

Design of test structure for wind tunnel experiments

In this project you will work beside other members of the student competition team for small wind turbine, and learn basics of wind turbine design, wind energy and work together to design and make a test bed for our blade, rotor, 2D profiles, and the scaled small wind turbine for aerodynamic measurements in our small wind tunnel with the test section area of 800 mm x 1000 mm. Apart from the structural design with frequency considerations, the required sensors and motion mechanisms such as turn table will be implemented.

Main tasks/requirements:

- CAD design of the test bed structure using Siemens NX, or Autodesk Inventor, or equivalent
- Frequency and stress estimations for the desired application
- Implementation of desired sensors and actuators
- Learn and apply DFM technics on your design
- Preparation of the report of your work including 2D drawings, exploded views, and BoM
- Contribution to the final report of the team for the competition
- Contribution in preparation of the test configuration
- Participation in weekly team meetings (online for remote students)
- Teamwork and communication with other team members
- Intermediate English knowledge or above

For more information about our team, visit the page:

<https://www.hs-emden-leer.de/studierende/fachbereiche/technik/projekte/wind-challenge>

Contact person for application or more information:

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