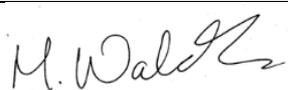


CIGRE Study Committee D1

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP ⁽¹⁾

WG* N° D1.71	Name of Convenor: Joe Tusek (AU) E-mail address: Joe.Tusek@ampcontrolgroup.com	
Strategic Directions # ⁽³⁾: 2 & 3		Technical Issues # ⁽²⁾: 10
The WG applies to distribution networks ⁽⁴⁾: Yes		
Potential economic Benefit of WG work # ⁽⁶⁾ : 2 & 4		
Title of the Group: Understanding and mitigating corrosion		
Scope, deliverables and proposed time schedule of the Group :		
Background :		
<p>Metallic corrosion leads to significant economic losses and is often poorly understood by many utilities due to a lack of in-house expertise. Additionally the science and terminology is unfamiliar to most in the power industry. Accordingly, Study Committee D1 has on several occasions been asked to provide guidance on this topic, but has found it difficult to find experts to participate in such a Working Group.</p> <p>In 2015 Advisory Group D1-03 (Solid Materials) created a Task Force to address this issue and determine the scope of a Technical Brochure which could be delivered with available expertise. The members of the TF propose an initial Technical Brochure providing an introduction to the subject of corrosion, providing information on the underlying science, different types of corrosion, impact of different metals and methods of protection. The initial draft Technical Brochure addresses the following topics and will form the basis of the output of this new, short-duration, Working Group.</p>		
Scope :		
<ol style="list-style-type: none"> 1. Terminology associated with metallic corrosion. 2. Overview of the chemistry of corrosion. Factors affecting corrosion. 3. Different types of metallic corrosion. 4. Corrosion properties of different metals. 5. Corrosion protection – coatings and electrochemical methods. 		
Deliverables :		
<input checked="" type="checkbox"/> Technical Brochure and Executive summary in Electra <input checked="" type="checkbox"/> Electra report <input checked="" type="checkbox"/> Tutorial ⁽⁵⁾		
Time Schedule : start : July 2017		Final report : 2018
Approval by Technical Committee Chairman :		
Date : 02/08/2017		

(1) Joint Working Group (JWG) – (2) See attached table 1 – (3) See attached table 2

(4) Delete as appropriate – (5) Presentation of the work done the Working Body – (6) See attached table 3

Table 1: Technical Issues of the TC project “Network of the Future” (cf. Electra 256 June 2011)

1	Active Distribution Networks resulting in bidirectional flows
2	The application of advanced metering and resulting massive need for exchange of information.
3	The growth in the application of HVDC and power electronics at all voltage levels and its impact on power quality, system control, and system security, and standardisation.
4	The need for the development and massive installation of energy storage systems, and the impact this can have on the power system development and operation.
5	New concepts for system operation and control to take account of active customer interactions and different generation types.
6	New concepts for protection to respond to the developing grid and different characteristics of generation.
7	New concepts in planning to take into account increasing environmental constraints, and new technology solutions for active and reactive power flow control.
8	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics.
9	Increase of right of way capacity and use of overhead, underground and subsea infrastructure, and its consequence on the technical performance and reliability of the network.
10	An increasing need for keeping Stakeholders aware of the technical and commercial consequences and keeping them engaged during the development of the network of the future.

Table 2: Strategic directions of the TC (ref. Electra 249 April 2010)

1	The electrical power system of the future
2	Making the best use of the existing system
3	Focus on the environment and sustainability
4	Preparation of material readable for non-technical audience

Table 3: Potential benefit of work

1	Commercial, business or economic benefit for industry or the community can be identified as a direct result of this work
2	Existing or future high interest in the work from a wide range of stakeholders
3	Work is likely to contribute to new or revised industry standards or with other long term interest for the Electric Power Industry
4	State-of-the-art or innovative solutions or new technical direction
5	Guide or survey related to existing techniques. Or an update on past work or previous Technical Brochures
6	Work likely to have a safety or environmental benefit