



**EUROPEAN COMMITTEE FOR THE STUDY
OF CORROSION AND PROTECTION OF PIPING SYSTEMS**

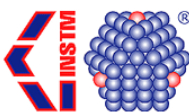
Drinking Water, Waste Water, Gas and Oil

INTERNATIONAL CONGRESS AND TECHNICAL EXHIBITION

Firenze – ITALIA 4th – 7th June, 2013



Organized by:



**CONSORZIO INTERUNIVERSITARIO NAZIONALE
PER LA SCIENZA E TECNOLOGIA DEI MATERIALI**

Organizing Secretariat



O.I.C. srl
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CEOCOR ACTIVITIES

CEOCOR, founded in 1956, is an international scientific non-profit association.

Most of the European countries are members of CEOCOR which brings together specialists from universities and research centres, water, gas and oil distribution and transportation companies, waste water collecting and treatment companies, pipe producers and manufacturers of coatings and equipments for cathodic protection systems.

CEOCOR provides the basis for scientific and technical guidance in the field of corrosion by studies, recommendations and publications and contributes to the formulation of European Standards. Topics are examined in Working Groups and an annual Congress is hosted by one of the member countries. Individuals, legal entities, private and public organizations and associations may become members of CEOCOR.

Congress proceedings, practical guidelines, recommendations, scientific articles can be found in the Web Site www.ceocor.lu

The working languages of CEOCOR are English, French and German. The activities of CEOCOR are performed through two Commissions.

COMMISSION 1 : Internal Corrosion Water Systems

President: Max Hammerer – Austria

Vice-President: Josef Klinger – Germany

Secretary: Angelika Becker – Germany

Commission 1 deals with the interactions between pipelines, reservoirs and waste water treatment plants and transported water, covering both the problems of corrosion of the materials involved and the change in water quality caused by the reaction products. These interactions are complex, ranging from electro-chemical corrosion of metals through disinfectant damage to plastics to changes in cement coatings. The Commission studies problems in existing plants, repair and measurement processes, as well as issues associated with modern material systems.

Working Groups

Working Group A - Strategy of planning and rehabilitation of pipeline systems

Convener. Max Hammerer – Austria

Working Group B – Disinfection of drinking water and influence of the pipe materials

Convener: Wolfgang Werner – Germany

Jean Baron – France

Working Group C – Influencing of water quality by water reservoirs

Conveners: Peter Frenz – Germany

Adrian Rieder – Switzerland

Working Group D – Corrosion in waste water systems

Conveners: Manfred Lohse – Germany

Daniel Bindschedler – Switzerland

COMMISSION 2 : External Corrosion & Cathodic Protection

President: Markus Büchler – Switzerland

Vice-Presidents: Bernard Graux – Belgium, Maros Melis – Slovakia

Secretary: Lars Nielsen - Denmark

Commission 2 deals with the interaction between pipelines and the earth or water surrounding them. It studies materials, soil composition and coatings and the effects of electrical interferences, AC and DC stray currents and cathodic protection. In addition to innovative protection concepts, one of its key activities is the monitoring of corrosion protection measures.

Working Groups

Working Group A : Remote Monitoring

Convener: Maros MELIS – Slovakia

Working Group B : Coupons

Convener: Lars NIELSEN – Denmark

Working Group C : Certification

Convener: Peter FRENZ – Germany

Working Group D : Off Potential

Convener: Bernard Graux – Belgium

International Congress and Technical Exhibition 4th – 7th June, 2013 Florence – Italy

Working Group meetings 7th of June, 2013 Florence – Italy

Program and Schedule		
Tuesday 4th of June, 2013		
11:30	-	12:00 REGISTRATION
COMMISSION 2 - Tuesday, June 4th, 2013		
12:00	-	12:30 Buffet Lunch incl. Accompanying people
12:30	-	15:30 Working Group A – Remote Monitoring Convener: Maros MELIS – Slovakia : Maros.Melis@spp-distribucia.sk
15:30	-	16:00 Coffee break
16:00	-	16:30 Working Group A – Remote Monitoring Convener: Maros MELIS – Slovakia : Maros.Melis@spp-distribucia.sk
16:30	-	17:30 Working Group B – Coupons Convener: Lars NIELSEN – Denmark : lvn@metricorr.dk
16:30	-	18:30 Meeting of the Standing Committee
18:30	-	19:30 Meeting BOARD of DIRECTORS

International Congress and Technical Exhibition 4th – 7th of June, 2013 Florence – Italy

Program and Timetable (all the Papers will be presented in English)

Program and Schedule Wednesday, 5th of June 2013 Congress Commission 1 + 2	
08:00 - 17:00	<i>Application and registration of participants</i>
08:00 - 17:00	Technical exhibition
08:15 - 08:30	Opening speech Lucio DI BIASE, President of CEOCOR
08:30 - 08:35	Introduction by Max Hammerer, President of Commission 1
08:35 - 08:55	Maintenance strategy for water networks: development and implementation of a high resolution risk based approach <i>Angelika Becker, Christian Sorge - IWW Water Centre, Mülheim an der Ruhr - Germany</i>
08:55 - 09:15	Ductile iron pipes with cement mortar coating according EN 15542 <i>Dipl.Ing. Steffen Ertelt, Duktus Rohrsysteme Wetzlar GmbH - Germany</i>
09:15 - 09:35	The Sustainable Municipal Pipes Study <i>Henk Meerman Man. Standardization and Certification, Dyka – The Netherlands</i>
09:35 - 09:55	Corrosion Protection: Maintaining and assessing the Integrity of buried pipelines, with a particular view to water pipelines. <i>O. Fumei – L. Di Biase – R. Cigna, ISPRONA – G. Venier, Past President of CEOCOR - Italy</i>
09:55 - 10:15	Coffee break
10:15 - 10:20	Introduction by Max Hammerer, President of Commission 1
10:20 - 10:40	Hygienic requirements on metallic materials used for products in contact with drinking water <i>Dr. Wolfgang Werner, TZW Karlsruhe - Germany</i>
10:40 - 11:00	Disinfection and Corrosion Resistance: Measurement and case analysis <i>Dr. W.Erning, Bundesanstalt für Materialforschung und –prüfung, Berlin - Germany</i>
11:00 - 11:20	Corrosion of galvanized carbon steel pipes in a new drinking water system – A case study <i>Mirjam Bajt Leban, Tadeja Kosec, Andraž Legat - Slovenian National Building and Civil Engineering Institute, Ljubljana - Slovak republic</i>
11:20 - 11:40	PVC Pipes in infrastructure <i>Joël Fumire PVC4Pipes Brussels – Belgium</i>
11:40 - 12:00	Fire-fighting water systems for tunnels - Corrosion problems and protective measures <i>Dr. Bindschedler SGK Zürich - Switzerland</i>
12:00 - 13:00	Buffet Lunch - Incl. Accompanying people

International Congress and Technical Exhibition 4th – 7th of June, 2013 Florence – Italy

Program and Timetable (all the Papers will be presented in English)

Program and Schedule Wednesday, 5th of June 2013 Congress Commission 1 + 2	
13:00 - 13:05	General Aspects of Cathodic Protection - Introduction by Markus Büchler, President of Commission 2
13:05 - 13:25	A Review of what happens at the Metal/Electrolyte Interface when Cathodic Protection is applied <i>Dr. Sarah Leeds - DC Voltage Gradient Technology & Supply Ltd - UK</i>
13:25 - 13:45	Specifying Coatings – Do we use appropriate design criteria? <i>Ing. Erik Broesder, Stopaq B.V., Stadskanaal - The Netherlands</i>
13:45 - 14:05	Application of European CP standards in Italy <i>V.M. Cannizzo, Brugnetti Fabio - APCE - Italy</i>
14:05 - 14:10	Interference on pipelines - Introduction by Markus Büchler, President of Commission 2
14:10 - 14:30	Telluric Effects on Pipelines <i>D.H. Boteler - Sweden</i>
14:30 - 14:50	Methodology for Evaluation of a.c. Corrosion Risk Using Coupon d.c. and a.c. Current Densities <i>Fumio Kajiyama, Tokyo Gas Co., Ltd., Tokyo - Japan</i>
14:50 - 15:10	Simulation of AC corrosion on pipelines under AC and DC interference <i>Ch. Baeté - Elsyca N.V. - Belgium</i>
15:10 - 15:30	Coffee break
15:30 - 15:50	Estimation of AC Interferences on Pipelines Running Parallel to the Railway Line Prior to Changing Traction from 3 kV DC to 25 kV AC and Design of Mitigation <i>Sanja Martinez - University of Zagreb, Faculty of Chemical Engineering and Technology, HR-10000 Zagreb - Croatia</i>
15:50 - 16:10	AC Interference in Sweden <i>D.H. Boteler - Sweden</i>
16:10 - 16:30	Determining the a.c. corrosion risk of pipelines based on coupon measurements <i>M. Büchler, SGK Swiss Society for Corrosion Protection, Zürich - Switzerland</i>
16:30 - 16:35	Measurement Technique in CP - Introduction by Markus Büchler, President of Commission 2
16:35 - 16:55	5 Years of remotely controlled Off measurements: Lessons learned <i>Authors: R. Ballerini, I. Magnifico, A. Ragni - Automa S.r.l. – Italy</i>
16:55 - 17:15	The key words in the evolution of Cathodic Protection remote monitoring : Data acquisition, management, new philosophy, flexibility, modularity <i>S. Benedetto, C. Calvi - Tecnosystem Group S.r.l. – Italy</i>
17:15 - 17:35	Multivariate analysis of acoustic emission data as suitable tool to investigate the damage mechanisms in pipelines <i>E. Proverbio, L. Calabrese and L. Bonaccorsi - Italy</i>
20:00	OFFICIAL DINNER

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Program and Schedule Thursday, 6th of June 2013 Congress Commission 1 + 2	
08:00 - 17:00	<i>Application and registration of participants</i>
08:00 - 17:00	Technical exhibition
08:25 - 08:30	Introduction by Max Hammerer, President of Commission 1
08:30 - 08:50	Rehabilitation of Drinking Water Reservoirs – Requirements on Materials and Material Systems, Rehabilitation Principles <i>Peter Frenz DVGW Bonn - Germany</i>
08:50 - 09:10	Cement Quality and Drinking Water <i>Dr. Andreas Leemann, EMPA, Dübendorf - Switzerland</i>
09:10 - 09:30	Recent Developments in Pipeline Condition Assessment Using Inline Technologies <i>Frank J. Mueller, PURE Technologies Ltd. - Abu Dhabi</i>
09:30 - 09:50	Asset Integrity Management – from Inspection to Action – the Full Integrity Loop on Water Pipeline Systems <i>Author: Michael Magerstädt, Reinhard Osterhage, Johannes Palmer, Markus Brors, ROSEN - Germany</i>
09:50 - 09:55	Introduction by Max Hammerer, President of Commission 1
09:55 - 10:15	Metal- and Concrete Corrosion in Wastewater Treatment Plants <i>Prof. Dr.-Ing. Ute Austermann-Haun, University of Applied Sciences, Detmold - Germany</i>
10:15 - 10:35	Coffee break
10:35 - 10:55	Microbial influenced corrosion (MIC) – an up to date overview <i>Jan Kuever, Institute for Materials Testing Bremen - Germany</i>
10:55 - 11:15	Integrated Rehabilitation management for different infrastructure sectors <i>Franz Tscheikner-Gratl, Max Hammerer, Wolfgang Rauch, Manfred Kleidorfer - Germany</i>
11:15 - 11:35	Waste water applications; corrosion due to biogenic sulphides and other aggressive waters <i>Dr. Ing. Kees Snaterse MMC CMC, DHV Consulting Engineers in Amersfoort- The Netherlands</i>
11:35 - 11:40	Measurement Technique in CP - Introduction by Markus Büchler, President of Commission 2
11:40 - 12:00	Penetration probe - a new way of monitoring corrosion protection <i>Bertil Sandberg, Swerea KIMAB - Sweden</i>
12:00 - 13:00	Buffet Lunch

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Program and Timetable (all the Papers will be presented in English)

Program and Schedule Thursday, 6th of June 2013 Congress Commission 1 + 2	
13:00 - 13:20	A new methodology for verifying the structural integrity of metallic, tubular structures <i>Giancarlo Raoli, Valerio Carusi – Global Engineering, Roma / Lucio Di Biase – Consultant, Roma - Italy</i>
13:20 - 13:40	Cathodic protection testing of onshore gas pipelines insulating joints and similar piping accessories <i>Dr. Nick Kioupis - Hellenic Gas Transmission System Operator (DESFA)S.A. Chalandri - Greece</i>
13:40 - 14:00	Permanent Buried Reference Electrodes: Technical Note on Significant Inaccuracies and Medium Term Trials <i>B.S. Wyatt - Corrosion Control – UK</i>
14:00 - 14:05	Off Potential Measurements - Introduction by Bernard Graux
14:05 - 14:25	Interpretation of instantaneous true potential in AC induced corrosion <i>A.Pourbaix - Belgium</i>
14:25 - 14:45	Determination of the Off-potential on ER-Coupons of AC-influenced Pipelines <i>Ulrich Bette, Laboratory for Cathodic Protection and Interference, Technische Akademie Wuppertal - Germany</i>
14:45 - 15:05	Commission 2 - Present status of WG D : "Off Potential Measurements" <i>Bernard Graux – Convener of WG D, FLUXYS Belgium nv/sa - Belgium</i>
15:05 - 15:25	Coffee break
15:25 - 15:45	Off measurements 101: from metrology principles to application <i>R. Ballerini, G. Giorgetti, L. Memè - AUTOMA S.r.l. – Italy</i>
15:45 - 16:05	IR Free Potential Measurement Techniques in common use <i>Ken Lax FIET, FICorr, NACE Corrosion Specialist - UK</i>
16:05 - 16:25	Delay for OFF potential measurements <i>Adrian Gomila - Spain</i>
16:25 - 16:45	Experience in Eoff Measurements <i>Sylvain Fontaine, GRTgaz - France</i>
16:45 - 17:05	A different approach for a DC polarization coupon <i>Dijkstra, GASUNIE - The Netherlands</i>
17:05 - 17:25	The physical-chemical significance of the IR-free potential <i>M. Büchler, D. Bindschedler SGK Swiss Society for Corrosion Protection, Zürich - Switzerland</i>
17:40 - 18:40	GENERAL ASSEMBLY

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Working Group meetings 7th of June, 2013 Florence – Italy

Program and Schedule			
COMMISSION 1 – Friday, 7 th of June, 2013			
08:00	-	09:00	Working Groups meeting <i>Convener: Max Hammerer - Austria: max@hammerer.cc</i>
09:00	-	09:30	Coffee break
09:30	-	12:30	Working Groups meeting <i>Convener: Max Hammerer - Austria: max@hammerer.cc</i>
12:30	-	13:30	Buffet Lunch

Program and Schedule			
COMMISSION 2 – Friday, 7 th of June, 2013			
08:00	-	09:00	Working Group C – Certification <i>Convener: Peter Frenz – Germany : frenz@dvqw.de</i>
09:00	-	09:30	Coffee break
09:30	-	12:30	Working Group D – Off Potential <i>Convener: Bernard Graux – Belgium : bernard.graux@Fluxys.Net</i>
12:30	-	13:30	Buffet Lunch

Program and Timetable for Accompanying People

4th June 2013

12:00 h – Buffet Lunch

5th June 2013

09:00 h – Guided visit by foot to Florence, historical Centre

12:00 h – Buffet Lunch

14:00 h – Free afternoon – possibility to pre-book entrance tickets to Uffizi Museum included in the registration cost (by OIC Organising Secretariat)

20.00 h – Official Dinner

6th June 2013

09:00 h – Full day Visit Tour to Siena & San Gimignano by Bus including lunch (final schedule to be advised)

Hotel accommodation

A number of hotel rooms have been optioned for delegates at the Congress venue Grand Hotel Adriatico at special discounted rates valid until 30th April 2013, after this date, according to availability.

BEST WESTERN Grand Hotel Adriatico

Via Maso Finiguerra, 9 - 47100- Firenze (FI)

Tel: +39 055 27931 - Fax +39 055 289661

Double room, single use: 145,00 € (VAT included)

Double room: 165,00 € (VAT included)

Prices are per room per night and include breakfast, city tax €4,00 per person per night not included.

Alternative hotel facilities near to the Congress venue are available at lower rates in other hotel categories.

For reservation and further information please contact the Organising Secretariat or use the online reservation system available in the Congress website at <http://ceocor.lu>



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registrationCEOCOR2013@oic.it

CONGRESS FEES

Ceocor or INSTM Members Fee 650,00 €

Accompanying People 250,00 €

Non Ceocor/INSTM Members Fee 750,00 €

Accompanying People 280,00 €

Note: the fees indicated include VAT

For Registrations made after the 30th April, 2013, the above said fees will be increased by 100,00 Euros for delegates, by 30,00 Euros for accompanying people. The Congress fees cover coffee breaks and buffet lunches plus the Official Congress Dinner according to timetable. **For registration and further information please contact the Organising Secretariat or use the online registration system available in the Congress website at <http://ceocor.lu>**

TRAVEL INFORMATION



How to get to Best Western Grand Hotel Adriatico – Florence:

By Plane

Florence's **Amerigo Vespucci airport** is 10 km from the **Best Western Grand Hotel Adriatico**. To reach the hotel, travel on the **Volainbus shuttle** to its terminus (SITA bus station). Continue by foot (about 380 metres) along **Via della Scala** and turn right into Via Maso Finiguerra. The Best Western Grand Hotel Adriatico is at number 9.

By Train

The **Best Western Grand Hotel Adriatico** is less than 10 minutes walk from **Florence's Santa Maria Novella station**. Leave the station on the right (your back to the platforms) and take **Via Santa Caterina** da Siena. Continue along **Via dell'Albero** and then **Via Maso Finiguerra**: the hotel is at number 9.

By Car

Due to continuous changes being made to the road system in **central Florence**, we would advise you to contact us for instructions on how to reach us. We will send you a fax with an itinerary and provide assistance while you are crossing the city.

From the **A1 motorway**, whether travelling northwards or southwards, leave the motorway at the **Firenze Certosa exit**. Follow the signs for **Centro / Ponte della Vittoria**. After crossing the Ponte della Vittoria bridge, turn right along the **Lungarno**, then immediately left until you reach **Via Il Prato** on your right. At the end of Via Il Prato, turn right and resume travel along the **Lungarno Vespucci**, on your left, up to the lights. At the lights, turn left onto **Via Melegnano** and continue straight on (50 metres) until you reach the **Grand Hotel Adriatico**.