

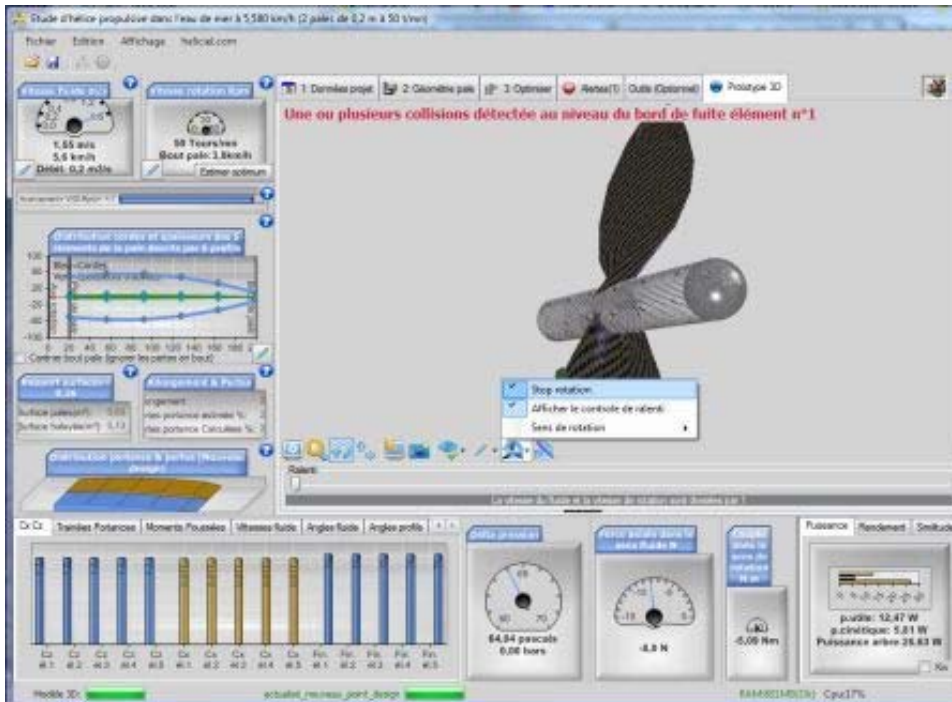
Messages advice and information to build propeller

We see that there are messages in tabs "Alerts". see what's wrong

Heliciel diagnostic results at each reconstruction and indicates possible improvements you can make to your parmetres to avoid design errors: With a little experience you can quickly find what are the parameters to correct.

Different types of messages and solutions are proposed, according to the defects observed::

One of the defects of construction, more current, is an inappropriate speed rotation. When you have messages involving the speed, first perform a procedure, research optimum speed,before changing the geometry of your propellers. This is, in the vast majority of cases, the reason for errors buildings!:



1: Données projet 2: Géométrie pale 3: Optimiser **Alertes(1)** Outils (Optionnel) Prototype 3D

1 Erreurs 0 Avertissements 0 Messages

(1) Géométrie d'hélice impossible car:
 Une ou plusieurs collisions détectée au niveau du bord de fuite élément n°1
 Causes possibles:
 - Pied de pale trop proche de l'axe de rotation
 - Pales trop nombreuses
 - Largeur (corde) élément trop importante
 - Vitesse de rotation trop élevée engendrant un callage de pale trop proche du plan de rotation

Solutions proposées:

- Modifier nombre pales
- Modifier corde
- Modifier vitesse rotation
- Augmenter pied_pale

Here it is the rotational speed, which is unsuitable for the speed of movement. We left the default speed when we define the operating point, it is time to take care of:

We could test the propeller speeds, changing this parameter and rebuilding, until you find a speed with a good yield. But these iterations may be long and tedious, heliciel therefore provides an optimization function for the rotation speed according to the optimum performance:



To find the speed at optimum performance, Héliciel provides a iterative search procedure. A range of rotation speed is tested, The twists of the propeller are recalculated and performance for each speed are displayed in a graph. When the maximum efficiency is obtained propeller is updated at the optimum rotation speed. The optimization in terms of performance gives us the most economical propeller power. It is a starting point for the study of the propeller. the implantation constraints for our propeller sometimes compel, to deviate from the optimum rotation speed...see optimize speed rotation propeller turbine