

We are Engineers of innovation and we would like to sign up for the V20 competition. Engineers of Innovation is an Alumni Society for people who want to do more with their knowledge and share it with each other and other teams/schools, this will be done in the form of a project. In this project we want to work together on great new innovations. Many of our members have experience with a solar boat project, during their study at the University they participated in the CleanMobility project. Since we are not students anymore, and we liked the solar boat project so much, we want to do these kind of projects with our society. This competition is the perfect way to start innovating with our own solar boat. We want to optimize the V20 as much as possible and share the improvements with anybody interested. For us it is not only competing in a race but also to make the world a little bit better with renewable energy sources and optimizing power use. Because we already have experience with building, maintaining and racing a solar boat we think we make a good V20 team.

Currently the society has 20 members from different studies which is a very multidisciplinary group. This means that there is a lot of knowledge from different levels. For example, the group consists of (ex)students and graduates of the studies "Engineering, Design and Innovation" and "Electrical Engineering". This group can collaborate closely and finds innovation and technology an important part of its own development.

The experience gained from the CleanMobility project has a lot of knowledge about foils and composites. In addition to this, all mechanical engineering members have the knowledge about complete drive, steering and construction for the boat. The electrical engineering members are able to design and develop batteries, motor controllers, MPPT's, control systems and data processing systems. All this experience will provide a steady base for the new developments on the V20. Furthermore do we have the possibility to exchange our experience with other teams to increase the innovation within the V20 class faster and better and to promote the solar boat racing sport. We also have visited some V20 teams (New Nexus Solar Racing Team & DB-20 Racing Team) to get inspired and find some flaws and opportunities in the V20 boats.

On the V20, we would like to change the foils to an active foil system with variable foil pitch. This will be done using a mix of mechanical and electronic improvements. Electronic sensors will measure the water level and change the foil pitch accordingly to provide a stable fly. This new foil system will provide more speed a better efficiency and good stability for the V20 boat. This innovation will be one of the main projects of the Society, and will start the first year and keep improving during the coming years.

Furthermore we would like to make a smart driving system with an advanced sensor network and logging system to determine the major power losses and the ability to fix these the next years.

Kind regard,

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