

## **Assessment of non-electrical equipment and components of the Equipment Category 2**

According to Chapter 8 (1) of the Directive 94/9/EC non-electrical equipment and components of the Equipment Groups I and II, Categories M2, 2 and 3 as well as electrical equipment and components of the Category 3 are not subject to the duty to the EC-Type Examination pursuant to Annex III of the Directive 94/9/EC.

The procedure of the conformity assessment according to Directive 94/9/EC distinguishes in the Equipment Category 2 (2G, 2D, M2) between electrical and other equipment (this means non-electrical equipment). While an electrical equipment of the Category 2 has to be subjected to an EC-Type Examination according to Annex III of the Directive 94/9/EC, this is not provided for non-electrical equipment of the Category 2. This distinction is not made in the Equipment Category 1.

For non-electrical equipment and components of the Category 2 the manufacturer is obliged according to the procedure of the conformity assessment to realize the quality securing measure pursuant to Annex VIII of the Directive 94/9/EC "Internal production control" in order to ensure the accordance of each delivered product with the construction documents deposited at a NOTIFIED BODY and with the relevant quality requirements. The procedure of the "Internal production control" is not supervised by a NOTIFIED BODY.

As already mentioned, the manufacturer of non-electrical equipment and components of the Category 2 is obliged according to Chapter 8 (1) b) ii) of the Directive 94/9/EC to deposit documents at a NOTIFIED BODY pursuant to Annex VIII of the Directive 94/9/EC. (The IBExU-Information sheet „Retention of documents“ gives corresponding indications.)

This actually means that for non-electrical equipment of the Category 2 a Type Examination and an EC-Type Examination Certificate is not necessary. The manufacturer of this equipment issues the EC-Certificate of Conformity according to Annex X of the Directive 94/9/EC acting in his own responsibility.

The experiences of IBExU show that the users of non-electrical equipment or components of the Category 2 also demand that the manufacturer of these products can present a certificate which is issued by an independent body. The European NOTIFIED BODIES represented in the ExNB have faced this situation and caused a clarification. Due to their special competence the NOTIFIED BODIES may also examine equipment which is not subject to examinations according to Annex III of the Directive 94/9/EC (please see „Clarification Sheet N° ExNB/00/20/CS“ with status „applicable“ of 29.09.2000; EOTC/044/00 EN, issued 03.11.2000).

Because according to the Directive 94/9/EC there is no examining duty for these equipment and components, they are not subject to the scope which is laid down by law. The NOTIFIED BODIES must not act as a NOTIFIED BODY with the EC-identification number allocated by the European Community, but in principle as a competent institution only which performs the corresponding services. This means in plain language that the NOTIFIED BODY must not issue an EC-Type Examination Certificate with naming the EC-identification number for examinations of for example non-electrical equipment or components of the Category 2. It must not refer in the certificate to the accreditation as a NOTIFIED BODY either.

IBExU Institut für Sicherheitstechnik GmbH is a competent institution for services (consultations as well as examinations, assessments and tests) in the field of the explosion protection of non-electrical equipment and components of the Category 2. In the context of these activities the following services are carried out:

- Analysis of ignition hazards or assessment of analysis drawn up by the manufacturer,
- Check of technical documents (as manufacturing drawings inclusive appertaining parts lists and material specifications),
- Assessment of Operating manuals („User information“),
- Examination of equipment regarding the compliance with the requirements according to Annex II of the Directive 94/9/EC,
- Measurements (e.g. electrostatic charging, surface resistance and volume resistance, surface temperatures) and
- Complete experimental examinations at equipment.

In the result of the examinations a test report is made out which can be the basis for a certificate to be issued optionally. This certificate marked by IBExU as „Type Examination Certificate“ complies in its configuration, content and marking with the corresponding specifications of the German version of the above mentioned „Clarification Sheet N° ExNB 00/06/20/CS (EOTC/044/00 DE)“. Such „Type Examination Certificate“ is often described by other test authorities as a „Conformity statement“.

The basis for the examinations of non-electrical equipment and components of the Equipment Category 2 is the Annex II of the Directive 94/9/EC and EN 1127-1:1997 „Explosion protection, Part 1: Basic methods and methodology“ as well as EN 1127-2: „Explosion protection, Part 2: Basic methods and methodology in the mining“ and primarily the standards of the series EN 13463-x: „Non-electrical equipment for use in potentially explosive atmospheres“.

IBExU Institut für Sicherheitstechnik GmbH has examined the following non-electrical products of the Equipment Category 2 for the fulfilment of the requirements resulting of the Directive 94/9/EC as well as the appropriate standards till now (examples):

- Armatures (e. g. shutting flaps, ball valves, diaphragm valves, slide valves, louvre dampers)
- Screw conveyors
- Gears
- Slide bearings
- Compensators
- Couplings of various types (e. g. arc-tooth couplings, claw couplings and diaphragm couplings)
- Magnetic couplings
- Pumps (e. g. eccentric screw pumps, piston pumps, centrifugal pumps, diaphragm pumps, hose pumps and gear-type pumps)
- Transport roller conveyors
- Screwing machines
- Vacuum pumps
- Ventilators
- Compressors (e. g. diaphragm compressors)

State: 13<sup>th</sup> October 2006