NAVIER

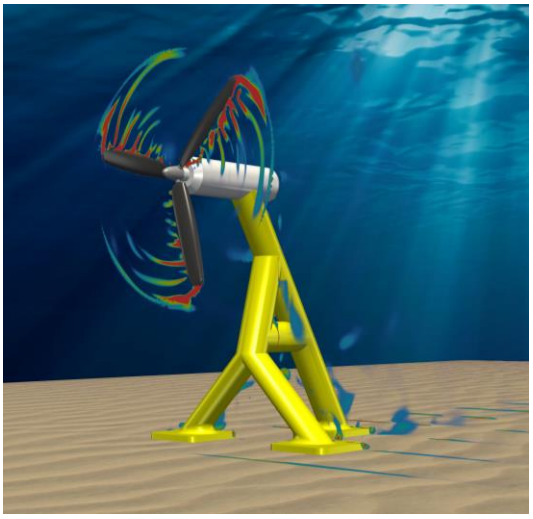
Renewables- Tidal Turbines CFD Capabilities Overview

RENEWABLES – TIDAL TURBINES
CFD CAPABILITIES OVERVIEW

NAVIER

Navier provides CFD based hydrodynamic analysis services to gain insight into the performance of conceptual tidal generator designs, earlier in the design process.

Computational fluid dynamics (CFD) is becoming an ever increasingly powerful tool for assessing the performance of tidal generators. In the hands of an experienced CFD practitioner, realistic tide profiles can be applied to the simulation to gain valuable insight into the performance of conceptual designs, earlier in the design process.

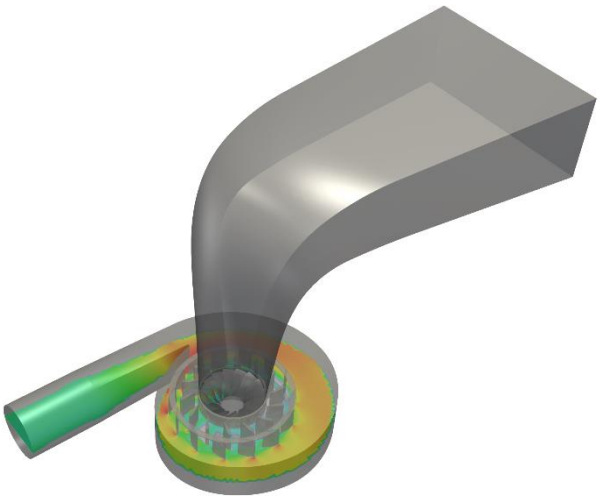


There are many challenges associated with tidal turbines that differentiate them from say wind turbines. For example, the turbulent intensities and length scales associated with their operation are significantly higher than those found around wind turbines. The influence of the turbulent inflow has a dramatic effect on both performance and wake regions, ultimately effecting the model's subsequent accuracy.

Navier's CFD consulting services have extensive experience of carrying out appropriate numerical simulations on novel tidal design concepts for full scale, micro and pico hydroelectric systems including both single turbines and arrays which either due to scale, technical complications or financial constraints cannot be tested .

Key Outputs:

- Turbine reactive forces and pressure loadings
- Shorten design cycles
- Optimisation of field layout
- Power performance
- Assess wave impact on tidal turbine



To find out more, contact us:

E: info@navier-flow-consultants.com

W: www.navier-flow-consultants.com