

GJ 218 Conference Rm. 3:30pm

Moderator: Ian Tanimoto

Minutes Taker: Kyle Petersen

Present: Andrew Jones, David Arnett, Shea Morrison, Dr. Herb Hess, Nick Bachus, Cooper Atkinson, Justin Pettingill, Dr. Feng Li, Brian Cartwright, Matt Phillips, Kyle Petersen

- **Updates from Teams**

- Stator Design Team Updates
 - Electrical team

Have produced a permeability linearization (results passed out in hard copy)

Need ~80% Iron to make effective

Composite does not look like it will satisfy requirements

Need to verify theoretical models of composites are manufacturable

Justin tried two different models for strength (results: 75% Iron -> 24Mpa strength) Solid Iron->280 Mpa

Justin is still going through model and looking into all composite aspects

- Mechanical team

Nick Met with Rachel Peterson to discuss cooling options (recommendation is solid core heat sinks)

Cooper is still working through fin equations

Thermal model will be done by using parallel resistances w/ constant temp

Nick got a hold of Strom Electric to discuss coil insulation (Max temp= 200C)

Fatigue model will drive heat transfer, then they will be verified

- Controls team

Design review was completed

Ready to move into coding phase

- **Updates from Mentors (Dr. Hess, David, Justin)**

- David

Looking at encoder
Getting selectin verified with Dr. Berven
No real reason for why it won't work
4x higher resolution than needed
6 week, 4 day order time (now is the time to order)
Need to look at encoder mounts
Hope to be testing by early Feb.

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- Justin
 - Talking with Dr. Xing about Ansys license
 - Team contribution ~\$1200
 - Optimization of composite underway
 - Collecting more data
 - By spring semester: pick material path to finalize testing
 - Mass added as a constant
 - Moment of inertia of x, y must be balanced
- **Tuesday Meeting Updates**
 - Update from meeting with Dr. Berven
 - Pursue copper heat sink design
 - IRIC space request has been submitted (very optimistic)
 - Looking into phase II paperwork
 - Safety office has training/videos to watch
- **Updates from Senior Design (Dr. Feng Li)**
 - Snapshot #2 is on Friday(12/9) 8:30-10:30
 - 10:50 flywheel 2nd semester team is presenting
 - Controls team must be present
 - Same place as previous snapshot
 - Must have: Goals, work accomplished, current state, future
- **Other Updates**
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- **Next meeting review (7 December 2016)**

Moderator: Kyle Petersen

Minutes Taker: Andrew Jones

- **Adjourn**