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

**Hydro 2003**
Croatia
Nov. 3-6, 2003

**IGHEM 2004**
Switzerland
July 14-16, 2004

**HydroVision 2004**
Montreal
Aug. 16-20, 2004

ASL AQFlow Presenting:

- “The Acoustic Scintillation Flow Meter – a breakthrough in short intake turbine index testing”

- Papers describing technical results of recent improved understandings of conditions for optimal absolute ASFM accuracies have been submitted.

- 1) “Understanding Causes for Systematic Error in ASFM Measurements 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.

**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.

**Other Hydro Solutions**

Our parent company, ASL Environmental Sciences, offers a range of related services and products for other hydro applications, such as flow surveys and numerical simulations in forebays and tailraces.