

Home of the **A**coustic **S**cintillation **F**low **M**eter

AQFlow at the World's Longest Hydropower Plant



Edison Sault Hydroelectric Plant

Edison Sault Electric

AQFlow has been contracted to conduct flow measurements at the 74 unit, 18 foot head, Edison Sault Electric Hydroelectric Plant in Sault St. Marie, Michigan. The plant is a quarter mile long horizontal shaft hydro plant (the longest in the world) and 80 feet wide. Each of the 74 horizontal turbines has four runners, which drive the 60-cycle generators. The ideal net plant capacity is about 36 MW. One 20-path ASFM Advantage system will be used for flow measurements at all of the 74 units, one at a time. Ten paths are mounted horizontally, and ten vertically. The flow measurements will be used to determine efficiency curves for each unit and optimize dispatch accordingly.

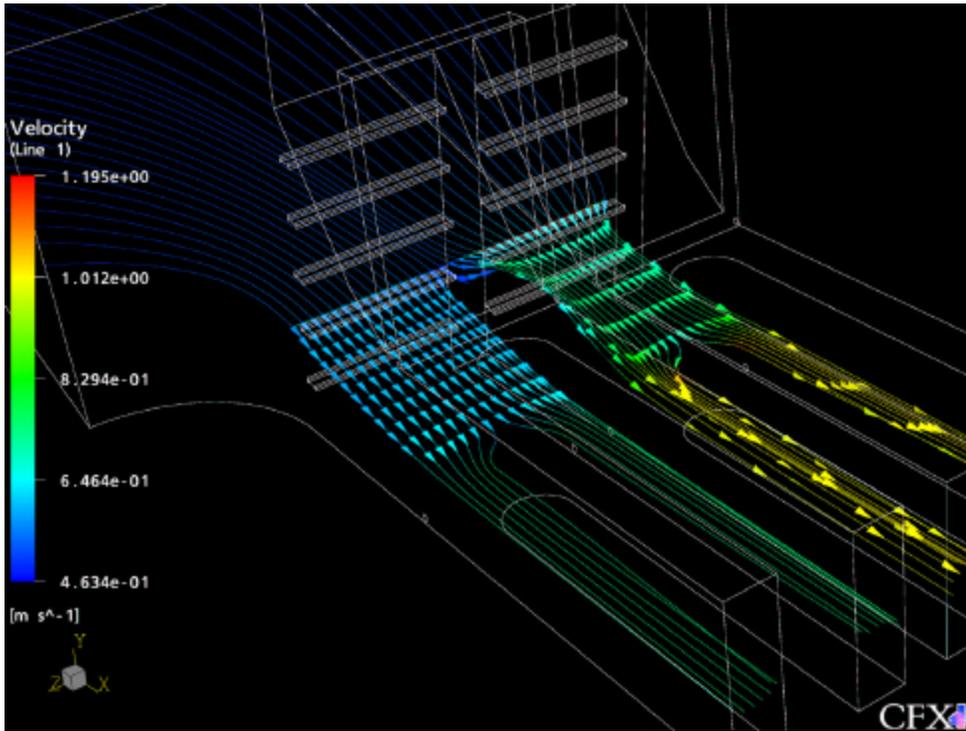
Hydro 2003 Croatia

AQFlow's Josef Lampa will be attending this conference November 3 – 6, 2003 in Dubrovnik. He will be presenting a paper titled "The Acoustic Scintillation Flow Meter – A breakthrough in short intake turbine index testing" during Session 2 of the conference. Josef will also be available at the Korto Cavitation Services booth #33.



Dubrovnik, Croatia





Latest Computational Fluid Dynamics Modeling Project

AQFlow's CFD group has finished developing a 3-D model of the Hydro Kennebec intakes in Maine, VT. The unstructured and parallel code CFX 5.6 has been used to simulate the turbulent flows. The turbulence levels calculated by the model show a good correspondence with the direct measurements made by a rapid sampling current meter in the intake.

Figure shows simulated flow through the two Hydro Kennebec intakes to the pit turbines, with trash racks.

ASL AQFlow will be attending the following trade shows & conferences. We would welcome the opportunity to talk to you.

ASL AQFlow Presenting:

Hydro 2003 Nov.3-6, 2003	Croatia	"The Acoustic Scintillation Flow Meter – a breakthrough in short intake turbine index testing"
IGHM 2004 July 14-16, 2004	Switzerland	Papers describing technical results of recent improved understandings of conditions for optimal absolute ASFM accuracies have been submitted.
HydroVision 2004 Aug. 16-20, 2004	Montreal	1) "Understanding Causes for Systematic Error in ASFM Measurements of Turbine Discharge" 2) "The ASFM Monitor: A Cost-Effective Tool for Real-Time Measurement of Turbine Discharge"

WaterPower XIII, Buffalo, NY

AQFlow's booth attracted a lot of interest from conference delegates.



Albert Mikhail of Ontario Power Generation, Jan Buermans and David Lemon of ASL AQFlow.

Other Hydro Solutions

Our parent company, [ASL Environmental Sciences](http://www.asl-science.com), offers a range of related services and products for other hydro applications, such as flow surveys and numerical simulations in forebays and tailraces.



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E-mail: aqflow@aqflow.com Web: <http://www.aqflow.com> Toll Free: 1-877-656-0177