

MNIT Students Begged 2nd Position in Indo Asian Solar Challenge-2017

(07/04/2017 - 09/04/2017)

TEAM XCLERATE representing MNIT Jaipur participated in Indo Asian Solar Challenge organized by Robotics and Intelligent System Community. The team comprised of 25 BTech students from Mechanical, Electrical and Electronics Department namely Arshad, Prit, Hiren, Amit, Vipul, Prateek, Abhishek, Parth, Narendra, Ajay, Himanshu, Devansh, from the second year and Rohan, Himanshu, Siddharth Singh, Tushar, Tabish, Siddharth Narula, Punit, Rahul, Prabhakar, Madhav, Harshit, Raghav, Nikhil from the first year. The team worked under the guidance of Dr. Harlal Singh Mali from the Department of Mechanical Engineering and Dr. Rajesh Kumar from the Department of the Electrical Engineering. The competition aimed on designing and fabricating a solar vehicle which could deliver optimum performance under city conditions. The competition was divided into two major parts, Virtual Round and Dynamic Round.

THE VIRTUALS : Phase " GRAB THE OPPURTUNITY"

The event focused on choosing the deserving teams for the dynamic round hence a virtual(initial) round was held in the month of January 2017. For the virtual round the team had to present reports showing the various design consideration, cost effectiveness, innovation and basis for opting on several technical aspects of the vehicle which was supposed to be fabricated. The team used Autodesk Fusion 360® platform for design and its validation.

THE DYNAMICS : "TIME TO TEST THE LIMITS"

The profound success produced by the combined efforts of the team and the faculty advisers helped the team to remain enthusiastic and determined for the second and the most crucial round. The team worked to fabricate a Tripod(two wheels in front, one in back) which had the capability to run on both Solar and direct electric power. The immeasurable support of the seniors helped us a lot. It just took 2 months for the team to get the Electric/solar car to hit the road. The single sitter vehicle used 800kW Motor, 48V 50Ah battery to run on direct charging of batteries through normal power supply completed 4.5 laps in the competition, covering a distance of around 67 km. The power to weight ratio of 800kW/166 Kg allowed them to score well in the event of running on solar power directly. The events at dynamic round included, Technical Inspection, Brake Test, Maneuverability, Design Report Presentation, Sales Idea Presentation and Endurance.

The 5 days event became a success when the team bagged the 2nd position in the overall event combining the scores of Virtual and Dynamic Round. The team was presented with a cheque of 40,000 INR. The members believed that all of this became possible because of the bonding and understanding in the team. It would not have been possible without the guidance of the faculty advisers, inputs from seniors and over and above the motivation from the Institute Management.

