


ExNB	Co-ordination of Notified Bodies Equipment for use in potentially explosive atmospheres on Council Directive 94/9/EC (ATEX)	Clarification Sheet N° ExNB/07/267/CS
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Status:	Step*5.2.1	Question	Originator	EK 4 ¹	Date:	99-07-20
	Step*5.2.3	Initial proposal	Proposer:	EK 4	Date:	99-07-20
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**Step refers to ExNB Rules, mentioned in draft only if not approved*

Title Structure of and requirements for EC-Type Examination Certificates for flame arresters
Reference: Doc. 5.1 of HOTL/ExNB of October 17th 1996, Annex 3 of the minutes of the 1st ExNB meeting

Authorised by Chairman: Dr. Jockers		Date:	30 July 2007
Date of application: 29 November 2006		Signature:	

Introduction

All manufacturers of flame arresters shall provide a definition of the intended use of the protective system in form of a technical document to be reviewed (separate document or part of the "Instructions for use"). On the basis of this document the notified body decides about the scope to be tested. If the definition of intended use forms a part of the "Instructions for use", it shall be considered that

- in principle the EC Type Examination Certificate can be rejected due to deficiency of the document „Instructions for use“;
- it has to be clarified which parts of the document „Instructions for use“ covering the Explosion Protection are involved;
- it has to be clarified which language version, according to the relevant parts of the "Instructions for use", will be adopted for conformity assessment;
- those parts of the "Instructions for use" which are relevant for explosion protection may only be changed after consent of the notified body.

The document which includes the definition of intended use is part of the technical documentation and is included in the certification procedure. In these explanations the manufacturer clearly describes the intended use of the respective protective system. This document shall include the following specification: e.g. intended Explosion Group, the type of load by flames such as detonation or deflagration and the suitability of the flame arrester for situations, in which stabilised burning can occur. This document shall also include notes about misuse, which can occur how experience shows, as well as for its prevention (see 94/9/EC, annex II, 1.0.6).

¹ EK4 is the German group of notified bodies within the framework of Directive 94/9/EC

Subject:	Directive, 94/9/EC Article No.	
	Directive, ESR No.	
	Directive, Module Annex No.	II
	Standard, No.	

Question:

Which specifications have to be laid down in the EC-Type examination certificate with respect to the safe use and conditions for use including notes about misuse?

Answer:

On the basis of the above mentioned resolutions taken by the European Group of Notified Bodies (ExNB), the following specifications for the structure of the EC Type Examination certificates are recommended by this clarification sheet:

- 3.1 Paragraph (16) shall cover a combined chapter clarifying which tests were carried out and that these test were passed. This chapter should be formulated as follows: " The sample/samples was/were tested against... and fulfilled the requirements."
- 3.2 Paragraph (17) is titled "Special conditions for safe use ".
- 3.3 With regard to the three basic types of flame arresters conditions for use, derived from the relevant types of hazards, have been formulated. They shall be mentioned in paragraph (17).
- The following conditions are specified:
 - **In-line detonation arrester:**
 - Information about suitability for stabilised burning.
 - The detonation arrester may be built only into piping, the nominal size of which is smaller or equal than the nominal size of the detonation arrester connection.
 - The detonation arrester shall be installed considering the marking of the protected side of the detonation arrester, i.e. the potential ignition source must be on the unprotected side and the component which has to be protected must be on the protected side of the detonation arrester.
 - Marking according to EN 12874 (04/01).
 - **In-line deflagration arrester:**
 - Conditions in correspondence to in-line detonation arresters and additionally:
 - the distance between the flame arrester and the potential ignition source may not exceed the L/D ratio of the test (see EN 12874, No. 6.4.2 (2));
 - at least 10% of the cross sectional area of the pipe shall be open at the ignition source (EN 12874, No. 6.4.2 (1)).
 - **End-of-line deflagration arrester:**
 - Information about suitability in occurrence of stabilised burning.
 - Marking according to EN 12874 (04/01).
- 3.4 Regarding the suitability in case of stabilised burning the following standard terms may be suggested:
- Stabilised burning test didn't take place:
 - "The range of the executed tests does not extend to stabilised burning. This circumstance shall be considered for use."

- Flame arrester is safe against short time burning:
"Based on the executed tests additional external safety devices are necessary for a safe use with stabilised burning." ⇒ Information about possibly tested temperature measurement devices.
- Flame arrester is safe against endurance burning:
"Based on the executed tests a safe use without restrictions is possible for stabilised burning."

or (in case of a static arrester Explosion Group IIA and IIB)

"Based on the executed tests a safe use for stabilised burning of hydrocarbons is possible without any restriction."

3.5 If the instruction manual has been checked and if the chapter about intended use contains the conditions specified in the paragraphs 3.3 and 3.4 of this Clarification sheet, only a reference shall be made in paragraph 17 to the appropriate paragraph of the instruction manual.

3.6 Paragraph (18) of the EC Type test examination certificate is called "Notes" and can include the following information:

- Requirements for safety and health protection, which are not covered by the harmonised standards (should be listed separately in the test report).
- Product features exceeding the range of EC Directive 94/9/EC.