

EUROPEAN FEDERATION OF CORROSION Working Party « CATHODIC PROTECTION » (EFC WP 16)

Minutes of the 12th Meeting September 26th, Maastricht, the Netherlands

Welcome, Apologies

The meeting was opened by M. Roche (Total), who shortly presented the Working Party. After the usual apologies for the people who could not attend the meeting and the attendance list for those who could (see [appendix 1](#)), the intended agenda (as depicted in the invitation, see [appendix 2](#)) started the session. 10 people attended the meeting.

X. Campaignolle (Gaz de France) accepted to be the secretary for this meeting.

Attendees:

Marcel Roche (Total), Xavier Campaignolle (Gaz de France), Anne-Marie Grolleau (DCN), Jean Vittonato (Total), Luciano Lazzari (Politecnico di Milano), Floris Kuijt (FRN Consultancy), Svann Magne (Force Technology), Michèle Lefèbvre (DGA), Peter Stehouver (Gasunie), Martin De Wacht (Gasunie).

Apologies:

Pr L. Bonora, Sandrolini F, Osvoll H., Gomilla A., Wyatt B., Theissen Th., Lax K., Gregoor R., Banu A., Thirkettle J., Graux B.

Approval of the minutes of the 11th meeting held in Lisboa, Portugal, on September 8th 2005

The minutes were approved without modification.

Status of prEN 15257 (CP personnel certification)

Update on the topic, by Marcel Roche (see [appendix 3](#))

The activity started with WP16 in 1998. The first report was issued in May 2001: “*qualification and certification in the field of cathodic protection: present situation and possible European scheme*”. Already at the end of 2000, it led to a consensus to launch CEN TC219 WG5. The later prepared a standard for “qualification and certification for CP personnel”. It has now reached the approval stage.

From November 2001 the group worked on the “competence level and certification of cathodic protection personnel”: prEN 15257. It is a framework allowing independent national certification bodies to operate. Formal equivalence through MLA (multi lateral agreement) will be possible after audit by any European national accreditation body.

There is a possibility of delegated body, if it has previously been authorized and verified by the certification body. There are 3 levels of competence and an accurate definition of the tasks relevant to each of them. It deals with 4 possible application sectors: land, marine, concrete and internal of equipments.

Examinations are formal for level 1 and 2. Level 3 accreditation relies upon a competence assessment consisting on a detailed dossier to be defended in front of an assessment committee. There are common preliminary acceptance criteria based on education and experience for full certification. Provisional certification may be delivered if the candidate's experience is not sufficient. Mandatory training is to be defined by the certification bodies. Certification has a 5 years validity period.

Next task (suggestion from the chairman):

EFC working party 16 could organize a collection of the different countries experiences. There should be a delegate per country in charge of compiling the information. A table indicating the number of certificates per country would be updated yearly. The latest update of the table was presented ([appendix 4](#)).

A list of corresponding members is proposed for giving periodically their respective countries numbers:

B.Wyatt for UK, L.Lazzari for Italy, M.Roche for France, H.Van Bruchem for the Netherlands..

No certification in Norway at this time.

In Germany, certification applies to companies and not individuals.

Miscellaneous:

In France a new training and examination center for the sea sector is to be operative by summer 2007 in Brest (collaboration between Ifremer and Institut de la Corrosion). There is already such a center for land, located in Compiègne, on Gaz de France's premises. The marine test facilities will include tests on samples in natural seawater tanks, on an actual node in a bigger tank and on ICCP system on a pier. This center could be opened to other European organizations.

Preparation of the work on EFC Publication on the "State of the Art" report for assessment of CP of buried pipelines

Such a document is still missing. There are standards, but they are not directive enough (e.g. what techniques should be used with a pipeline coated with this material and operated under those specific conditions?).

The idea of such a document was launched several years ago with the aim of preparing an EFC publication. At this time UK and France are respectively working on the subject.

In France (CEFRACOR), a recommendation is being prepared, but it is still far from being completed. The outline of the French document was presented. The major topic will be to recommend techniques and methodologies either for old or new pipelines. All methods quoted within the document will be described in the appendixes.

In UK, B.Wyatt and J.Thirkettle informed that they are working on a similar document and ready to contribute to the EFC one. They also proposed (email to Marcel Roche) to review and complement the EN 13509 as it is about time to reconsider it.

The chairman asked whether anything similar is happening in the other countries. There was a negative answer from the participants.

It was mentioned that CEOCOR could also contribute to such a document. However, up to now it has been impossible to joint efforts with CEOCOR.

It was suggested to organise a workshop at Eurocorr'2007 depending on UK and France progresses. Moreover, as EFC is in the favor of working with NACE, NACE CP colleagues could be invited to join this workshop. A discussion on the 100 mV between Europeans and Americans seems to be necessary. This workshop will be an opportunity for such discussions. Indeed, various points of views need to be clarified: Germany is against it, Netherlands do not use it for practical reasons, France do not use it but does not have real objections against it.

A decision about the workshop should be made by the end of 2006 in order to possibly plan first a spring meeting. Workshop title could be "how to verify CP effectiveness on buried pipelines?".

Note post meeting: The Chairman has been too busy to organize this Workshop for 2007. The idea is maintained for 2008 (Eurocorr in Edimburg).

Other technical topics and free discussions

- **CEFRACOR "CP and associated coatings committee" issued recommendations** on specific related topics. All of them were prepared by working groups and are based on a consensus. They are available on the website: www.cefracor.org. At this time most of them are in French, but they are progressively translated into English.
 - Recommendations for measurements of interferences on buried CP protected pipeline: charter of collaboration for consensual measurements.
 - Recommendations for fault detection after backfill and repairs on coating of buried pipelines.
 - Recommendations for the inspection by electrical method of faults in either on-site or factory applied organic coatings on steel.
 - Recommendations on the compatibility of CP and earthing (grounding) systems.
 - Recommendation for reference electrodes checks.
- **Technical Discussions (suggested by Marcel Roche)**
 - Choice of sacrificial anodes for internal protection of vessels in the presence of H_2S and/or SRB: Should they be Al or Zn based? No experience from the other attendants.
 - Use of specific Zinc anodes above 50°C? Norwegians did some HT tests on specific sacrificial anodes showing under those conditions oxides layers form. Conclusion is that up to 80°C such anodes are OK (see Force Technology presentation at Eurocorr'2006). Total is planning to launch tests on various anodes under different conditions (temperature, H_2S content, salinity, etc) in 2007.
 - There are concerns on Girassol FPSO ballast tanks internal CP by sacrificial anodes: although it is also very well coated, potentials are very bad. Explanations could be that
 - 2 anodes metals (zinc, aluminum) used (i.e. galvanic couples),
 - tidal effect which impairs a proper anodes functioning.The Norwegians have some experience with similar cases.
 - Jean Vittonato (Total) presented a novel reference electrode which could be used in the presence of stray currents. Indeed, the coupon and the reference have to be as close as possible to avoid disruptions by stray currents during off measurement. However, even when there are located close to each other, there are still potential gradients due to stray currents. Depending on the orientation of the current lines with respect to the coupon-reference combined electrode, the potential reading may be optimistic or pessimistic. However, the reference electrode cannot be located too close to the coupon, because of the contamination by copper sulfate ions. Corexco developed a new electrode to avoid this: the coupon is placed in between two references electrodes. The reading is the average value of

the voltages from the two references, and therefore free of stray currents potential gradients effects (as the effect on each reference are opposite and sum close to zero).

Participation to the next events

Next EFC WP16 meetings

- * **Spring meeting to prepare a workshop at Eurocorr 2007?**
- * **Eurocorr'2007 in Freiburg**

Please submit papers.

X. CAMPAIGNOLLE
Secretary

M. ROCHE
EFC WP 16 Chairman

4 appendices