

RISA Webinar Q&A

Using RISA-3D for Complex Industrial Design

Sep. 13, 2010

- **Q**: Is there a rule of thumb for sizing of plates to optimize analysis?
- A: There are several rules of thumb, depending on the application. For most structural applications you can typically get good results out of plates which are between 12 and 24 inches in length/width.
- **Q:** Is the accuracy of the model impacted with plate aspect ratios in excess of 2:1?
- A: With the plate solver in RISA-3D you can actually get good results for plates with length:width ratios of up to 9
- Q: Is there a relationship for plate dimensions vs thickness? For example modeling thick concrete slabs vs. thinner steel tank shells.
- **Q:** Typically a plate's thickness should not exceed 3 times its width or length. So for a 36" slab you should not have plates less than 12" on a side. If you need to model such an application you can use RISA's "Solid" element instead of a "Plate"
- **Q:** I'd be interested in "hanging" the cone from the cylinder, like in a hopper application. Can RISA handle this or do I need to model a compression ring with a WT at the joint?
- A: You can hang the cone without needing a compression ring member. Plates can connect to each other at any angle, allowing you to model virtually any 3D geometry using only plate elements.
- Q: Are the Arc and Axis Members connected to the plate via Rigid Links
- A: No, plates connect directly to the members. For more information, check out **How Do Plates Connect to Members?** on our **RISANews** blog.
- 0: Does RISA automatically dectect interior nodes on members if the node is added after the member is drawn?
- A: Yes, as long as the member is defined as a "Physical Member" it will recognize and automatically connect to any joints which fall along its length. For more information, check out What Are Physical Members? on our RISANews blog.
- **Q:** Often manways or piping is required in the sides of industrial structures such as presented. These will rarely match the node points of the mesh. How can these be added?
- A: You can add small "dummy" members which you can then connect these other members to.

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