**FAMU/FSU College of Engineering**

**Department of Mechanical Engineering**

**Code of Conduct**

**Team 4: Turbocharger compressor casing, alternate material selection and processes**

**Names: Harrison McLarty, Ralph Scott, Alexander Mankin, Oluwalowo Abiodun**

**Date: Friday, October 4, 2013Mission Statement**

The goal for team 4 is to research different materials that could replace the current aluminum alloy used to cast the compressor casing in Cummins B series turbochargers. These materials should match or exceed the current design parameters set in place by Cummins to manufacture and produce their compressor casings. These parameters include, but are not limited to, fracture strength, temperature tolerances, and cost efficiency. The final objective should be to find a material, which is cheaper to fabricate and manufacture than the current aluminum alloy used by Cummins.

**Roles**

Responsibilities have been assigned to different team members and all have personally agreed to carry out their assigned tasks to the best of their ability:

**Team Leader** – Harrison McLarty

The team leader will be responsible for managing communication between team members and with the project sponsor. Responsibilities also include assigning tasks to team members equally and providing expectations for these objectives. Tasks will include completing deliverables, project presentations, bi-weekly reports, and completion of the mission statement stated above. In addition the team leader will assist in researching and prototyping materials selected to replace the aluminum alloy currently in use by Cummins. Also, the team leader will assist in finalizing the completion of deliverables and presentations.

**Team members:**

**Web Design Master: Alexander Mankin**

The web design master will be assigned with keeping the group website up to date and current. All deliverables, reports, and presentations will be uploaded to the website. The team will assist the web design master in selecting a template and format for the website, and will provide assistance if needed.

**Financial Advisor: Ralph Scott**

The financial advisor will be responsible for organizing supplies needed for the project and their estimated cost. The advisor will update on the team on estimated costs of supplies and the current balance. The main responsibility of the financial advisor is to ensure the team possesses responsible spending practices and ensure that with the supplied funds the project is completed efficiently.

**Materials and Metallurgical Advisor: Oluwalowo Abiodun**

The materials and metallurgical advisor will provide input and suggestions for the most effective materials to be used in replacing the aluminum alloy currently used by Cummins. All team members will complete research for alternate materials and the materials advisor can provide suggestions and comments on the quality and effectiveness of the materials selected.

**All Team Members: Harrison McLarty, Ralph Scott, Alexander Mankin, Oluwalowo Abiodun.**

* Assist in completion of deliverables and presentations
* Be open to all group members suggestions and ideas
* Arrive to group, sponsor, and staff meetings on time
* Respect group members time schedule and assist in ensuring that all contribute to a productive environment

**Communication**

Communication will be carried out through cell phone, email, and personal interaction between all team members. The team leader will be the primary member responsible for coordinating meetings between the group and project sponsor. Emails will primarily be used by the team leader to forward all documents and attachments sent by the project sponsor to the team leader. This will ensure that all team members are kept up to date with expectations and information provided by the sponsor. Most group meetings will be held on Tuesdays and Thursdays, but will be flexible if need be. The team leader will send text messages and inform members in person of future meetings held by the group. At the latest meetings will be announced 24 hours in advance. Any questions or concerns about the project will be carried out in person to ensure that all team members clearly understand what objectives and tasks need to be carried out.

**Team Dynamics**

For our groups team dynamics, every one of our member’s is encouraged to make positive contributions to the advancement of our project as well as making suggestions to help things such as, team organization, time management, allocation of tasks, and team deadlines. All of this group communication is done with open minds from each of the members and with only constructive criticism being given to any of the ideas. Our members are encouraged to share any doubts or issues they are having with either there assigned task or with the project as a whole, and any of these problems will then be discussed and solved as a group with everyone getting there chance to voice their opinion. All of these decisions are made with intent of advancing the project in a positive direction.

**Ethics**

All of our groups members are expected to behave in an ethical manner, and make choices that would jeopardize their integrity or the integrity of the school. All of these ethical decisions will be based on the guidelines presented in the NSPE Engineering Code of ethics.

**Dress Code**

As far as dress code, for presentations we will dress in business casual attire. But for team meetings or any other group gathering, there will be no established dress code.

**Weekly and Biweekly Tasks**

Depending on the task, meeting or deliverable that is required of us, we will split up and delegate tasks to each of the members, as well as establish a timeline on when our tasks need to be completed by. This type of decision making will be conducted during group meetings that generally occur two times a week. All members are required to attend these meetings, and if one of us cant due to a conflicting issue, a task will be assigned to them in their absence and they will then be informed on what it is they have to do and by when.

**Decision Making**

The decision making by the team should be based on every members input. If there are any concerns they should be brought up during a group meeting and discussed thoroughly to clear up the problem. This should be done for every concern as this is imperative to have a smoothly running and successful project. All decisions should be made with ethics in mind and for the safety and well-being of society. The procedure below illustrates the way the team will make each decision.

* Evaluation of Problem  –  Investigate the problem and find the parameters which it involves
* Possible Ideas – Gather and list all and any ideas and solution to the problem which was found
* Assemble information from research – Research information pertaining to the problem. Discuss this information with the group in order to find the most viable information found
* Plan – From this previous research, come up with a plan to solve the solution. A design should be come up with in this step.
* Prototyping and Testing – After construction of a prototype is completed, test the prototype and gather results of this test
* Decision Review and Implementation – Review the results of the test and determine if the prototype of the solution is sufficient. If not, go back to planning step and reevaluate the design

**Conflict Resolution**

If there is any issue that arises between two members of the group the following steps will be followed.

* Discussion of the aforementioned issue with clearly made points on why the member feels that way
* If the discussion does not clear up the issue and the issue pertains to the decision making process a vote shall be tallied on what the solution to the problem should be
* If the voting does not clear up the issue, the instructor for the class will be consulted and his opinion will be heard.

**Statement of Understanding**

All team members agree to all of the descriptions and contingencies listed above

Name Signature Date

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