Solar Splash 2003

MSOE's entrant into the 2003 international solar splash boat race is the result of a two year project in which thirteen (13) ME students designed, fabricated, and raced a solar/battery electric boat in competition. The result of their efforts was a fourth (4th) place finish in a field of seventeen (17) teams. This was only the second time that MSOE has participated in the competition.

In addition to the overall finish MSOE took 2nd place in the endurance event that consisted of two 2-hour races using a combination of solar and battery power.

MSOE also captured the best drive train design award based on using a hydrostatic transmission in the sprint event. A novel hydraulic steering system that used vegetable oil was also included in the boat design. Both of these systems were of intense interest to many of the competitors and visitors.

The trailer that is utilized by the ME student design competition teams also attracted a lot of attention. The organizers asked that the trailer be parked next to the paddock area so that all of the visitors could see it and we also let other teams store equipment overnight. For this MSOE was also given a sportsmanship award.

Finally, the uniqueness and performance of the boat was of sufficient interest that the local CBS station did three news spots that were sent out to such shows as Good Morning America on Thursday June 19, 2003. These spots consisted of interviews with the student team members and video of the boat on the lake. We are attempting to obtain both the raw and edited footage of these new spots.

The two student teams should be commended for their design and perseverance in producing a very competitive boat. The team members were as follows;

2002-2003 Team Captain: Jeremiah Rauwerdink

Jeremy Gorski Fahd Bubshait Mohammed Merdad

Travis Meyers Jeff Meusen

2001-2002 Team Captain: Andrew Krajnik

Andrew McNeal Kyle Steffen Kevin Guetzke Mishal Saab Ayman Alghamdi Mousa Alharbi Raied Alghamdi The pictures that follow show the boat in various configurations and details of the hydrostatic transmission. Several fluid power companies contributed directly to the boat in terms of equipment donations. Specifically Parker Hannifin, Eaton Corp. and PHD contributed hardware.

In addition Parker Hannifin also contributed to the competition trailer that is used by the solar boat other student teams at MSOE.

The support provided by NFPA through the education committee was vital to the success of the project. MSOE would like to thank NFPA and all the companies that supported this project.

Additional pictures and video are being processed and will be provided to NFPA in the future. An article on the boat is being planned for Hydraulics and Pneumatics similar to the one that appeared on the Baja car. The boat was also exhibited at the Milwaukee Public Museum during their environmental awareness day.



Boat – Solar Configuration (Travis Myers Driving)



MSOE Solar Boat Competition Team



Hydrostatic Drive for Sprint Competition



MSOE at Starting Line of Sprint Competition