

Abstract Submitted  
for the DFD10 Meeting of  
The American Physical Society

**Tip vortex cavitation suppression by water ejection from wing tip**  
MOHAMED FARHAT, MARTINO RECLARI, Laboratory for Hydraulic Machines  
- EPFL — In the present study we investigated how a water jet, used to create a  
winglet-like effect, actively reduces or suppress the cavitation formed into the core  
of a tip vortex. Modifications of the vortex structure were monitored by measuring  
the velocity profiles with laser Doppler velocimetry. High-speed jets proved to be  
very effective in increasing the size of the vortex core, thus inhibiting the formation  
of tip vortex cavitation.

Martino Reclari  
Laboratory for Hydraulic Machines - EPFL

Date submitted: 05 Aug 2010

Electronic form version 1.4