**INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC SYSTEM FOR CERTIFICATION FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)**

Green paper Document Tabled at

The Seventeenth Meeting of the ExMC

Held in Christchurch, New Zealand

**17th and 18th September 2015**

### Title: Proposal from DE Concerning Cyber Security

**INTRODUCTION**

This document contains a proposal from DE regarding Cyber Security and is issued for consideration at the 2015 ExMC Christchurch meeting.

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**Green paper presented by the German Member Body of IECEx**

**Influence of Cyber – Security on Ex – Protected Equipment, Safety Devices**

**Topic:**

Cyber Security is the body of technologies, processes and practices designed to protect networks, computers, programs and data from attacks, damages or unauthorized accesses.

Cyber Security is an item that may influence the explosion safety of installations and production plants as well, by unauthorized access to their automation systems and by changing process data, limitation values or whole interrelationship of products. This issue starts with the security of ex-protected equipment, that is more and more fitted with machine to machine interfaces and with programmable electronics (compare the development of Internet of Things “IoT” and/or Industry 4.0).

Therewith Ex-protected equipment could be influenced by Cyber Security twice, firstly on its intended use and functionality and secondly on its safety design, especially if we are talking about “Safety Devices”, e.g.: Ex p – controller; Motor Breaker / Frequency Converter, Gas Analyzers.

**Proposal:**

The IECEx MC shall establish a “study group” on Cyber Security.

The study group shall consist of persons from different areas (manufacturers, plant drivers, certification bodies, may be others) and shall consider the influences of Cyber Security on Ex-protected equipment.

The first goal of this study group is to create a written statement.

This written statement sets up a common understanding of Cyber Security for Ex-protected equipment and will be the basis for further discussion within this group. This group shall establish a close relationship with CAB/WG 17 and IECEE PSC WG 3 both dealing with cyber security. For this sake a liaison officer(s) shall be appointed in due time.

This will lead to the following benefit:

- The IECEx community will then have a common understanding on cyber security,

- The influences on Ex-protected equipment can be identified easily,

- Standards can be developed taking the results into account,

- Correct measures can be taken by manufacturers and certification bodies