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EXPLOSION PROTECTION

In the field of explosion protection, numerous new directives, laws, regulations and technical rules have been issued in recent years. The new regulations increase the operational and organisational requirements for the operators: they are burdened with a much higher degree of personal responsibility. The weyer group knows its way around explosion protection. Daily work in the field, a sound theoretical background knowledge and practical experience from many engineering projects make us competent advisors in technical matters.

The experts of the weyer group have already prepared explosion protection concepts for a wide variety of plants - e.g. from the mineral oil, pharmaceutical, printing and paper industries and for biogas production. Benefit from our wealth of experience.

Explosion protection documents / concepts

According to § 6 paragraph 9 of the Ordinance on Hazardous Substances, an explosion protection document must be drawn up for an installation or an area of an installation in which hazardous explosive mixtures may arise. The essential components of this document are:

- the risk assessment and
- the explosion protection concept.

The resulting zoning and measures define the requirements for the equipment of the plant, especially for the electrical and non-electrical devices. On request, we also carry out the risk assessment and the development of the protection concept according to the national implementation of the ATEX directives for other member states of the EU or according to American regulations (NEC 500 to NEC 506).

Our offer

Preparation of explosion protection documents / concepts

Proof of suitability of non-electrical electrical equipment (ignition hazard assessment of old equipment)

On-site testing of equipment in hazardous areas on site

Preparation of tests

Maintenance concepts



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What can we do for you?

We develop technically and economically optimised explosion protection concepts for you as early as the plant planning stage and the approval procedure. In addition to the lowest possible investment costs, the main focus is on simple handling, operability and maintenance.

Proof of suitability of non-electrical equipment

Until Directive 94/9/EC came into force, the focus of explosion protection was essentially on electrical equipment (e.g. EMSR technology, switchgear and electrical drives). This directive for the first time clearly defined explosion protection for non-electrical equipment (e.g. pumps, fans and stirrers). Their suitability for explosion protection must be demonstrated. In addition to the new equipment, those that were already in operation before the end of the transitional period on 30.06.2003 are thus particularly affected. From 26.02.2014, Directive 2014/34/EU will apply to equipment and protective systems for intended use. It replaces Directive 94/9/EC.

How can we support you?

We provide proof of explosion protection suitability for equipment that is already in use. For this purpose, we carry out the ignition hazard assessment according to DIN EN ISO 80079-36 and prepare the necessary technical documentation. If necessary, notified bodies (e.g. IBExU, Freiberg) are involved.

For manufacturers, we offer the preparation of the ignition risk assessment for devices and assemblies within the scope of the first placing on the market. Our experts accompany the manufacturer's conformity assessment procedure until the EC/EU declaration of conformity is issued.

Testing of equipment in potentially explosive atmospheres

Our experts carry out inspections as competent persons on behalf of the operator. This includes inspections prior to the first commissioning according to § 15 of the Ordinance on Industrial Safety and Health (BetrSichV) as well as recurring inspections according to § 16 BetrSichV. The competent persons according to Annex 2 Section 3 No. 3 BetrSichV of the weyer group are highly qualified through their daily





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work in the plants and through regular further training.

The inspection intervals for electrical and non-electrical equipment to be specified in accordance with § 3 Paragraph 6 BetrSichV can be determined quickly and competently thanks to our many years of experience. This is done in close consultation with the operator so that the individual operating conditions can be taken into account.



Exam preparation

As part of the testing of equipment in potentially explosive atmospheres, a large number of documents and verifications are required. We take care of the complete recording of the equipment and provide the necessary documentation to successfully complete the test date.

Creation of maintenance concepts

The BetrSichV makes it possible to dispense with periodic inspections by means of maintenance concepts within the framework of the risk assessment. We develop maintenance concepts that ensure that the safe condition of the systems is maintained and that explosion safety is permanently guaranteed.

Implementation of in-house training courses

The large number of new laws, ordinances, technical rules and standards in explosion protection require the operator

to deal intensively with these issues. If he wants to implement all rights and obligations in compliance with the regulations, he must first obtain comprehensive information: Which new regulations have come into force for which area of the plant? What are the individual consequences for equipment, operation and organisation?

But: All tasks that lie outside your core business tie up time, money and resources.

We are the right contact for explosion-related issues that you have to learn about in addition to your main job. That is why we offer in-house training courses in which our experts impart their specialist knowledge in a targeted manner. The operator determines the focus of the content. The training sessions are not conducted as a frontal lecture, but the expert encourages a lively question and answer session after a short introduction. This ensures that all individual questions are answered.

In addition to operating and planning engineers, the managers responsible for operational safety also benefit from our in-house training.

➔ Your benefit

Competent support in the field of explosion protection

Individual support for your questions

Access to experts according to § 29a BImSchG and qualified persons

Practical solutions

Time and cost savings

Implementation of the most economical solution



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References (excerpt):

- Roche Diagnostics GmbH (Mannheim, GER): Inventory and preliminary gap-analysis of an exhaust air system
- GSB - Sonderabfall-Entsorgung Bayern GmbH (München, GER): Preparation of explosion protection documents for the entire site, calculation of exhaust air volumes
- Stadtwerke Düsseldorf AG (Düsseldorf, GER): Revision of various explosion protection documents
- Sihl GmbH (Düren, GER): Appointment of an external explosion protection officer and explosion protection advice
- DuPont Specialty Products GmbH & Co. KG (Schkopau, GER): Explosion protection documents: Lubolid mixer, pilot plant and ignition hazard assessment of a bead mill
- PERGAN GmbH (Bocholt, GER): Basic engineering for the new construction of a tank farm incl. a hazop and an explosion protection concept
- EGK Entsorgungsgesellschaft Krefeld GmbH & Co. KG (Krefeld, GER): Expert opinion on a gas processing plant with explosion protection concept and acceptability
- Carpus+Partner AG (Aachen, GER): Preparation of an explosion protection concept

The weyer group is an independent group of engineering and consulting companies in Germany, Austria, Switzerland and Poland.

Always based on the expectations and wishes of our customers, the weyer gruppe has developed a wide range of competences since 1976.

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