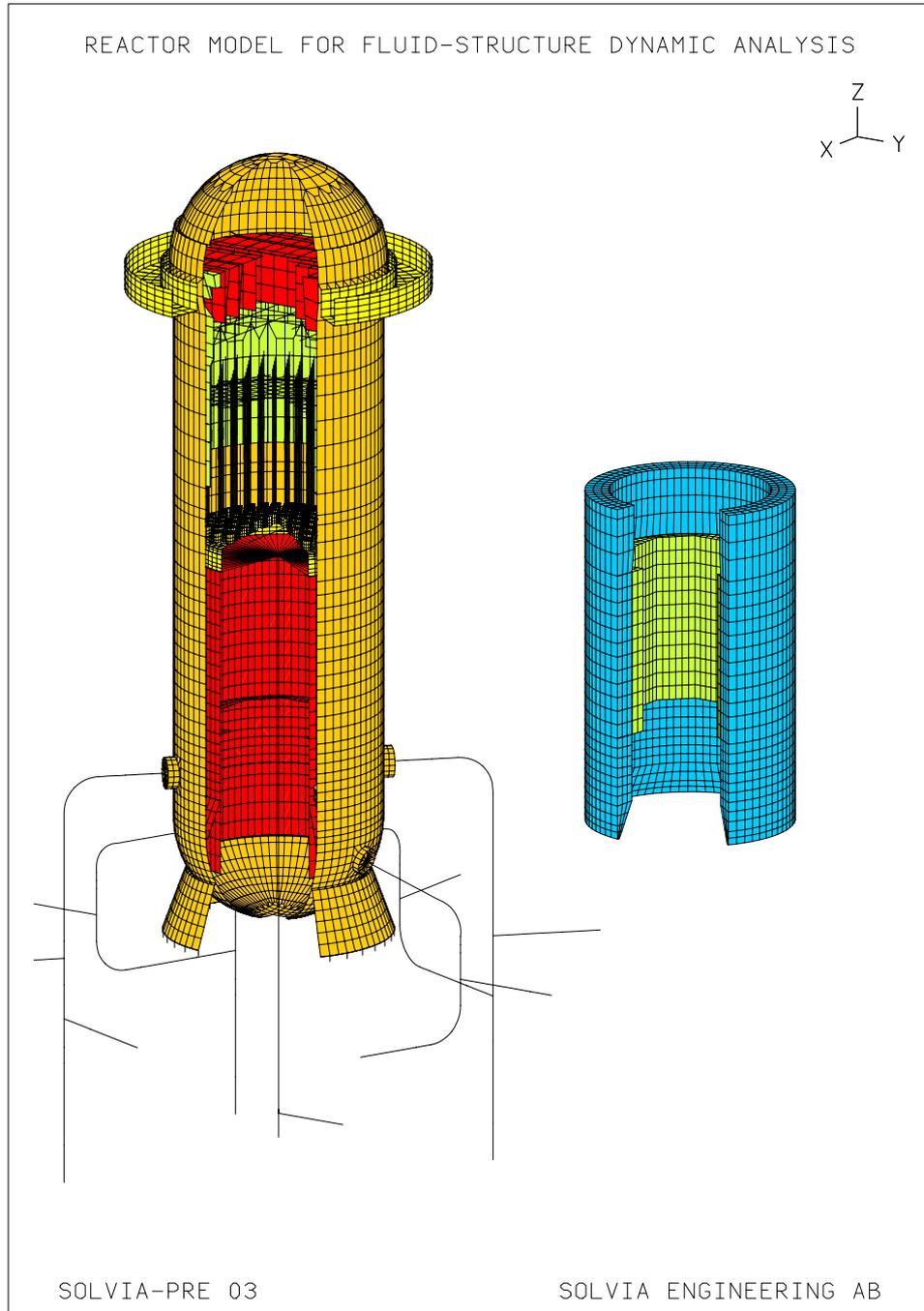


## Examples of Capabilities in the SOLVIA® Finite Element System

### Reactor Model for Fluid-Structure Dynamic Analysis



The reactor with internals and recirculation loops is modeled by SHELL, BEAM, PIPE, FLUID and SPRING elements. The model can be used for analysis of the response due to dynamic loads such as earthquakes, postulated pipe breaks and vibrations from pressure oscillations in the condensation pool. The new FLUID element is used to model the fluid-structure interaction between the fuel, the moderator tank and the reactor pressure vessel and can also model the propagation of pressure waves. The FLUID portion of the model is shown separately to the right.

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