



## IGHEM 2008

### Final Schedule for 7<sup>th</sup> International Conference on Hydraulic Efficiency Measurements

September 3<sup>rd</sup> – 6<sup>th</sup> 2008, Milano 20146 – Piazza Po,2

#### Wednesday, September 3, 2008

##### Opening Session

08:30 – 09:30 Registration

09:30 – 10:00 Welcome to participants  
*Thomas Staubli, Roberto Castellano, Fabio Muciaccia, Jim Walsh*

10:00 – 10:30 IEC- ISO - ASME Contributions to Code Upgrading  
  
Coffee break

##### Session #1 - Economics of Efficiency Testing and Monitoring Chaired by Thomas Staubli

10:50 – 11:20 Optimization of Hydro-Power Plants for Generation  
*Jim Cook, Jim Walsh*

11:20 – 11:50 Optimization of Hydro Power Plants: The Effects of General Maintenance and Hydraulic Profiles Rehabilitation  
*Livio Magri, Aldo Cateni, Gianalberto Grego*

11:50 – 12:20 Using Standard Pumps as Turbines  
*Eugen Constantin Isasoiu, Diana M. Bucur, Calin M. Ghergu, Nicoleta O. Tiralà*

12:20 – 12:50 Energy Loss Efficiency Measured In Hydraulic Jumps within Sloped Channels  
*J.D. Demetriou, D. Dimitriou*

Lunch

13:30 – 14:00 Sponsor workshops and demo

##### Session #2 - Efficient Management of Hydraulic resources Chaired by Albert Michail

14:00 – 14:30 Importance of jet quality on Pelton efficiency and cavitation  
*Mario Peron, Etienne Parkinson, Lothar Geppert*

14:30 – 15:00 Operation Characteristic Analysis of a High Head Hydropower Plant  
*Georgiana Dunca, Mihaela Constantinescu, Eugen C. Isbasoiu*

15:00 – 15:30 Generator Power Measurements for Turbine Performance Testing at Bureau of Reclamation Powerplants  
*James DeHaan, David O. Hulse*

Coffee break

**Session #3 - Measurement : Acoustic Scintillation  
Chaired by David Lemon**

15:50 – 16:20 Union Fenosa Generación's Field Experience with Acoustic Scintillation Flow Measurement  
*Jordi Vich Llobet, David D. Lemon, J. Buermans, D. Billenness*

16:20 – 16:50 Report On Performance Surveys For Namgang Hydropower Plant Modernization Project  
*Jung Jae Hyun*

16:50 – 17:20 The Importance in Intake Structure Design for the Measurement of Hydraulic Efficiency  
*Dong Sun Sin, Changduk Seo, Jangwon Park*

**Boureau Communications**

19:00 PALAZZO DELLE STELLINE - WELCOME BUFFET - LEONARDO DA VINCI AND THE HYDRAULIC STUDIES IN RENAISSANCE sponsored by VATECH

**Thursday, September 4, 2008**

**Session #4 - Measurement : Acoustics Transit Time Method and Index Testing  
Chaired by Jim Walsh**

09:00 – 09:30 Index Tests of a Francis Unit using the Sliding Gate Method  
*André Abgottspon, Thomas Staubli*

09:30 – 10:00 Accuracy Validation of Multiple Path Transit Time Flowmeters  
*Don Augenstein, Gregor Brown, Jim Walsh*

10:00 – 10:30 Flow Measurement and Leakage Detection by the Multipath Ultrasonic (acoustic) Transit Time Method  
*Andy Kenworthy*

Coffee break

10:50 – 11:20 Optimizing the Acoustic Discharge Measurement for Rectangular Conduits  
*Bruno Lüscher, Peter Gruber, Thomas Staubli*

11:20 – 11:50 Multipath Clamp-On Acoustic Flow Meter  
*Jürgen Skripalle*

11:50 – 12:20 Presentation of Optimized Integration Methods and Weighting Corrections for the Acoustic Discharge Measurement  
*Thomas Tresch, Peter Gruber, Bruno Lüscher, Thomas Staubli*

12:20 – 12:50 Choice of the Best Position of 4 Path Acoustic Systems in Circular Sections downstream Curves or with Inadequate Straight Pipes and Disturbed Speed Profiles  
*Gianalberto Grego, Fabio Muciaccia*

Lunch

13:30 – 14:00 Sponsor workshops and demo

**Session #5 - Measurement : Current meters and Dye Dilution Methods  
Chaired by Gianalberto Grego**

14:00 – 14:30 Improvements in the Dye Dilution Method: Experiences in Italian Power Plants  
*Alberto Fumagalli, Claudio Orsiers, Fabio Fausto Muciaccia*

14:30 – 15:00 Flow Rate Measurement using the Pressure-Time Method (Gibson Method) in a  
Hydropower Plant Curved Penstock  
*Adam Adamkowski, Waldemar Janicki, Zbigniew Krzemianowski*

15:00 – 15:30 Experimental Data on the Reliability of Flowmeters for Pressure Pipes  
*Enrico Orsi, Lazzarin A., Sanfilippo U., Camnasio E.*

15:30 – 16:00 Optimizing the exploitation of hydraulic resources: Calibration with dye dilution of  
the flow monitoring system in La Nouva intake  
*Giampaolo Canestri, Fulvio Perino, Fabio Fausto Muciaccia*

Coffee Break

**Young Presenters:  
Session #6 –Innovative Techniques, Calibrations, Uncertainty Evaluation  
Chaired by Fabio Muciaccia**

16:20 – 16:40 Uncertainty of Hydrometrical Methods for Discharge Measurement  
*Mila Chilikova-Lubomirova*

16:40 – 17:00 Experimenting with a new Calibration Method for Current Meters  
*Erica Camnasio, Orsi Enrico*

17:00 – 17:20 Velocity and Wall Shear Stress Measurements in very small Channels by an  
Ultrasound Pulsed Velocimeter based Technique  
*Anna Paraboschi*

19:45 MARRIOTT HOTEL - IGHEM SOCIAL DINNER sponsored by Rittmeyer

**Friday, September 5, 2008**

**Session #7 – Measurement : Thermodynamic Method  
Chaired by Leif Vinnogg**

08:30 – 09:00 The A2A investments in improving the efficiency of the High Valtellina hydraulic  
system - presentation to the visit  
*Roberto Castellano*

09:00 – 09:30 Thermodynamic efficiency measurements of Pelton turbines - Experience from  
investigation of energy / temperature distribution in the discharge canal  
*Eirik Bøkkø, Harald Hulaas, Erik Nilsen, Leif Vinnogg*

09:30 – 10:00 Efficiency testing in Tai An (Shandong China) PSPP reversible units by means of  
thermodynamic method  
*Xie Feng, Thomas Hequet, Hou Weirong, Fabio Fausto Muciaccia*

Coffee break

- 10:20 – 10:50 Efficiency testing in Belesar power plant  
*Jordi Vich Llobet, Antonio Fernandez Seara, Luis Pertierra, Fabio Muciaccia*
- 10:50 – 11:20 Efficiency differences of upper and lower injectors and scan of tailrace temperature distributions  
*Thomas Staubli, André Abgottspon*
- 11:20 – 12:20 IGHEM Organization - Future Activities – Open Discussion
- 12:20 – 12:30 Closure
- Lunch
- 14:00 – 16:00 MILANO CITY TOUR - On the steps of Leonardo da Vinci

### **Saturday, September 6, 2008**

- 08:30 DEPARTURE TO VALTELLINA POWER PLANTS  
VISIT VENINA GROSIO POWER PLANTS
- 12:30 BORMIO THERMAE - LUNCH sponsored by A2A – WEST  
VISIT PREMADIO S.GIACOMO POWER PLANTS
- 18:30 Return to Milano