

Minutes

Started: 12:30

Ended: 1:10

Total: 50 minutes

Notes

Team Kill-a-Wattz Meeting #1:

- 01/20/16
- 1130
- GJ 102

Team Member:

- Matthew Klein (present)
- Abdencio Sanchez (present)
- Nathan Gaul (present)
- Jake Querubin (present)

Power Converter:

- Input frequency from 0 to 400hz (universal input)
 - basic diode bridge (should not need a high speed)
 - similar to computer power supply
 - range in input unusual (wide range)
- efficiency: 97%
- used as a vehicle of research for new technology
 - using new tech is prime
 - subsets
- new tech in power conversion
 - gallium nitrite (high temps 460C)
 - 460C surface of venus
- 60V,10W (limited by safety reasons)
 - 2 people in lab at all times (more than 24V being used)

History:

- small business innovative research
 - %2 budget
 - encourage small business integrating
 - encourage American industry
 - <500 employies
 - Phase 1:
 - \$100K
 - design
 - proof of concept
 - Phase 2:
 - \$1M
 - prototype
 - we are in phase 2
 - Phase 3:
 - manufacturing

- usually bought by larger firm
 - small business owns patents
 - gov. has royalty free license
- \$3M
- Original Navy project feb 2014
 - July 2015 awarded phase 2 to uidaho
 - Phase 2.1: 18 months (end Jan 2017)
 - Phase 2.2: 9 months
 - Phase 2.3: 24 months
 - prototype ready for production
 - Lockheed Martin

Company

- small firm in Atlanta
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Previous Team:

- heatsink (mechanic and material eng.s)
- rough design

Timeline

- see senior design website
 - due dates
 - snapshot day (before spring break)
 - concept design
 - design due dates
- thing as defined by summer
- working and tested thing by December

Log Book

- bound notebook
- notes about everything related to project
 - dated
 - drawings
 - rough ideas
- used for patenting
- format
 - date (top)
 - names (top)
 - title (top)
 - signed and dated at bottom
 - date each page
 - cross out blank spaces in pages (end of pages)
 - leave about four pages in beginning for index
 - or do index at the back
 - number all important sections and their pages

Work Area

- room 330 buccannan engineering building

- lab space
- desk space
- coordinate w/ grad student Aumerate
- keys are available

Next Meeting

- positions
 - finance: Nathan Gaul
 - Budget Number: FDK737
- by next week
 - chat w/ amerate (adahal@vandals.uidaho.edu)
 - phase 2 design proposal
 - chat w/ jackson and other team members

Overall Goal

- advancing the goal with new tech for a subset of the overall product
- built in hardware