

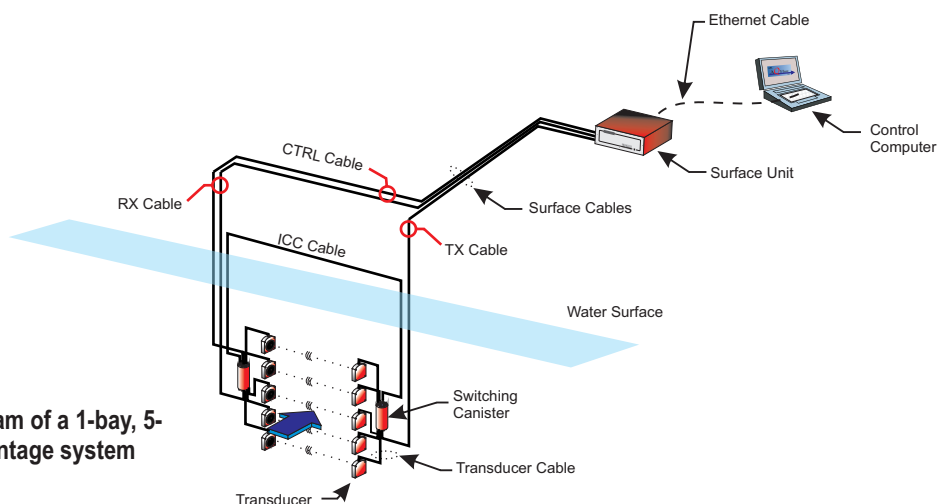


Home of the Acoustic Scintillation Flow Meter

Nova Scotia Power

Nova Scotia Power is upgrading their ASFM Advantage™ which was originally purchased over 10 years ago. They returned it to AQFlow for updating and refurbishing with new connectors. It is a 1-bay, 5-path system.

Schematic diagram of a 1-bay, 5-path ASFM Advantage system



AQFlow - EdF - HQ Research Partnership

In 2011, Electricité de France and Hydro-Quebec, with ASL AQFlow's participation, set up a research project at Grenoble University for a Ph. D. student to investigate the application of advanced signal processing methods for extending the application of acoustic scintillation flow measurement to currently unfavourable conditions. These unfavourable conditions may be found in intakes with low turbulence levels, irregular turbulence fields and interference from vibration. The student has completed the second year of the program, and a review meeting with the student, his supervising professor, and representatives of EdF and Hydro Quebec was held in June 2013 at AQFlow's offices in Victoria. Preliminary results are planned for presentation at the flow measurement workshop to be held at Hydro 2013 in Innsbruck in October 2013.



David Lemon (AQFlow), Jan Buermans (AQFlow), Gilles Proulx (HQ), Cornel Ioana (Grenoble U.), Ion Candel (PhD student), Murray Clarke (AQFlow), Bertrand Reeb (EdF), Dave Billenness (AQFlow)

4th Workshop on Turbine Flow Measurement

As part of Hydro 2013 Conference, the Fourth Workshop on turbine flow measurement will take place in Innsbruck, Austria in October 2013. Previous workshops were held in 2004 (Porto), 2007 (Granada) and 2010 (Lisbon). Mr. Gilles Proulx of Hydro Quebec, (also Convener of IEC 60041 TC 4 MT28), will chair the workshop.

Two papers on measurements with the Acoustic Scintillation Flow Meter will be presented:

- 1) Gas Natural Fenosa personnel will describe their successful turbine acceptance tests at Frieira HPP, Spain, performed with the ASFM and current meters. This was the first time the ASFM was used for this purpose.
- 2) EdF and OSC personnel will talk about their comparative turbine flow measurements with the ASFM and the Gibson method at Slapy HPP, Czech Republic

Also as part of the workshop, EdF personnel will summarize the results to-date of their 3-year PhD study of the acoustic scintillation method, which they carried out jointly with Hydro Quebec personnel.

AQFlow activities with ASME and IEC Code Committees

AQFlow's participation with the ASME PTC-18 code committee continues; David Lemon was re-elected for a second term as a member of the committee at the April 2013 meeting held in Savannah, Georgia.

AQFlow is continuing to supply technical information on acoustic scintillation and data from comparison tests to the committee as it proceeds with its evaluation of methods for flow measurement in short converging intakes.

AQFlow also attended the meeting of the IEC-TC4 MT-28 committee held in March 2013 in Vancouver, BC to provide further technical information to the committee in support of its work on the revisions for the planned next edition of the IEC 6041 code.

Upcoming Conferences and Exhibitions

Papers to be presented:

HydroVision International 2013

Denver, Colorado
July 23-26
Booth # 938



Turbine acceptance tests at Frieira HPP, Miño River, Spain with Acoustic Scintillation Flow Meter and Current Meters, poster to be presented by J. Buermans, ASL AQFlow Inc., Canada

Hydro 2013
Innsbruck, Austria
Oct 7-9
Booth # 129



1) Intercomparison of acoustic scintillation and pressure-time methods in a typical mid-head HPP, Bertrand Reeb and Ion Candel, EdF France, and Petr SEVCIK, OSC a.s. Czech Republic

2) Turbine acceptance tests at Frieira and Castrelo HPP, Miño River, Spain with Acoustic Scintillation Flow Meter, Darío González, Jordi Vich, Gas Natural Fenosa, Spain; Dr. Fabio Muciaccia and Gianalberto Grego, W.E.S.T., Italy; Murray Clarke and David Lemon, ASL AQFlow Inc., Canada

Electricité de France will also be presenting:

Latest improvements in acoustic scintillation flow metering – update on Electricité de France R&D “SMASH” project / “Demystifying the 'black box syndrome' !

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 and **remote sensing** including mapping and monitoring of watershed land use/cover, aquatic vegetation, and water quality and temperature.
See www.aslenv.com



ASL AQFlow Inc.
#1-6703 Rajpur Place
Victoria, BC, Canada V8M 1Z5
+1-250-656-0177
aqflow@aqflow.com
www.aqflow.com