Water Loss Management Strategies

Workshops and Conferences are supported by the “Water Loss Task Force” of the IWA “Efficient Operation and Maintenance” Specialist Group (Conference web site: www.leakage.it)

Italy, May 2006

Ferrara – 17, 18, 19 May 2006
H2O Fair - Ferrara International Fair (www.accadueo.com)

International Conference and Workshops
Efficient Management of Water Systems

May 17th - Workshop 1- HYDROPLAN-EU: EC funded Project on Rehabilitation of Water and Wastewater Networks
May 17th - Workshop 2- TILDE: EC funded Project on Efficient Leak Detection
May 17th - Conference- CSSA: Efficient Management of Water Networks. Design and Rehabilitation Techniques
May 19th - Workshop 3 - Introduction to IWA Water Loss Task Force Practical Approach to Water Loss Management

Key Speakers will be Eminent International Experts, Members of the IWA Water Loss Task Force

Who should attend:
Water Engineers, Leakage Specialists, Managers, Academics and Senior Decision Makers from water companies internationally who wish to apply efficient management strategies to reduce water loss from distribution networks and to network with world leaders in the water loss management field are encouraged to participate in this premier event.

Main Benefits of attending:
- Hear about ‘best practice’ in water loss management from world leaders
- Be informed about latest technologies in leak detection
- Learn from latest Italian and International case studies

The events are organised in conjunction with:
Hydroplan-EU: EC Funded Project on Rehabilitation of Water and Wastewater Networks

(Language: Italian and English – with simultaneous translation)

10.00 Introduction to the Hydroplan-EU methodology and the associated products - H. De Schamphelaere (Aquaplus)

10.15 Tools and products to support network managers - Frederik Van Herzeele (Aquaplus)

10.50 Coffee Break

11.05 Real Life Cases (15 min each).
- Italy – AMAT Imperia: Results of a drinking water network – Angelo Gallea (AMAT Imperia)
- Belgium: Leuven - Results of 2nd Phase implementations - Erik Van Criekinge (Aquaplus)

12.10 What will the future bring - Frederik Van Herzeele (Aquaplus)

12.20 Introduction to the CareS project and cluster activities with Hydroplan-EU – Rita Ugarelli (Sintef)

12.40 Panel discussion (20 mins)

13.0 Lunch Time
TILDE : EC Funded Project on Efficient Leak Detection

(Language: Italian and English – with simultaneous translation)

14.20 Introduction to the TILDE project (Tool for Integrated Leakage Detection) – Augusto Pretner (SGI)
14.40 TILDE Leakage Check-Up and TILDE DST (Decision Support Tool) – Dene Marshallsay (WRc)
15.00 TILDE DMS (Data Management System) – Axel Konig (Sintef)
15.20 TILDE Waterportal - Alessandro Bettin (SGI)
15.40 Coffee Break
16.00 International Snap Shots – 4 short papers from partners of the TILDE Project to give an overview of activities in their pilot project (15 min each).
  • Italy: AQP Santèramo Pilot Project - Antonio Carbonara (AQP),
  • Italy: Sassari Pilot Project – Marco Soriga (Abbanoa)
  • Cyprus: Nicosia Pilot Project – P. Theodoulides, Chrysanthos Paschali (Water Council of Nicosia) P. Antonaropoulos, M. Karatsoras (Z&A)
  • Norway: Bergen Pilot Project – S. McCarley (Bergen Kommune)
16.50 Panel Q&A (20 mins)
  ➢ Where are the gaps in knowledge and can TILDE contribute?
17.10 Introduction to the CareW project and cluster activities with TILDE – Vittorio Di Federico (University of Bologna)
17.30 Close
**Conference**  
**Wednesday 17th May 2006**

**CSSA (Centro Studi Sistemi Acquedottistici) Conference on Efficient Management of Water Networks. Design and Rehabilitation Techniques**

Presentations will be made in Italian. Simultaneous translation will not be provided.

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenters and Topics</th>
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| 14.20 | Bertola P., Nicolini M. - Reliability assessment and optimal pressure management in water distribution network  
Darvini G., Salandin P. - Reliability based maintenance criteria for water distribution systems  
Alvisi S., Grata S., Franchini M. - Leakage detection planning and pressure control in a real water distribution system  
Carravetta A., Giugni M. - Functionality factors in the management and rehabilitation of water networks.  
Liberatore S., Sechi G.M. - Scatter Search Metaheuristic Optimization Approach for Water Distribution Systems Design and Rehabilitation  
De Marinis G., Gargano R., Tricarico C. e Savic D. - Reliability thresholds for the rehabilitation of hydraulic networks |
| 15.50 | Coffee – Break |
| 16.20 | Cannarozzo M., Criminisi A., Gagliardi M. e Mazzola M.R. - Maintenance and rehabilitation strategy of Palermo city water network  
Ermini R., Ingeduld. P. - A case study of water distribution network reliability assessment with Mike-Net  
Rejtaeno B., Boccafoschi A. - Entropy and equivocation concepts in assessment of water network reliability  
De Marinis G., Gargano R., Tricarico C. e Savic D. - Models of daily water demand for small towns  
Orsi E. - Some topics in water demand reduction and control  
Brunone B., Ferrante M., Meniconi S. e Almadori C. - Pipe system diagnosis. Effects of singularities on pressure signal  
Guerco R., Magini R. e Pallavicini I. - Dynamic control of WDS for leakages reduction |
| 17.50 | Discussion |
| 18.20 | Close |
IWA Water Loss Task Force and FederUtility Water Loss Group:
International Experiences in Efficient Management of Water Losses

(Language: Italian and English – with simultaneous translation)

Introductory Session - Allan Lambert (Session Chair)

9.30 Opening by Andrea Cirelli (Regional Authority for Water Services)

9.40 IWA Water Loss Task Force: its achievements and directions – Ken Brothers (IWA Water Loss Task Force Chair)


10.20 The activities of the FederUtility GOA (Gruppo Ottimizzazione Acquedotti - Italian Water Loss Group) – Rosario Mazzola (GOA Chair) Nicola Bazzurro, Marco Fantozzi

10.40 IWA Italy: programs and directions – Renato Drusiani (IWA Italy)

11.00 Coffee Break

11.20 Pressure Management & Active Leakage Control Session – Tim Waldron (Session Chair)

- IWA Speaker – Best Practice Pressure Management – Julian Thornton (USA) (20 mins)
- IWA Speaker – Experiences in Pressure Management in DMAs: Lemesos Case Study (20 mins) – Bambos Charalambous (Water Board of Lemesos, Cyprus)
- IWA Speaker – Getting started, the basic approach: Regular Survey and Economic Intervention - Allan Lambert – United Kingdom, Marco Fantozzi – Italy (20 mins)
- GOA Speaker – StiPerZEnia: Experiences in in-depth management of DMAs in ENIA Group – Francesco Calza, Antonio Gualtieri, Camillo Ferrari, Marco Fantozzi - Italy (20 mins)
- GOA Speaker – Leakage reduction program and calculation of economic intervention frequency in GESESA– Giovanni Tretola - Italy (20 mins)
- Panel Q&A (10 mins)

13.10 Lunch Time
14.20  Leak Detection & Economic level of leakage ELL Session - Ken Brothers (Session Chair)

- IWA Speaker – Leak detection technology internationally – Malcolm Farley (UK) (20 mins)
- GOA Speaker – Innovative Leak Detection Technologies - Bruno Brunone, Marco Ferrante, Silvia Meniconi, C. Almadori (University of Perugia) (20 mins)
- IWA Speaker – International case study: The Malta experience – Alex Rizzo – Malta (20 mins)
- IWA Speaker – Approaches to estimating and achieving ELL – Stuart Trow (United Kingdom) (20 mins)
- Panel Q&A (10 mins)

15.50  Coffee Break

16.10  Water Loss Management Solutions - Bruno Brunone (Session Chair)

- Leakage control by use of Flowiz electromagnetic flow meter – Roberto Guazzoni, Diego Benvenuti, Giuliano Rossi (ISOIL) (20 min)
- Water Loss Management Solutions for Water Utilities - Marco Fantozzi (Marco Fantozzi), Allan Lambert (ILMSS), Tim Waldron (WBWC) (20 min)
- Leakage analysis using InfoWorks WS - Alessandro Gallina, Tom Merrifield (Wallingford Software) (10 min),
- Bermad Solutions for Pressure Management – Nir Naveh (Bermad), (10 min),
- Monitoring of water distribution networks and location of water leakage – Robert Bargolini (Volta) (10 min)
- ABB solutions for water networks management – Aurelio Fanoni, Giorgio Brianza (ABB) (10 min)
- UFR: solution for apparent water losses – Dan Cohen (ARI) (10 min)
- Panel Q&A (20 mins)

18.00  Close
Introduction to IWA Water Loss Task Force
Practical Approach to Water Loss Management

Presentations will be made in English. Simultaneous translation will not be provided.
Ken Brothers (Session Chair)

Engineers and specialists have the possibility to participate in a session in which the Water 21 Articles will be presented for discussion and updating.

9.30 Key Note – Water Loss Management: Network Modelling for Rehabilitation (20 min) - Dragan Savic (Exeter University - UK) & Orazio Giustolisi (Politechnic of Bari - Italy)

9.50 Presenting the IWA Water 21 Articles (10 min each).
Each expert will briefly present an overview of the key points of their articles and identify progress since the articles were written. This will be followed by open discussion on the topic of the article
- Practical approach initiatives to water loss reduction - Ken Brothers
- Assessing Non Revenue Water and its components: a practical approach – Allan Lambert
- Managing leakage by managing pressure - Julian Thornton
- Managing leakage by district metered areas – Stuart Trow
- Leak detection practices and techniques: a practical approach – Stuart Hamilton
- Assessing Real Losses, including Component Analysis and Economic Considerations: A Practical Approach – Paul Fanner
- Apparent Water Loss Control – Alex Rizzo
- Best Practice Performance Indicators for Non-Revenue Water and Water Loss Components: A Practical Approach - Ronnie McKenzie & Allan Lambert
- Recent highlights and future events - Roland Liemberger & Malcolm Farley

11.30 Introducing the IWA Water Loss Management methodology to Italy. How can you become involved - Marco Fantozzi, Nicola Bazzurro, Rosario Mazzola (GOA) (Italy) (10 min)

11.40 Setting Leakage Targets and Best Management Practices in Emilia Romagna Region using the IWA Approach - Tiziano Draghetti (Emilia Romagna Region, Italy) (10 min)

11.50 Concluding session: (30 min) Panel Q&A

12.20 Close

The events are organised in conjunction with:
ABB, Ari, Banca OPI, Bermad, Marco Fantozzi, Gruppo AMGA, Hans Brand, Huberg, ILMSS, ISOIL, Raci, Volta, Wallingford, Wide Bay Water