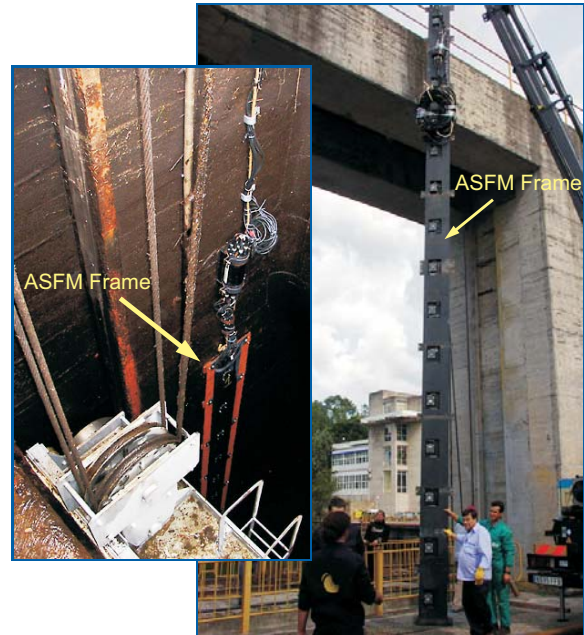




Home of the Acoustic Scintillation Flow Meter

Recent Successes with the ASFM

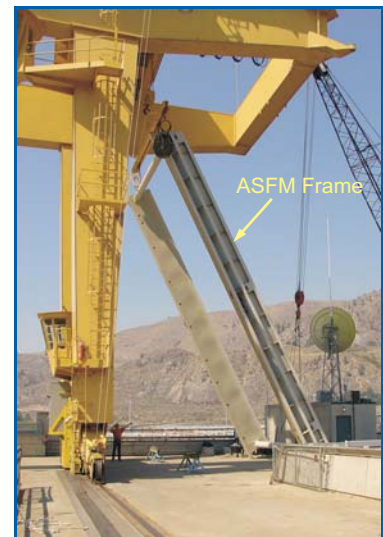
Union Fenosa Generación of Spain needed to establish operational efficiency of their Kaplan turbines at 3 plants on the River Miño in north-western Spain – Velle, Frieira and Castrelo. Having reviewed all presently available flow measurement methods suitable for short intakes, Union Fenosa opted for the ASFM. As all 3 plants had identical 2-bay intakes, the portability of fully instrumented ASFM frames was of particular benefit: a comprehensive testing of one unit at each of the 3 plants was completed successfully in less than 2 weeks. Union Fenosa Generación is currently replacing runners at some of its most important units, and the results from the ASFM measurements are being used in the technical specifications for these new runners. The ASFM has been specified as the flow measurement method for checking contractual guarantees.



Hydro Quebec have recently upgraded their ASFM from a 3 times 1 path system to a 4 times 10 path system. They are now going to do some work at the Beauharnois Plant on the St. Lawrence River. The Beauharnois Plant is located 40 km from Montréal, between lakes Saint-François and Saint-Louis. This generating station is one of the biggest power plants in the world! It harnesses the powerful waters of the St. Lawrence to drive 38 generating units that are spread out over nearly one kilometre.

AQFlow and Douglas County PUD have successfully completed the performance testing program for all units at Wells Dam for the purpose of developing performance baselines and for optimizing cams for all Kaplan units. In late 2004, full flow measurement performance tests were completed on Units 3 and 4, and with two units tested every year after that, the testing of all 10 units was completed in 2008. Following these performance tests a regular cycle of flow measurement and absolute performance testing is envisaged to continue cyclically into the future. With these tests, individual unit performance will be optimized by tuning the Kaplan wicket to blade cam relationship, the known performance will be used in dispatching units, and more accurate flow measurements will be used to improve the coordination of Mid-Columbia river system operations. In addition, a regular program of periodic performance testing on the ten units will continue and will be used to monitor trends in performance.

Wells Hydroelectric Project is in Pateros, Washington.



Other Hydro Solutions

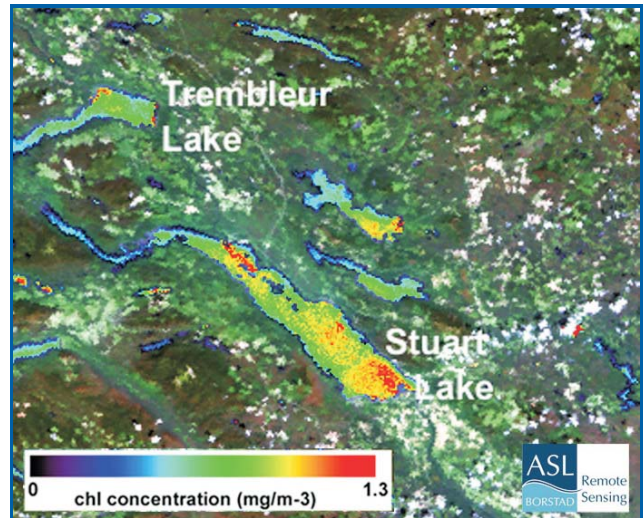
Our parent company, ASL Environmental Sciences, offers a range of related services and products for other hydro applications, such as flow surveys and numerical simulations in forebays and tailraces.

See www.aslenv.com

Exciting News

Through a recent merger with G. A. Borstad Associates Ltd. ASL now offers remote sensing capabilities for a very wide range of applications including mapping and monitoring of watershed land use/land cover, aquatic vegetation, and water quality and temperature.

See www.borstad.com for more information.



Upcoming Conferences and Exhibitions

WaterPower 2009 Spokane

Be sure to attend a technical paper given by Gilles Proulx of Hydro Quebec:

What: "Comparison of Discharge Measurement by Current Meter and Acoustic Scintillation Methods at Rocher-de-Grand-Mère"

Where: Briefings, Session 4E, Planning & Analysis for Better Projects, paper #074

When: Wednesday, July 29, 1:45pm

Visit AQFlow's David Lemon, President and Jan Buermans, Sales Manager in booth #105
Ask us about our upcoming comparison measurements for the PTC 18 at Kootenay Canal.



Hydro 2009 Lyon, France

ASL AQFlow personnel will participate in a series of 4 international papers on turbine flow measurement in low-head plants with the ASFM. In one session, personnel from Electricite de France, Union Fenosa Generación and Hydro Quebec will discuss their ASFM measurements at several of their low-head plants in France, Spain, Canada and USA. Both one-time measurements and continuous monitoring in real time will be discussed.

Session: Turbine flow measurement in low-head plants with acoustic scintillation in France, Spain, Canada and USA

1. Acoustic Scintillation Flow Meter: Why? How? Where?
Jan Buermans, David Lemon and Josef Lampa, ASL AQFlow, Canada
2. Short intakes with slots: ASFM on fixed and moving frames
Bertrand Reeb, EDF, France
3. Short intakes without slots: ASFM on two-part frames
Jordi Vich Llobet, Union Fenosa, Spain
4. Continuous flow monitoring in short intakes with ASFM
Gilles Proulx, Hydro Quebec, Canada



Visit AQFlow in Booth #62



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