



## VdS-Leaflet

# Issue of quality plans for products for fixed fire-fighting systems according to the Construction Products Directive (CPD)<sup>1)</sup>

*Note: On 01 July 2013 the CPD will be replaced by the Construction Products Regulation (CPR)<sup>2)</sup>. It is expected that this will have no effect on the provisions on quality plans.*

More and more products for fixed fire-fighting systems (i.e. extinguishing systems, fire detection and alarm systems, smoke and heat control systems) fall within the scope of the CPD. This concerns all products which are covered by a European product standard that is accepted and announced by the European Union as harmonised standard for the CPD.

*Note: In the Official Journal a list of the harmonised standards for the CPD is published regularly. On the Internet this information is available also in the NANDO data base of the European Commission at <http://ec.europa.eu/enterprise/newapproach/nando/>.*

In the CPD several attestation of conformity procedures are defined. But for products for fixed fire-fighting systems the European Commission has uniformly implemented the procedure "system 1" which requires the manufacturer to involve a Notified Body. In system 1 the manufacturer and the Notified Body have the following tasks:

Tasks of the manufacturer in system 1:

- implementation and execution of factory production control (FPC)
- further testing of samples taken at the factory in accordance with the prescribed test plan;

*Note: The CPD differentiates between the manufacturer and the factory. The manufacturer is the legal person who is responsible for the product and holder of the EC Certificate of Conformity. The factory is production place of the manufacturer and also identified in the EC Certificate of Conformity.*

Tasks of the Notified Body in system 1:

- initial type testing of the product
- initial inspection of the factory and factory production control
- certification of the product (issue of EC Certificate of Conformity)
- continuous surveillance of the factory production control.

The factory production control requirements of the CPD necessitate the permanent internal control of production exercised by the manufacturer.

All the data, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures. These production control system documents build a common basis for the quality management and enable the achievement of the required product characteristics and the effective operation of the production control system to be checked.

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1) COUNCIL DIRECTIVE of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (89/106/EEC)

2) REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

In addition, the manufacturer or his factory respectively shall test samples taken at the factory in accordance with a prescribed test plan. This test plan shall be considered sufficient by the Notified Body – if the content is not already defined in the harmonised standard.

*Note: In most harmonised standards for products for fixed fire-fighting systems this test plan is also addressed as quality plan.*

## Basis

- Legal basis of the manufacturer's duty to draw up a test plan for the sampling and testing of samples from his own production are the CPD, the provisions of the attestation of conformity system and the additional requirements of the applicable harmonised product standard.
- The harmonised product standard identifies in the Annex ZA the attestation of conformity system. For all products for fixed fire-fighting systems the system 1 applies. System 1 refers to Annex III.2.(i) of the Directive 89/106/EEC and defines that the manufacturer shall execute a factory production control and "further testing of samples taken at the factory by the manufacturer in accordance with a **prescribed test plan.**"
- The applicable harmonised product standards (e.g. EN 54-2 +A1) often contain amending information and lay down additional requirements on a „**product specific factory production control or quality plan**“.
- **This quality plan corresponds to the „prescribed test plan“** and must not be confused with quality management plans from other standards.

## Who is responsible for the content?

- The manufacturer.
- The Notified Body checks the quality plan and certifies the conformity of the product. In addition the Notified Body checks regularly whether the manufacturer executes all measures that are necessary to demonstrate the guaranteed conformity and the performance characteristics (e.g. fire detector: response sensitivity).

## Check of the quality plan by VdS Schadenverhütung

- As Notified Body, we refer to the provisions of the quality plan at the evaluation of the initial inspection of the factory, at the continuous surveillance and at the evaluation of the factory production control system. VdS Schaden-

verhütung checks whether the quality plan is appropriate to maintain the product characteristics as guaranteed by the manufacturer and required by the standard.

- A quality which has been positively checked by VdS Schadenverhütung is basis for the certification procedure. With the EC Certificates of Conformity issued by VdS Schadenverhütung it is "stated that the construction product ... is submitted by the manufacturer to a factory production control and to the further testing of samples taken at the factory in accordance with a prescribed test plan ...".
- The provisions in the quality plan oblige the manufacturer to do the stated tests.
- The quality plan serves as basis for the regular surveillances in the factory of the manufacturer. The auditors check – among other things – whether the tests that are listed in the quality plan are executed and documented. They assess the factory production control system and its documentation and they check whether in case of nonconformities the necessary action has been taken. Furthermore it is assessed whether the human resources are available.

## Content and scope of the quality plan

The quality plan shall

- be a released/approved document in the factory of the manufacturer,
- clearly identify the products covered by the quality plan,
- contain a reference to the related harmonised standard(s),
- contain the address of the manufacturer and of his factories,
- identify the sample size for the individual tests,
- describe the tests (in accordance with the standard or demonstrably correlating), and
- contain evaluation criteria (pass/fail-criteria).

The quality plan may refer to written test or work procedures.

One A4-page as table or flowchart may be sufficient as quality plan for simple products.

## What does not need to be contained in the quality plan?

- Measures from the factory production control requirements which are fixed in the harmonised product standard in accordance with standard ISO 9001, e.g. clause 7.4 "Purchasing", do not need to be contained in the quality plan, if these measures are already part of the **global quality management system**.

## Two examples for quality plans

### Example quality plan for a mechanical product

<b>QUALITY PLAN</b>		
<i>&lt; name und address &gt;</i>	<i>Page 1 of 1</i>	<i>&lt; doc. no, rev. &gt;</i>
<i>Manufacturer</i>	<i>CO<sub>2</sub>-LP-selector valve</i>	<i>&lt; model &gt;</i>
	<i>Product</i>	<i>Model designation</i>
<i>&lt; name und address &gt;</i>	<i>&lt; part no &gt;</i>	<i>&lt; date and name &gt;</i>
<i>Factory</i>	<i>Part No</i>	<i>released</i>
<b>work steps / job / sample</b>	<b>documents, evaluation criteria</b>	<b>notes</b>
<b>in-process test, at 100%:</b> water pressure test on valve body	work instruction	test according to standard
<b>test on finished product, at 100%:</b> leakage test on closing component	work instruction	test according to standard
<b>test on finished product, at 100%:</b> function test at normal temperature	work instruction	test according to standard

**Example quality plan for an electrical/electronic product**

<b>QUALITY PLAN</b>																			
<i>Page 1 of 1</i>		<b>&lt; doc. no, rev. &gt;</b> <i>Document No &amp; Revision</i>																	
<b>&lt; name und address &gt;</b> <i>Manufacturer</i>	<b>Signalgeber</b> <i>Product</i>	<b>&lt; model &gt;</b> <i>Model designation</i>	<b>EN 54-3:2006</b> <i>Related Product Standard</i>																
<b>&lt; name und address &gt;</b> <i>Factory</i>	<b>&lt; part no &gt;</b> <i>Part No</i>		<b>&lt; date and name &gt;</b> <i>released</i>																
work steps / job / sample	documents, evaluation criteria	notes																	
<b>function test, at 100%:</b> function main board	work and test instruction measuring and test software																		
<b>visual check of assembly of main board and terminal board, at 100%</b>	work instruction product specific work and test instruction																		
<b>test of final assembly, at 100%</b>	work instruction																		
<b>sound pressure level measurement, at 100%:</b> performed on minimum one certified tone inside test box	work and test instruction proof of correlation to free field compliance with limits according to standard	correlating test																	
<b>full sound test, at 2% of each production lot, but minimum 5 sounders of daily production:</b> performed on minimum one certified tone	test instruction compliance with electrical and acoustic limits according to standard	test according to standard																	
<p>Note: This quality plan applies also to the following models with parallel certificate (models are identical in construction):</p> <table border="1"> <thead> <tr> <th>manufacturer</th> <th>model designation</th> <th>part no</th> <th>release Q-plan</th> </tr> </thead> <tbody> <tr> <td>&lt; name 1 and address 1 &gt;</td> <td>&lt; model 1 &gt;</td> <td>&lt; part no 1 &gt;</td> <td>&lt; date 1 &gt;</td> </tr> <tr> <td>&lt; name 2 and address 2 &gt;</td> <td>&lt; model 2 &gt;</td> <td>&lt; part no 2 &gt;</td> <td>&lt; date 2 &gt;</td> </tr> <tr> <td>&lt; name 3 and address 3 &gt;</td> <td>&lt; model 3 &gt;</td> <td>&lt; part no 3 &gt;</td> <td>&lt; date 3 &gt;</td> </tr> </tbody> </table>				manufacturer	model designation	part no	release Q-plan	< name 1 and address 1 >	< model 1 >	< part no 1 >	< date 1 >	< name 2 and address 2 >	< model 2 >	< part no 2 >	< date 2 >	< name 3 and address 3 >	< model 3 >	< part no 3 >	< date 3 >
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