

California Polytechnic State University - San Luis Obispo represented the Pacific Southwest Conference and made their fifteenth national appearance.



Canoe Name/Weight: "Ambrosia"/209 lb

SLO relied on 3 men to make their presentation. The presenters were dressed business casual. The team used 1screen; there were 2 animations.

The team based their theme on San Luis Obispo agriculture. They began their presentation by introducing their theme.

After outlining their goals, the team described their organizational structure. They referred to the project schedule and explained how the team developed their delivery.

The team elaborated on the modifications that they made in hull design and described how they analyzed it for structural integrity. They mentioned that they tested eight different loading scenarios and performed both static and dynamic tests. More importantly (and rightly so), they found that the highest stress occurs during the turn in the sprint race.

After they described their mix design process, the team explained how they reinforced their hull. Then, it was on to mold and canoe construction.

In addition to providing details regarding the latter, the team explained the curing process and how they applied tension to their strengthening elements. They gave details regarding de-molding and finishing before explaining how they used sustainable materials to produce the "ultimate fruit of Cal Poly-SLO."

Questions and Comments:

- How did your quick setting mix differ from your main structural mix?
- Which accelerator did you employ?
- How does this help?
- How do you have air in your concrete considering that you did not use an air entrainment admixture?
- Why do you think that latex entrains the air?
- Shouldn't your boat crack considering that your analysis predicts a higher concrete tensile stress than you measured?
- Did you set a factor of safety for your design?
- What would you do differently if you had only half the time that you devoted to canoe construction?
- Why, as the project manager, did you take on the leadership role for the concrete canoe?
- How does increasing particle fineness lead to an increase in early stress?
- How did you calculate stresses based on your strain gage analysis?
- So, you used Young's modulus in the constitutive equations. What was the variance in this parameter in your plate testing?
- Did this variance make a difference?
- Should we be concerned about drying in a post tensioned structure?

Commentary:

This was a very strong delivery and the team addressed the questions flawlessly.



Cal Poly – SLO Display