HPRT MEETING MINUTES

Team Meeting

Sunday, 29 October 2017
6:00pm to

Minutes recorded by: Myla Azofeifa

Meeting called by: Alex Rustaey

Attendees: Yi Tong Zhang, Jordan Loos, William McGinn,

Table 1 - Record of Meeting

6:00pm	**Begin Meeting** ● Meeting started by Alex Rustaey ● Topics ○ Team assignments ○ How to generate concepts ○ Concept generation	EGR 108
6:10pm	**What is everyone working on?** ● Alex - Vehicle turbochargers ● Bill - Mechanical closure elements ● Myla - Electronic closure elements ● Jordan - Variable area nozzles ● Yi Tong - Metal bellows	EGR 108
6:15pm	**How to generate concepts** ● Individual vs. group methods ● Previous D4P methods ○ Seat sketch ○ Brain ball ○ 3-2-5 ● Issues that we're encountering ○ Limiting ourselves to the current pressure balance design ■ It's been thought about 100 times, and we need to come up with something new ○ Need to bring down hysteresis by minimize contact area ○ Need to determine one system, rather than	EGR 108

	continuing on with multiple scattered ideas	
6:35pm	**Decided to focus on turboexpander and variable area nozzles**	
6:35pm	**Variable area nozzles** ● Actuators ● Nozzle shape ● Nozzle material ● Pressure sensors **Turboexpander** ● Feedback looping (getting it to power itself) / (how to get it to torque itself) ● Loading ● Increase shaft resistance ● Turbochargers ? ● Turbines ○ How does a turbo-expander generate energy? ○ How can it be loaded ○ Look at how turbocharger turbines work, what they cost, sizes, etc. ○ Concept generation ○ How can we incorporate that into our design	

Table 2 - Action Items (Tasks Assigned)

Tasks	**Person Assigned**	**Due Date**	**Date Complete**
Generate concept designs.		10/31/2017	
Assignments: ● Alex/Myla: Turboexpanders ○ Increase shaft resistance ● Jordan/Bill: Variable area nozzles ● Yi Tong: Sensors	One concept and research material each	10/31/2017	
Reschedule next semester Honeywell meetings, due to class interferences.			
Complete shop safety training. Must be done on a weekday at 9:30am. Contact Kellan Rothfus for more information.	*Jordan Loos* *Bill McGinn* *Alex Rustaey* *Yi Tong Zhang*	*Spring 2018*	*Alex - 10/24/2017*

Complete Advanced Shop Training (following the completion of shop safety training). Available every other weekend beginning 9/9 & 9/10. Contact Kellan Rothfus for more information.	*Jordan Loos* *Bill McGinn* *Alex Rustaey* *Yi Tong Zhang*	*Spring 2018*	

Next formal meeting: Tuesday, 31 October 2017, Engineering Bldg. (#69), Room 108 at 3:00 PM (client meeting)