

Electrical and non-electrical equipment



Every two months, IECEx Chairman Prof. Dr. Thorsten Arnhold provides an update on developments within his organisation

Last week I attended an international conference in Barcelona. The event was about safety solutions and, among other topics, it also dealt with hazardous areas. For me, as the IECEx Chair, there were many interesting conversations with end users, solution providers and certification bodies. It was very positive to see that the international acceptance and reputation of our system is continuously growing.

Counting the number of test reports, certificates, Certification Bodies and Test Labs in our annual statistics is one thing. It is definitely better to get feedback directly from our customers! Events such as the one in Barcelona give the best opportunities to learn how to improve the IECEx system further, as the following example shows.

The benefits of selecting Ex equipment covered by an IECEx Certificate are obvious in terms of providing independent verification of a manufacturer's claim of compliance with international IEC standards, and this

also includes on-going monitoring of the manufacturing process.

As regards the latter, we ensure the end user that the products manufactured today and tomorrow are in line with the samples that passed the original testing and assessment.

I have the impression that more and more operators in the process industry and even manufacturers appreciate that IECEx is now able to certify both electrical and non-electrical equipment and - by means of the brand new Technical Specification TS 60079 - 46 "Assemblies" - the combination of both. The market need for this is expressed by the fact that already about 20 ExCBs (Certification Bodies) have a scope extension to cover ISO/IEC standards 60079 - 36 and - 37, as well as the TS mentioned above.

Due to the fact that assemblies in the majority of applications consist of a combination of electrical and non-electrical aspects of explosion protection, the IECEx Executive decided that a scope extension for TS 60079 - 46 has to be made in conjunction with a scope extension for ISO/IEC 60079 - 36 and -37. After seven months in operation already more than 70 Certificates of Conformity have been published on the basis of these standards. This is definitely a positive development, but there are some special issues to be solved such as the surveillance of the Quality Management System, which was an issue raised by our customers.

For specific products such as luminaires, motors etc. the process to achieve and maintain IECEx Certification seems rather straightforward. But when it comes to more complex products and assemblies involving a combination of both electrical and non-electrical parts, there is the need to ensure that adequate surveillance over the manufacturing of key or critical parts and assemblies is paramount in ensuring on-going compliance with standards. In many cases such manufacturing and production usually occurs at different locations and

often by different companies with their own quality management systems and procedures.

The IECEx Certified Equipment Scheme provides this assurance of on-going compliance for both relatively straightforward and complex products and assemblies, and acknowledges that there is no "one-size fits all" approach to the monitoring and control of the production of parts and assemblies. It also has the ability to cater for differing manufacturing arrangements and structures, while still ensuring that the universal system for assessing and auditing manufacturing processes is maintained.

So, for instance, if there are value chains where it is possible to clearly distinguish between general operations and operational steps critical for the explosion protection concept, the focus of the QA assessment is fixed on the latter one. The ExCBs are requested to create a 'tailor-made concept' for the QA assessment working closely with the customer.

During our series of Working Group meetings in June, which took place in Weimar, Germany, we took many decisions about the new non-electric elements of our system. So we decided to add these special aspects in all our relevant Units of Competence that are defined in the OD 504. We think it is not enough just to focus on the design, production and certification of non-electric products for hazardous areas, it is also of high importance to cover the special requirements of inspection and tests, maintenance and repair, etc.

Writing this article, I am close to my summer vacation. I look forward to relaxing and gathering new energy for the coming IECEx highlights. In August we are organising a big international IECEx conference in Jakarta, Indonesia, and in September our annual IECEx MC conference will take place in Cannes, France. I will, of course, keep you fully informed about developments at these important events. ■