

Appendix B

FEM Model for Fuel Storage Rack

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B.1 Full Model for Storage Rack

Dynamic analysis of fuel storage rack was performed using finite element analysis program ANSYS (Ref. E.1). X, Y direction of model means EW, NS direction respectively from installation of each rack, and Z direction means vertical direction.

Model Description of New Fuel Storage Rack

New fuel storage rack is composed of two modules consisting of 7 x 8 cells. Four parts on the edge of rack bottom are fixed and storing fuel in air.

Shell element was used to describe cell, top plate, middle plate and base plate. This element has a six degrees of freedom at each node: translations in the nodal x, y and z directions and rotations about the nodal x, y, and z-axes.

As boundary condition for modal analysis, nodes at module base bottom were constrained in all directions.

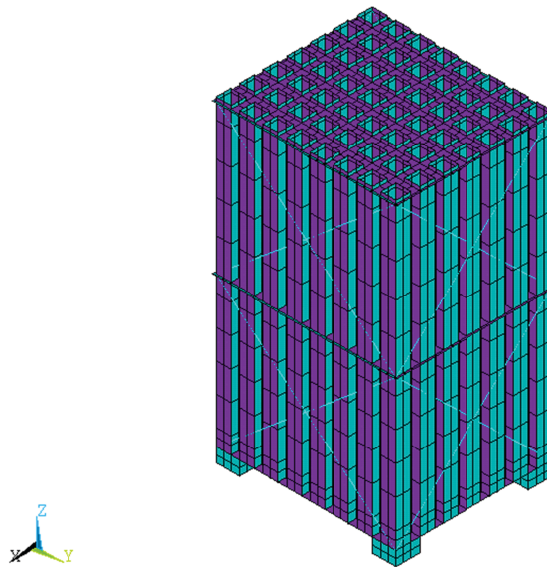


Figure B.1 Full Model for New Fuel Storage Rack