

Technology

The Friesland Solar Challenge Jeremy Parsons



Messing about in boats is famously fun, but it can also be an ecological means to get from A to B: especially when the boats are powered the traditional way by wind and sail or, more recently, by sunlight and photovoltaic panels. For example, in early 2007, the Swiss solar catamaran Sun21 journeyed 7,000 miles across the Atlantic Ocean to the USA. And whilst the recent 2008 biofuel diesel-powered circumnavigation by 'Earthrace' may have taken the powerboat record (60 days), it does not match the 50-day record for wind-powered sailing boats set by the 'Orange II' catamaran in 2005.

The combination of solar energy and electric propulsion has unique advantages in quieter waters and narrow canals, so it seems appropriate that the Friesland region of the Northern Netherlands hosted its second Solar Challenge boat race this June. The route follows the famous Elfstedentocht ('Eleven cities') ice skating tour over 200km. However, whilst global warming may mean that the winter race becomes increasingly rare (it has been run only once since 1996) the warm summer sunshine this year gave a welcome boost to both the new solar boat racers and the crowd that came to watch the parade and sprint competitions the day before the main tour. A total of 49 boats competed in three different classes, with Sharp loaning standard rooftop solar panels to the A and B classes (giving approximately 600 to 900 watts) leaving the 'C' teams free to design and build something sleeker and faster. The C-class pre-race favourite was a Netherlands home team from Technical University Delft and sponsored by Delta Lloyd. Coincidentally, teams from TU-Delft have won the World Solar Car race across Australia the last four times it has been run (against formidable opposition and constrained by the 110km/h Aussie speed limits) and TU-Delft also won the previous Frisian Solar Boat Challenge. So, yes, as expected, they won again this year (in just over 12 hours aggregated) and to rub salt in the wounds, they even brought along their commercial offshoot's carbon-fibre speedboat



ABOVE:
TU-Delft scared everyone with the 'stealth boat'
BELOW:
Imperial College flying the flag for the UK

version to intimidate entrants in the sprint. This oversize 'stealth' boat can also top up on energy from the electricity grid, looks very cool, but is only suitable for those who don't bother to ask about prices (rumours suggest hundreds of thousands of Euros).

By contrast, a British team ('SolarSpirit') from Imperial College London built a light 'A class' boat for only a few thousand Pounds by using volunteers' hands the hi-tech way: slices of foam laid on a mould then coated on both sides with a thin layer of fibreglass. Their boat was racing remarkably well until the last day, when an inadvertent dunking weakened the electrics (boats need to be lifted at certain points in the tour) causing the motor to cut out completely just 1km from the finish! Thirty-two boats did make it all the way to the end so Imperial got the prize for the unluckiest team and have vowed to do better next time.



For more information, see the full English website: <http://www.frisiansolarchallenge.com/>